

VBEMS Opioid Poisoning/Overdose Protocol

EMT Specific

Patient Care Goal Objectives

1. Rapid recognition and intervention of a clinically significant opioid poisoning or overdose
2. Continued care of a patient where bystanders have administered Naloxone in a suspected opioid overdose

Inclusion Criteria

Patients of all age groups with access to opioids and known or suspected opioid use or abuse

Exclusion Criteria:

Patients in cardiac arrest

Patients with altered mental status exclusively from other causes (e.g. head injury, hypoxia, or hypoglycemia)

Patients that have already received 2 dosages of Naloxone

Patient Management

1. Therapeutic interventions to support the patient's airway, breathing, and circulation should be initiated prior to the administration of naloxone
2. Identify specific medication taken if possible, time of ingestion, and quantity
3. Determine if a lay rescuer or first responder has already administered an opioid antagonist (naloxone), when, how much and what route.
4. Obtain and document pertinent cardiovascular history or other prescribed medications for underlying disease
5. Be aware that unsecured hypodermic needles may be on scene if the intravenous route may have been used by the patient, and that there is a higher risk of needle sticks during the management of this patient population which may also have an increased incidence of bloodborne pathogens
6. Naloxone, an opioid antagonist, should be considered for administration to patients with a confirmed or suspected opioid overdose that are exhibiting respiratory depression/arrest and have not already been administered 2 doses
7. Naloxone administration via the intranasal or intramuscular routes provide additional options of medication delivery

Assessment

1. Assess the patient's airway, breathing, circulation, and mental status
2. Support the patient's airway by positioning, oxygen administration, and assistance with a bag valve mask (with OPA/NPA) if necessary
3. Assess the patient for other etiologies of altered mental status including hypoxia, hypoglycemia, hypotension, and traumatic head injury

Treatments and Interventions

1. Critical resuscitation (opening and/or maintaining the airway, support respirations with a BVM and OPA/NPA as necessary, provision of oxygen, ensuring adequate circulation) should be performed prior to naloxone administration
2. If the patient is symptomatic from a confirmed or suspected opioid overdose, consider naloxone administration. The administration of the initial dose or subsequent doses should be incrementally titrated until respiratory depression is reversed

3. Naloxone can be administered via the IN route by the EMT with the typical initial adult dose of the complete injector provided in the Revive Kit
 - a. For the intranasal route, divide administration of the dose equally between the nostrils to a maximum of 1 ml per nostril
 - b. A patient does not have to be breathing to administer IN route
 - c. The adult dose carried in prefilled syringes is 2mg 1mg/ml for IN administration
 - d. The pediatric dose of naloxone is 0.1 mg/kg IN, with a maximum dose of 2 mg
4. A repeat dose may be provided in 5 minutes with another complete injector provided in the Revive Kit if the patient does not resume adequate respirations after the initial administration
 - up to two total dosages may be administered by either lay rescuers, first responders or any combination

Patient Safety Considerations

1. Clinical duration of naloxone
 - a. The clinical opioid reversal effect of naloxone is limited and may end within an hour whereas opioids often have a duration of 4 hours or longer
 - b. Monitor the patient for recurrent respiratory depression and decreased mental status
2. Opioid withdrawal
 - a. Patients with altered mental status secondary to an opioid overdose may become agitated or violent following naloxone administration due to opioid withdrawal
 - b. Be prepared for this potential scenario and take the appropriate measures in advance to ensure and maintain scene safety
3. EMS providers should be prepared to initiate airway management before, during, and after naloxone administration and to provide appropriate airway support until the patient has adequate respiratory effort
4. Narcan can precipitate seizures in patients with a seizure history or long term narcotic addicts
5. Narcan can precipitate dysrhythmias in patients with cardiac disease, including ventricular fibrillation or ventricular tachycardia

Notes /Educational Pearls:

Key Considerations

1. The essential feature of opioid overdose requiring EMS intervention is respiratory depression or apnea
2. Overuse and abuse of prescribed and illegal opioids has led to an increase in accidental and intentional opioid overdoses
3. DEA and opioids:
 - a. Opioids, most of which are controlled under the Drug Enforcement Administration (DEA), have a high potential for abuse, but have an accepted medical use in patient treatment and can be prescribed by a physician
 - b. Frequent legally prescribed opioids include: codeine, fentanyl, hydrocodone, morphine, hydromorphone, methadone, morphine, oxycodone, oxymorphone and Ultram
 - c. Opioid derivatives, such as heroin, are illegal in the United States
4. Opioid combinations:
 - a. Some opioids are manufactured as a combination of analgesics with acetaminophen, acetylsalicylic acid (aspirin), or other substances
 - b. In the scenario of an overdose, there is a potential for multiple drug toxicities
 - c. Examples of opioid combination analgesics:
 - i. Vicodin® is a combination of acetaminophen and hydrocodone
 - ii. Percocet® is a combination of acetaminophen and oxycodone
 - iii. Percodan® is a combination of aspirin and oxycodone
 - iv. Suboxone® is a combination of buprenorphine and naloxone

5. The IN route has the benefit of no risk of needle stick to the provider
6. Patients should be transported to the closest medical facility after treatment with Naloxone.
7. The half-life of Naloxone is shorter than opioids, therefore there is a real risk that the patient will relapse into respiratory depression/arrest after treatment without subsequent treatment at a medical facility. Medical direction and an EMS supervisor should be contacted for any difficulty in treatment or transport of these patients.
8. The cartons of naloxone auto-injectors prescribed to laypersons contain two naloxone 0.4 mg IM auto-injectors (and one trainer)

Pertinent Assessment Findings

1. The primary clinical indication for the use of opioid medications is analgesia
2. In the opioid overdose scenario, signs and symptoms include:
 - a. Miosis (pinpoint pupils)
 - b. Decreased intestinal motility
 - c. Respiratory depression
 - d. Decreased mental status
3. Additional assessment precautions:
 - a. The risk of respiratory arrest with subsequent cardiac arrest from an opioid overdose as well as hypoxia, hypercarbia, and aspiration may be increased when other substances such as alcohol, benzodiazepines, or other medications have also been taken by the patient
 - b. The signs and symptoms of an opioid overdose may also be seen in newborns who have been delivered from a mother with recent or chronic opioid use. Neonates who have been administered naloxone for respiratory depression due to presumed intrauterine opioid exposure should be monitored closely for seizures

Quality Improvement

Key Documentation Elements

1. Rapid and accurate identification of signs and symptoms of opioid poisoning
2. Substance taken (name, amount, route and time)
2. Pulse oximetry
3. Blood glucose
4. Naloxone dose and route of administration
5. Clinical response to treatment

Performance Measures

1. Clinical improvement after prehospital administration of naloxone
2. Frequency of patients who develop adverse effects or complications (recurrent respiratory depression or decreased mental status, aspiration pneumonia or pulmonary edema)
3. Number of patients who refuse transport following naloxone administration

References

1. Marx JA et al. Rosen's Emergency Medicine: Concepts and Clinical Practice, 2010 2047-2048, 2050
2. Nelson, LR et al. Goldfrank's Toxicologic Emergencies, 2010, 579-583
3. United States Department of Justice, Drug Enforcement Administration, United States Code Controlled Substance Act, Title 21, Section 812
4. Tidewater Emergency Medical Services, Regional Medical Protocols, 11th Ed., 2013
5. National Association of State EMS Officials, National Model EMS Clinical Guidelines, v11-14, 216-218

Virginia Beach EMS
Opioid Overdose Protocol
For BLS Providers

