RESPIRATORY DISTRESS

Effective Date: February 7, 2014
Replaces: February 8, 2013
Review: November 2016

Resources:
AHA 2010 Guidelines

I. Purpose

The purpose of Policy 700 – A11: Respiratory Distress is to provide clinical guidelines for the treatment of patients experiencing respiratory distress, shortness of breath, and/or hypoxia in the prehospital setting.

II. BLS Treatment

A. Routine Medical Care – Adult (see 700 – S04)
B. Any patient in respiratory distress shall receive high flow oxygen
C. Place the patient in a position of comfort
D. Determine the patient code status

III. ALS Treatment

A. Routine Medical Care – Adult (see 700 – S04)
B. Any patient that presents with acute shortness of breath and/or hypoxia (SpO₂ < 94%), shall receive high flow oxygen.

Suspected Acute Cardiogenic Pulmonary Edema
- Apply county approved CPAP device (see Procedure 700 – M12)
- **Initial dose of NTG**: 0.8 mg SL/TM
- Subsequent doses of NTG: 0.4 mg SL/TM q 5 minutes to max of 6 doses.
- Discontinue if SBP < 100 mmHg
- Avoid NTG if the patient takes erectile dysfunction or pulmonary HTN medication (see suspected cardiac ischemia A08).

Bronchospasm (Diffuse Wheezing)
- **Albuterol**: 2.5 – 5 mg via hand held nebulizer (HHN) or other FDA approved device q 15 minutes or continuously prn.
- If the patient is in severe distress and his/her tidal volume decreased, administer Albuterol via in-line CPAP, BVM, or ET.
- Discontinue Albuterol if the patient’s HR > 160 bpm, has chest pain, dysrhythmias, or onset of new symptoms.
### IV. Special Considerations

**A.** Both severe fluid overload and severe bronchospasm may present with diminished lung sounds. Differentiating between conditions should be based on the patient’s history.

**B.** Epinephrine should be reserved for those patients who are unable to generate adequate tidal volume to deliver aerosolized drugs to their bronchial tree.

**C.** Do not use Epinephrine excessively, as it tends to thicken secretions, deplete glycogen stores, and increase apprehension. Use lower doses of Albuterol for mild to moderate respiratory distress and high doses for severe distress.

**D.** *In patients who are experiencing severe bronchospasm, breath sounds may sound clear with no audible wheezing.* This is due to decreased tidal volume with little to no air movement. Do not withhold Albuterol with these patients.

**E.** Do not get Nitro-Paste on skin.

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1 Avoid morphine when the patient has suspected sepsis, pneumonia, or dehydration.
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**BLS Treatment**

- Routine Medical Care – Adult (see 700-S04)
- Any patient in respiratory distress shall receive high flow oxygen
- Position of comfort
- Determine Code status

**ALS Treatment**

- Routine Medical Care – Adult (see 700-S04)
- Any patient that presents with acute shortness of breath and/or hypoxia (SpO2 <94%), shall receive high flow oxygen.

<table>
<thead>
<tr>
<th>Suspected Acute Cardiogenic Pulmonary Edema</th>
<th>Bronchospasm (Diffuse Wheezing)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apply CPAP (see Procedure 700-M12)</strong></td>
<td><strong>Albuterol</strong> 2.5 – 5 mg via HHN or other FDA approved device dosage per manufacturer’s information, q 15 minutes or continuously prn</td>
</tr>
<tr>
<td>- Initial single dose of Nitroglycerin 0.8 mg SL/TM</td>
<td>- If severe distress and tidal volume decreased, administer Albuterol via in-line, CPAP, BVM or ET</td>
</tr>
<tr>
<td>- Subsequent doses of Nitroglycerin 0.4mg q 5 minutes max of 6 total doses.</td>
<td>- Discontinue if HR &gt; 160 bpm, chest pain, dysrhythmias, or acute onset of new symptoms</td>
</tr>
<tr>
<td>- Discontinue if SBP &lt; 100 mmHg</td>
<td><strong>Consider use of CPAP device in conjunction with albuterol treatments.</strong></td>
</tr>
<tr>
<td>- Avoid NTG if patient takes erectile dysfunction or pulmonary HTN medication (see Suspected Cardiac Ischemia A08)</td>
<td><strong>Consider Epinephrine</strong> (1:1,000) 1mg/1ml: 0.3 mg IM. See Allergic Reaction/Anaphylaxis (A12)</td>
</tr>
<tr>
<td>- Nitropaste apply 1 inch topically. Discontinue if SBP &lt; 100 mmHg</td>
<td></td>
</tr>
</tbody>
</table>
or dehydration is suspected. These medications will worsen the patient’s condition

- **Dopamine** 5-20 mcg/kg/min IV drip. Titrate in 5 mcg/kg/min increments every 5 minutes to an SBP between 90-100 mmHg and a pulse of 80-100 bpm.

### Table: Allergic Reaction/Anaphylaxis vs. Smoke Inhalation

<table>
<thead>
<tr>
<th>Allergic Reaction/Anaphylaxis</th>
<th>Smoke Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>See Allergic reaction/Anaphylaxis (700-A12)</td>
<td>See Smoke Inhalation Protocol (700-A19)</td>
</tr>
</tbody>
</table>

### Table: Suspected Pulmonary Embolus (PE) vs. Decompression Illness

<table>
<thead>
<tr>
<th>Suspected Pulmonary Embolus (PE)</th>
<th>Decompression Illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Place in position of comfort</td>
<td>• Left Lateral Trendelenburg (on left side, body tilted with head lower than torso)</td>
</tr>
<tr>
<td>• Ensure high flow oxygen</td>
<td>• Transport to ED for stabilization. Do not transport directly to hyperbaric chamber.</td>
</tr>
</tbody>
</table>

### Special Considerations

- Both severe fluid overload and severe bronchospasm may present with diminished lung sounds. Differentiating between conditions will be based on history.

- **Epinephrine** should be reserved for those patients who are unable to generate adequate tidal volume to deliver aerosolized drug to the bronchial tree.

- Do not use epinephrine excessively, it tends to thicken secretions, deplete glycogen stores, and increase apprehension. Use lower dosage of Albuterol for mild to moderate distress and higher dosage for severe distress.

- **D.** In patients who are experiencing severe bronchospasm, breath sounds may sound clear with no audible wheezing. This is due to decreased tidal volume with little to no air movement. Do not withhold Albuterol with these patients.

- **E.** Do not get Nitro-Paste on skin. When using Nitropaste be sure to wear gloves. Do not allow your skin to come into contact with the paste.