RESPIRATORY ARREST
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Absence of spontaneous ventilations; pulse present

TREATMENT
- ALS RMC
  - If suspected narcotic overdose:
    - Assist breathing with BVM (do not insert advanced airway before Narcan)
    - Administer Narcan 0.4-4.0 mg/kg, IV/IO/IM/IN
      - For IN administration: 2 mg (1 mg per nostril)
      - If respiratory depression persists, repeat above doses q 2-3 minutes until patient responds. May need multiple doses.

RELATED POLICIES/ PROCEDURES
- Intranasal Medication Midazolam (Versed) & Narcan Procedure ALS PR 7
AIRWAY OBSTRUCTION
ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION
- Presence of upper respiratory infection, sore throat, fever, stridor or drooling
- Mechanical upper airway obstruction with history of food aspiration (especially if elderly)

CRITICAL INFORMATION
- Ability to speak
- Ability to manage secretions

TREATMENT
- ALS RMC
- Visualize airway
- Suspected mechanical upper airway obstruction; Conscious patient- able to speak:
  - Suctioning if needed to control secretions
  - Transport in position of comfort, avoid agitating patient
- Suspected mechanical upper airway obstruction; Conscious patient-unable to cough or speak:
  - Ask the patient if he/she is choking
  - Administer abdominal thrusts/Heimlich maneuver until the foreign body is expelled or the patient becomes unconscious
  - After obstruction is relieved, reassess airway, lung sounds, skin color and vital signs
- Unconscious patient:
  - Perform a tongue-jaw lift followed by finger sweep to remove object
  - Begin CPR
  - Prepare to use Magill forceps if BLS not effective
- Suspected epiglottitis
  - Transport in an upright sitting position
  - If patient deteriorates or the airway becomes completely obstructed, attempt positive pressure ventilation via BVM. Endotracheal intubation should be performed only if BVM is inadequate.

DOCUMENTATION- ESSENTIAL ELEMENTS
- Frequent pulse oximetry recordings
ACUTE RESPIRATORY DISTRESS
ALWAYS USE STANDARD PRECAUTIONS

INDICATIONS
- Increased respiratory rate or sensation of difficulty breathing that is not clearly due to the clinical entities specified in other guidelines. Symptoms may be due to pneumonia, inhalation of toxic substances, pulmonary embolus.

TREATMENT
- ALS RMC
- Position of comfort
- If absent or diminished breath sounds due to severe bronchospasm, refer to Bronchospasm/Asthma/COPD, R4
- Consider CPAP with decreased oxygen saturation

DOCUMENTATION- ESSENTIAL ELEMENTS
- Pulse oximetry

RELATED POLICIES/PROCEDURES
- CPAP Procedure ALS PR 13
- Bronchospasm/Asthma/COPD R4
- Toxic Inhalation R7
BRONCHOSPASM/ ASTHMA/ COPD ALS
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Acute or progressive shortness of breath, chest discomfort, wheezing, cyanosis

TREATMENT
- ALS RMC
- Mild to moderate (alert, may be unable to speak full sentences, limited accessory muscle use).
  - **Albuterol** 5 mg in 6 ml NS HHN, MR if necessary
  - **Ipratropium (Atrovent)** 500 mcg (2.5 ml) HHN
- Severe (altered mental status, minimal air movement, inability to speak, significant desaturation <90%, cyanosis)
  - Consider CPAP
  - If **Albuterol** and **Atrovent** not effective:
    - **Epinephrine** 0.3mg IM (1mg/ml concentration); MR once in 5 minutes

SPECIAL CONSIDERATION
- Do not repeat **Albuterol / Ipratropium (Atrovent)** if significant tachycardia or chest pain.
- **Epinephrine** may cause anxiety, tremor, palpitation, tachycardia, hypertension and headache, and may precipitate AMI, hypertensive crisis and intracranial hemorrhage.
- Consider use of patient actuated nebulizer with prolonged scene times and/or transport times over 10 minutes.
- Suspect carbon monoxide in cases of exposure to fire or smoke in confined areas; pulse oximetry in these settings is not an accurate measure of respiratory status

DOCUMENTATION- ESSENTIAL ELEMENTS
- Wheezing, decreased lung sounds
- SAO2

RELATED POLICIES/ PROCEDURES
- CPAP Procedure  ALS PR 13
ACUTE PULMONARY EDEMA
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Acute onset of respiratory difficulty; associated with the following signs or symptoms:
  - Rales
  - Hypertension
  - Tachypnea
  - Diaphoresis
  - Chest discomfort
  - History of cardiac disease
  - Occasional wheezes
  - Near drowning

 PHYSICIAN CONSULT
- Opioid administration
- If SBP < 80, obtain physician consult for Push-dose Epinephrine

TREATMENT
- ALS RMC
- If tolerated, position patient in a sitting position, with legs dependent.
- 12-lead ECG if available
- If SBP > 100:
  - Apply CPAP
  - Nitroglycerin 0.4 mg SL; MR q 5 if SBP > 100
- If SBP < 100, consider NS 250-500 ml IV fluid challenge
- If SBP < 80 obtain physician consult for Push-dose Epinephrine:
  - Mix 1mL Epinephrine (0.1mg/mL concentration) with 9mL Normal Saline in a 10mL syringe
  - Administer Push-dose Epinephrine 1mL IV/IO every 3-5 minutes
  - Titrate to maintain a SBP >80mmHg
- Monitor blood pressure every five minutes

SPECIAL CONSIDERATION
- Do not give NTG if patient has taken erectile dysfunction medication (ED) within the previous 24 hours for Levitra/Viagra or 36 hours for Cialis.

DOCUMENTATION- ESSENTIAL ELEMENTS
- SpO2

RELATED POLICIES/ PROCEDURES
- CPAP Procedure ALS PR 13
PNEUMOTHORAX / TENSION PNEUMOTHORAX
ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION
- Acute onset of respiratory distress with decreased unilateral or bilateral breath sounds. Signs and symptoms may include the following:
  - Extreme dyspnea
  - Neck vein distension
  - Agitation
  - Hypotension
  - Cyanosis
  - Hyperresonance to percussion on affected side
  - Tracheal shift away from the affected side

TREATMENT
- ALS RMC
- Needle thoracostomy on affected side with signs of tension pneumothorax
- Rapid transport

SPECIAL CONSIDERATION
- Condition may be precipitated by the following:
  - Trauma
  - Pre-existing lung disease
  - Cancer related treatment
  - Marfan’s syndrome

DOCUMENTATION- ESSENTIAL ELEMENTS
- Decompression site
- SAO2 before and after decompression

RELATED POLICIES/ PROCEDURES
- Needle Thoracostomy and Pleural Decompression Procedure ALS PR 8
TOXIC INHALATION
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Respiratory distress caused by inhalation of toxic gases
- Symptoms may include headache, malaise, dizziness, nausea/vomiting, seizures, hypotension, coma; may be associated with cherry-red color of mucous membranes (late sign)
- Consider carbon monoxide (CO) poisoning or cyanide poisoning with any patient exposed to products of combustion toxic gases in an enclosed area
- ONLY if patient exhibits serious signs and symptoms of smoke inhalation (e.g. unconscious/unresponsive, hypotension, and/or severely ALOC) treat with CYANOKIT (hydroxocobalamin)

TREATMENT
- Rapid removal of patient from toxic environment
- ALS RMC
- Administer high flow oxygen despite normal oxygen saturation levels
- If wheezing - Albuterol 5 mg in 6 ml NS via HHN, repeat as indicated
- CO monitoring, if available
  - High Suspicion of CO poisoning:
    - Any patient (non-smoker) with CO level >9%
    - Any patient (smoker) with CO level >12%
  - At Risk for CO poisoning (at risk = pregnant, children <6y, elderly, patients with history of respiratory problems)
    - Any “at risk” patient (nonsmoker) with CO level >4%
    - Any “at risk” patient (smoker) with CO level >8%
    - Any patient with CO symptoms and confirmed source of CO
- ONLY if patient exhibits serious signs and symptoms of smoke inhalation (e.g. unconscious/unresponsive, hypotension, and/or severely ALOC) treat with CYANOKIT (hydroxocobalamin):
  - Adult: 5 g IV/IO infusion over 15 minutes. May repeat once if severe signs of poisoning and lack of clinical response to first dose; MAX total dose of 10 g.
  - Pediatric: Not approved.

DOCUMENTATION – ESSENTIAL ELEMENTS
- Nature of exposure
- CO levels
- At-risk criteria