Naloxone Administration for the Medical First Responder
Objectives

After review of this material, the first responder will:

- Be aware of the current public health crisis caused by illicitly produced fentanyl.
- Be aware of response considerations where opioids may be involved.
- Recognizing Signs and Symptoms of an Opioid Overdose.
- Describe and demonstrate use of naloxone intranasal spray.
What are Opioids

- Synthetic or natural chemical that binds to opioid receptors in the brain

- Central nervous system depressants that result in euphoria, decreased heart rate, decreased respiration rate, drowsiness, slow/slurred speech and constricted pupils

- May be in the form of medication to manage pain as well as to control moderate to severe cough, control diarrhea, and treat addiction to other opioids.
Opioids

Examples include:
Oxycodone, Morphine, Hydromorphone, Fentanyl,
Codeine, Heroin, Methadone

Comes in many forms:
Tablets, capsules, syrups, liquids for injection, nose sprays, skin patches, suppositories
What is Fentanyl?

Fentanyl is a powerful opioid pain medication similar to but up to 100x more potent than morphine.

*Common street names for Fentanyl include “China White”, “Dance Fever”, “Apache”, “TNT”, “Goodfella”, “Murder 8”, and “Tango” “greenies”, “green beans”, “green apples” or “oxy”*
Fentanyl

- In prescription form, Fentanyl is usually administered in a lozenge form, injection, or transdermal patch.
- However, when used for recreational purposes, illicitly produced Fentanyl is typically found mimicking the green OxyContin 80 mg pills.
- Fentanyl is mixed with binding agents and dyes to mimic Heroin. It is also being added to other illicit drugs such as Cocaine among others to increase the high.
Fentanyl

On the left, a lethal dose of heroin; on the right, a lethal dose of fentanyl.

(Photo credit: New Hampshire State Police forensic lab)
Carfentanil

Carfentanil is a fentanyl analogue and is not licensed for use in humans. It is licensed for use in large animals under strict safety conditions. **Carfentanil is 10,000 times more potent than morphine and 100 times more potent than fentanyl.** This very dangerous opioid is circulating in our province, and has been present in 15\(^i\) individuals who have recently died in Alberta.

Drug dealers have been cutting carfentanil and its weaker cousin, fentanyl, into heroin and other illicit drugs to boost profit margins.

An amount the size of a grain of sand can be lethal.

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Canadian Crisis

Canada is the world’s second-largest per capita consumer of opioids, behind only the United States. In 2015, American physicians wrote 775 opioid prescriptions for every 1,000 people; Canadian physicians 534 for every 1,000.

Because illicit fentanyl is so potent, the white crystalline powder gets diluted with powdered sugar, baby powder or antihistamines before it can be sold on the street and consumed. It is also mixed into other drugs, and sold as heroin or OxyContin.

1 lb. of fentanyl at 95% purity represents enough to: KILL 250,000 people.

https://www.youtube.com/watch?v=S860Gl04uMY
Alberta Crisis

In Alberta, from January 1, 2014 to June 30, 2016 there were approximately 17,690 emergency and urgent care visits related to opioid and other substances of misuse, averaging 1,769 visits per quarter.

From January – September 2016, 338 Albertans died from an apparent drug overdose related to fentanyl or another opioid. 193 of these deaths (57%) were related to fentanyl and 145 (43%) were related to an opioid other than fentanyl.

89% of fentanyl related deaths occurred in larger urban centres.

What is Naloxone?

Naloxone, sold under the brand name Narcan among others, is a medication used to block the effects of opioids, especially in overdose.

Naloxone is a safe and effective antidote to opioid overdose that prevents or reverses the effects of opioids by blocking the opioid receptor sites in the central nervous system.

It is available as a nasal spray, Intra-Muscular (IM) injection, or by IV.
Naloxone

Onset of Action is 2 – 5 minutes for Nasal and IM

Duration of Action is 30 – 120 minutes dependent on dose, route of administration and patient’s age

The Duration of Action of some opioids may exceed that of Naloxone

Assess patients for respiratory depression and hypotension so that repeated doses of naloxone can be given if necessary
The new provincial Ministerial Order, Dated Feb 7 2017, permits First Responders to administer IM injections of **Naloxone** provided all training has been completed.

The Previous ministerial order regarding Naloxone administration for EMRs and EMTs was replaced with the transition to the Health Professions Act and the enabling of the Paramedics Profession Regulation 16(1)(a).

All registered members should review the Code of Ethics and Standards of Practice, which detail the expectation of the practitioner with their practice.

Response Considerations

- PPE – Gloves, Glasses, consider P95/N95 mask, long sleeve shirt or Turn-out coat
- Scene Safety
- Number of patients?
- Backup – Are police required, Hazmat?
- Check the scene for signs of drug use – powder, pills, needles. Do not handle drugs or drug paraphernalia if discovered.
Follow protocols for Airway Management. Your first priority is providing ventilations and CPR, if needed.
What should I be aware of?

• Fentanyl pills, are generally **white or green** and may have similar markings to a Percocet pill.
• Keep an eye for any equipment looking like a **pill pressing machine and/or powder mixers**.
• **Lumber pieces** and other types of wood (possible to stabilized the pill press (Concrete block and other weights could also be a sign).
• **Heavy Dust** – Any White Powder (or green dust) can be found aerosolized, forming a hue on most surfaces in the property contents and structure. We are unsure if the coloured greenish dust is caused by the pill processing process or from the dye packs.
• **Shipping Materials** – Shrink wrap, tape and protective boxed corners for packaging materials because some labs could be suspected of supplying for many locations.
• Over the counter **caffeine and glucose powders that are used as fillers** when compressing into pills.
What should I be aware of?
Signs and Symptoms

- **Unresponsive to stimulus** such as someone yelling their name, a light shake or a sternal rub
- Breathing is slow, erratic or not breathing at all
- Body is very limp
- Fingernails and lips are blue
- Skin is cold and/or clammy
- Pulse is slow, erratic, or not there at all
- Choking sounds or a snore-like gurgling noise
- Vomiting and/or Seizures
- Loss of consciousness
- Pupils are tiny
Agonal Respirations

are an abnormal pattern of breathing and brainstem reflex characterized by gasping, labored breathing, accompanied by strange vocalizations and myoclonus.

https://www.youtube.com/watch?v=CBMxH4xtE8w
Naloxone

Contraindications

• Hypersensitivity to Naloxone (rare)

Other Considerations

Administration of Naloxone may cause symptoms of overdose from another narcotic in cases of a polypharmacy overdose or opioid withdrawal symptoms in opioid-dependent individuals including:

• Body aches
• Fever
• Sweating
• Runny nose
• Sneezing
• Yawning
• Weakness
• Shivering or Trembling

• Nervousness
• Irritability
• Diarrhea
• Nausea or vomiting
• Abdominal cramps
• Increased blood pressure
• Tachycardia
• Seizures

Continue to monitor patient vitals and treat symptoms according to appropriate protocol. The priority is Airway Control.
Naloxone

**CAUTION:** Patients may become violent after you administer the medication.

“You just ruined my expensive high.”
Responding to an Overdose

**Stimulate** – check for responsiveness

**Airway** – ensure no restrictions. Suction if necessary

**Ventilation** - rescue breathing or initiate CPR with compressions

**Evaluate the situation**

**Muscular injection of naloxone. May also be delivered via Intranasal spray.**

**Evaluate again - continue rescue breathing. Administer 2nd dose if required.**

Patient may present with new symptoms after administration of Naloxone. Constantly re-evaluate and treat according to the appropriate MCP. The Priority is **Airway Control**
Narcan Nasal Spray

Naloxone Nasal spray has also been approved for use in Alberta under the brand name Narcan. It is distributed in single dose applicators of 4.0mg in 0.1mL of spray and is available for purchase as an alternate administration method to IM.
Narcan Nasal Spray

1. Remove NARCAN Nasal Spray from the box and peel back the tab with the circle to open the NARCAN Nasal Spray.
2. Hold the NARCAN nasal spray with your thumb on the bottom of the plunger and your first and middle fingers on either side of the nozzle.
3. Tilt the person’s head back and provide support under the neck with your hand. Check the nostrils for blood or vomit that may require suctioning.
4. Gently insert the tip of the nozzle into one nostril, until your fingers on either side of the nozzle are against the bottom of the person’s nose.
5. Press the plunger firmly to give the dose of NARCAN Nasal Spray.
6. Remove the NARCAN Nasal Spray from the nostril after giving the dose.
7. If breathing does not return to normal or if breathing difficulty resumes, after 2-3 minutes, give an additional dose of NARCAN® Nasal Spray using a new device in the alternate nostril.
8. Note time of administration and keep vial(s) for EMS to see what was given.
Ensure the patient care report is completed with all event, patient information and vitals, and treatments including:

1. *Dose Administered*
2. *Time Administered*
3. *Route and location of Administration*
4. *Person administered by*
Practical Component
Acknowledgements

This training program has been developed as part of joint initiative of Edmonton Fire Rescue Services and Alberta Health Services
Additional Links


http://globalnews.ca/news/3153988/drug-found-in-hamilton-thought-to-be-fentanyl-was-more-deadly-carfentanil-police/


Sources

http://www.albertahealthservices.ca/info/Page12491.aspx

