POISONING/TOXIN EXPOSURE (INGESTION / INHALATION / ABSORPTION / INJECTION / ENVENOMATION)
STATEWIDE BLS PROTOCOL

Criteria:

A. Patient who has accidentally or purposefully been exposed to toxic substances. Including:
1. Ingested toxins
   a. For example pills, capsules, medications, recreational drugs, poisonous plants, strong acids or alkali household or industrial compounds
2. Inhaled toxins
   a. For example carbon monoxide and other toxic gases
3. Absorbed toxins
   a. For example substances on skin or splashed into eyes
4. Injected toxins
   a. For example snake bites or substances injected through the skin

B. Patient with suspected narcotic overdose who may have symptoms of unresponsiveness, decreased respiratory effort, pinpoint pupils, history of narcotic ingestion or fentanyl patches on skin.

Exclusion Criteria:

A. None

System Requirements:

A. Only an EMR or EMT that has completed the Naloxone Administration for EMR and EMT course (CE course #007622) on the Learning Management System may administer naloxone. The EMR or EMT should also receive psychomotor training/ experience with the use of the BLS naloxone delivery device used by the EMS agency.

B. EMRs and EMTs may only administer naloxone by intranasal or autoinjector routes.

C. **[Optional]** BLS services (QRS or ambulance) may carry naloxone for administration by the agency's EMR/EMTs.
1. These services must comply with Department of Health naloxone requirements for these services and for the training of service providers before the service is permitted to stock and carry naloxone.
2. The EMS agency medical director must oversee the carrying and use of naloxone.
3. The EMS agency or medical director may require psychomotor training in the use of the naloxone administration device.

Treatment:

A. All patients:
1. Initial Patient Contact – see Protocol # 201.
   a. **WARNING: EMS providers must not enter confined spaces with potential toxic gases (e.g. manure pits, silos, spaces with carbon monoxide, spaces with industrial gases) unless providers have proper training and PPE.**
   b. If toxic exposure/ overdose is the result of intentional behavior- also see Behavioral Emergency/ Patient Restraint protocol #801.
2. Maintain adequate airway and ventilate if needed (two-person two-thumbs-up BVM technique preferred).
3. Administer high concentration oxygen, if altered level of consciousness, shortness of breath, abnormal respiratory rate, or patient coughing.
4. Monitor pulse oximetry – See Pulse Oximetry Protocol #226
5. Consider call for ALS if available, particularly for decreased LOC. See Indications for ALS Use protocol #210.
6. Determine:
   a. What – identify specific toxin and amount, if possible.
      1) If possible, safely transport source of toxin (e.g. prescription pill bottles) with patient to receiving facility.
      2) EMS vehicles should not transport dangerous items (e.g. toxic chemicals that are not sealed in their original containers, live snakes, etc.…)
   b. When – identify time of exposure, if possible.

c. Why – identify reason for exposure, if possible.
d. Where – identify environmental site issues (e.g. exposure in a confined space or carbon monoxide present).

7. Give **naloxone** (if available**)** if decreased respiratory rate and suspected narcotic overdose Goal = adequate respiration and oxygenation (not awakened patient).
   a. Ventilation with BVM takes priority over naloxone administration. **SAFETY NOTE: If cyanotic, decreased respirations, or hypoxia (SpO_2 < 95%), ventilate with BVM and oxygen to adequate color/SpO_2 <u>while preparing</u> for administration of naloxone**
   b. In pulseless patients, naloxone is not indicated and CPR should be initiated immediately.
   c. Administration options:
      1) Initial naloxone dose:
         a) Naloxone, 2 mg intranasal prefilled kit with atomizer (1 mL in each nostril), or
         b) Naloxone, 2 mg or 4 mg prefilled commercial naloxone nasal device, or
         c) Naloxone, 0.4 mg intramuscular by autoinjector
      2) If respiratory effort not normal after 5 minutes, may repeat above dose once.
      3) If inadequate spontaneous ventilation after repeat dose of naloxone by any route, efforts should be focused on adequate BVM ventilation, oxygenation, and transport.
   d. CAUTION: Patients that receive naloxone may have rapid onset of withdrawal symptoms, including agitation, vomiting, and violent behavior.
   e. CAUTION: Naloxone half-life is 30-90 minutes and respiratory depression may recur when naloxone wears off.
   f. EMR and EMT may not administer naloxone by intravenous, intramuscular (without autoinjector), or endotracheal methods.
8. Do not give anything by mouth to a patient with an altered level of consciousness or an unconscious patient.[1]
9. Treat specific toxins based upon the appropriate category:
   a. **Ingested Toxins.** Treat all exposures as follows:
      1) **DO NOT INDUCE VOMITING.**
      2) Poison Control Center or Medical Command for possible order for activated charcoal (if available).[2,3,4]
   b. **Inhaled Toxins.** Treat all symptomatic (e.g. SOB, cough, headache, decreased LOC) patients as follows:
      1) Only personnel with proper training and wearing proper PPE should enter environments that may have toxic gases.
      2) Remove patient from environment.
      3) Ventilate, if needed.
      4) Administer 100% oxygen.
         a) **WARNING: Pulse oximetry monitors give false readings in patients that have been exposed to carbon monoxide or cyanide, and these devices should never be used in these patients**.
   c. **For Absorbed Toxins:**
      1) Remove contaminated clothing.
      2) Flush affected area copiously:
         a) Liquid substance - Irrigate with copious amounts of room temperature water. Do not contaminate uninjured areas while flushing.
         b) Dry substances- With gloves and appropriate PPE, brush remaining powder from skin and clothing, then irrigate with copious amounts of water.[5]
         c) Eyes- Flush affected eyes continuously with water of saline if eye exposure.
   d. **For Injected Poisons/ Envenomation/ Snakebite:**
      1) Identify type of snake or animal (e.g. scorpion), if safe and possible. If identity of a snake is not known, all victims of snakebite should be treated as if the snake is poisonous. Do not delay transport while attempting to capture or kill a snake.
      2) Calm patient.
      3) Administer high-flow oxygen, if respiratory symptoms are present.
      4) Remove jewelry and tight clothing.

5) Consider immobilizing the involved body part. If extremity involved, keep the extremity at a neutral level to the patient's heart (neither elevate or lower the extremity).
6) Keep the patient as still as possible to reduce the circulation of the venom. Carry patient for transport, if possible.
7) Apply constricting band proximal to bite if patient is hypotensive.
8) **DO NOT APPLY ICE.**

10. Transport.
11. Monitor vital signs and reassess.
12. Contact Medical Command or Poison Control Center[2] if additional direction is needed.

Possible Medical Command Orders:

A. Administration of activated charcoal (if available) may be ordered [3,4]:
1. **Adults:** 25 - 50 gm orally of pre-mixed activated charcoal.
2. **Children:** 1 gm/ kg orally or approximately 12.5 - 25 gm orally of pre-mixed activated charcoal.

Notes:

1. Contact Poison Control Center or Medical Command before administering anything by mouth.
2. National **Poison Control Center Phone number is 800-222-1222**. EMS providers must follow instructions from Poison Control Center unless the orders are superseded by orders from a medical command physician. These instructions must be documented on the PCR.
3. Activated charcoal (if available) may only be given by order of medical command or poison control.
4. Contraindications to charcoal:
    a. Patient unable to swallow/protect airway.
    b. Seizures.
    c. Hydrocarbons ingestion (e.g. turpentine)
    d. Caustic substance ingestion (e.g. liquid drain cleaner or milk pipe cleaner)
5. Note- some substances, like dry lime will cause a heat-producing reaction when mixed with water. Copious water should be available before beginning to irrigate.

Performance Parameters:

A. Review for documentation of orders received from Poison Control Centers or Medical Command.