Respiratory Compromise (120)

Adults	Pediatrics *(13 years and under)*
Public Safety First Aid Procedures: Only	**Public Safety First Aid Procedures: Only**
• Request EMS • Support ABC's • Give Oxygen if available	• Request EMS • Support ABC's • Give Oxygen if available
BLS Procedures: EMT's and Paramedics start here	**BLS Procedures: EMT's and Paramedics start here**
• Consider rapid transport or ALS rendezvous if severe distress • Administer Oxygen only if SpO2 <94% or if in respiratory distress • If patient is wheezing and has a prescribed rescue inhaler assist patient with use • If **SEVERE** wheezing, stridor, or signs of bronchospasm consider CPAP. • If wet lung sounds, consider CPAP if Systolic B/P > 90. No response to CPAP move to positive pressure ventilation	• Consider rapid transport or ALS rendezvous if severe distress • Administer Oxygen only if SpO2 <94% or if in respiratory distress • If patient is wheezing and has a prescribed rescue inhaler assist patient with use • If **SEVERE** wheezing, stridor, or signs of bronchospasm consider CPAP.If wet lung sounds, consider CPAP if > 8 years old and systolic B/P > 90. No response to CPAP move to positive pressure ventilation
ALS Prior to Base Hospital Contact: Paramedic only	**ALS Prior to Base Hospital Contact: Paramedic only**
• Attach monitor/SpO2/EtCO2 • If **Bronchospasm** give nebulized Albuterol 2.5 mg in 3 mL NS and Ipratropium bromide 500 mcg in 2.5 mL NS. May repeat Albuterol as needed or continuous. May repeat Ipratropium bromide every 20 minutes to max 3 doses. • If not relieved by Albuterol, consider CPAP if available and not contraindicated. • May only use epinephrine if suspected anaphylaxis (Refer to Allergic Reaction/ Anaphylaxis Protocol) • If severe distress and no response, consider Magnesium Sulfate 1-2 grams in 50 mL NS over 5-10 minutes • If **Pulmonary Edema** with Systolic B/P >150 give Nitroglycerin 0.4 mg SL, Repeat every 5 minutes as long as Systolic B/P >150 • Consider CPAP if available and Systolic B/P > 90	• Attach monitor/SpO2/EtCO2. • If **Bronchospasm** give nebulized Albuterol 2.5 mg in 3 mL NS and Ipratropium bromide 500 mcg in 2.5 mL NS. May repeat Albuterol as needed or continuous. May repeat Ipratropium bromide every 20 minutes to max 3 doses. • Severe distress not responding consider Magnesium Sulfate 25mg/kg max 2 grams. Give over 5-10 minutes. • Consider CPAP if > 8 years old if no response to meds. If not available or contraindicated apply Positive Pressure Ventilation via bag valve mask. • **Pulmonary Edema** consider CPAP if > 8 years old. ○ If systolic B/P < 90 or not responding to CPAP begin bag valve mask ventilations. • **Upper Airway (Stridor or Barky Cough)** If suspected Allergic Reaction or Foreign Body refer to appropriate protocol,

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• No response to CPAP or Medications apply Positive Pressure Ventilation Via Bag Valve Mask • If Systolic B/P <90 or Patient not responding to Medications or CPAP Apply Positive Pressure Ventilation Via Bag Valve Mask, refer to Shock/ Hypoperfusion Protocol (124) • Consider Intubation	• **Suspected Epiglottitis** Calm the Patient/ Avoid IV access if possible. Attempt early base contact and rapid transport. • **Suspected Croup.** Calm the patient/assess for severity**.** ○ **Mild** Observe. **Moderate to Severe** Give nebulized Epinephrine 1:10,000, 0.5 mg. Consider fluid bolus. ○ Patient not responding or deteriorating rapidly apply Positive Pressure Ventilation.
Base Hospital Contact Required	**Base Hospital Contact Required**

120 RESPIRATORY COMPROMISE

Special Considerations

1. Complications of epinephrine for bronchospasm include tachycardia and myocardial irritability. Use extreme caution with patients having pre-existing cardiac problem history, older patients with tachycardia, or patients showing ventricular ectopy on the ECG monitor.

2. Administer nitroglycerin to reduce myocardial workload and oxygen consumption in cases of pulmonary edema. Monitor vital signs carefully during any nitroglycerin administration due to vasodilation effects of this medication.

3. In cases of pulmonary edema where BP is under 150mm/Hg systolic, administration of vasodilator medication may further compromise the patient condition. Endotracheal intubation with positive pressure ventilation, or just positive pressure ventilation if unable to intubate can be an effective means of treatment for pulmonary edema. Consider sedation with Midazolam after intubation of conscious patients.

4. Continuous Positive Airway Pressure (CPAP) may be considered. Refer to CPAP protocol.

5. In cases of **croup or epiglottitis** do not attempt to visualize the throat. Attempts should be made at calming the patient. Consider allowing the parent to hold the child or the oxygen mask, and transport in a position of comfort. Avoid obtaining IV access if possible. Procedure may cause increased anxiety in patient and can cause rapid deterioration to complete airway obstruction.

6. **Suspected epiglottitis**: Abrupt onset of severe symptoms. Patients deteriorate rapidly. Usually patients present with fever first, followed by stridor and labored breathing. Stridor may diminish as the disease progresses. Stridor may be accompanied by marked suprasternal, subcostal, and intercostal retractions. Dysphagia, refusal to eat, muffled or hoarse voice, sore throat, and anxiety are common. The clinical triad of drooling, dysphagia, and distress is the classic presentation. Epiglottitis is not solely caused by bacterial infection. Other causes may exhibit slightly different presentations.

7. **Suspected croup**: Clinical syndrome of hoarse voice, barking cough, and inspiratory stridor. It is usually caused by a viral infection and mostly affects children between six (6) months and thirty-six (36) months of age, although it may occur in older children. Children with croup do not appear pale, very febrile with poor perfusion; this presentation is more commonly seen in bacterial infections such as epiglottitis. Viral croup typically develops over days. Careful assessment of the patient with suspected croup is essential. Mild cases may not require pre-hospital treatment, while moderate and severe distress may require pharmacological intervention.
   - **Mild**: Child appears happy, can eat, drink, play and is interested in surroundings. May be mild chest wall retractions and mild tachycardia, but stridor at rest will not be present.
   - **Moderate**: Persisting stridor at rest, chest wall retractions, use of accessory muscles, tracheal tug, and increasing heart rate. Child is interactive with surroundings. Progression of disease is indicated by the child becoming worried, preoccupied, or unusually tired.
   - **Severe**: Increased tiredness and exhaustion. Marked tachycardia is usually present, restlessness, agitation, irrational behavior, decreased level of consciousness, hypotonia, cyanosis, and pallor. Stridor may become softer in the presence of lethargy due to impending obstruction.

8. **Bronchospasm** is usually accompanied by respiratory distress with the following findings: wheezing, prolonged expiration, increased respiratory effort, severe agitation, lethargy, suprasternal and substernal retractions, tripod positioning. A silent chest is an ominous sign indicating that respiratory failure or arrest is imminent.