

	<b>COUNTY OF SACRAMENTO</b> EMERGENCY MEDICAL SERVICES AGENCY	Document #	9003.16
	PROGRAM DOCUMENT:	Initial Date:	04/25/95
	<b>Pediatric</b> <b>Respiratory Distress: Reactive Airway Disease, Asthma, Bronchospasm, Croup, or Stridor</b>	Last Approval Date:	09/12/19
		Effective Date:	07/01/21
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 EMS Medical Director

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 EMS Administrator

**Purpose:**

- A. To ~~serve as establish~~ a treatment standard for pediatric patients assessed to have respiratory distress and a history of asthma, bronchospasm, or reactive airway disease.
- B. To ~~serve as establish~~ a treatment standard for pediatric patients assessed to have respiratory distress with no history of asthma, bronchospasm, or reactive airway disease but are wheezing and tachypneic.
- C. To ~~serve as establish~~ a treatment standard for pediatric patients assessed to have slow onset of respiratory distress, barking cough, with a history of fever and respiratory stridor.

**Authority:**

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

**Protocol:**

Treat a single problem; commit yourself to a single assessment and if in doubt contact medical control for advice.

- A. **Asthma/Bronchospasm - Mild or Moderate:**  
 Patient present with intercostal retractions, nasal flaring and capillary refill > 2 seconds.

BLS
1. Supplemental $\text{O}_2$ as necessary to maintain $\text{SpO}_2 \geq 94\%$ . Use lowest concentration and flow rate of $\text{O}_2$ as possible. 2. Assess vital signs, including $\text{SpO}_2$ when available. 3. Assess lung sounds. 4. Consider Noninvasive Ventilation (NIV) when appropriate, for moderate to severe distress (patient's $\geq$ twelve (12) years of age only). 5. Begin immediate transport.
ALS
1. <b>Albuterol:</b> 2.5 mg (3 ml unit dose): <ul style="list-style-type: none"> <li>• Nebulizer (HHN), or mask; reassess after the first treatment. May be repeated as needed, based on reassessment.</li> </ul> 2. Pulse Oximetry, when available, may be used to titrate oxygen saturation to a $\text{SpO}_2 \geq 94\%$ . 3. Cardiac monitor. 4. Consider vascular access.

- B. Asthma/Bronchospasm - Condition is severe:** Immediate transport.  
 Patient is unable to speak, patient may have decreased/elevated pulse and/or decreased/elevated blood pressure; mental status is altered.

<b>BLS</b>
<ol style="list-style-type: none"> <li>1. Basic Life Support (BLS) airway interventions as needed.</li> <li>2. Supplemental O<sub>2</sub> as necessary to maintain SpO<sub>2</sub> SpO<sub>2</sub> ≥ 94%. Use lowest concentration and flow rate of O<sub>2</sub> O<sub>2</sub> as possible.</li> <li>3. Assess vital signs, including SpO<sub>2</sub> SpO<sub>2</sub> when available.</li> <li>4. Consider NIV, when appropriate, for moderate to severe distress (patient's ≥ twelve (12) years of age only).</li> <li>5. Consider administering Epinephrine auto-injector if needed:           <ul style="list-style-type: none"> <li>• &gt; 30 kg Epinephrine Auto Injector 0.3 mg IM. No repeat. Record time of injection.</li> <li>• 15-30kg Pediatric Epinephrine Auto Injector 0.15 mg IM. No repeat. Record time of injection.</li> </ul> </li> <li>6. Begin immediate transport in position of comfort.</li> </ol>
<b>ALS</b>
<ol style="list-style-type: none"> <li>1. Airway management as per PD# 8837- Pediatric Airway Management.</li> <li>2. Pulse Oximetry, when available, may be used to titrate oxygen saturation to a SpO<sub>2</sub> SpO<sub>2</sub> ≥ 94%.</li> <li>3. <b>Albuterol:</b> 5 mg via HHN, mask or BVM.</li> <li>4. <b>Epinephrine:</b> 0.01 mg/kg of 1:1,000 (1 mg/ml) solution Intramuscular (IM) up to a maximum dose of 0.3 ml.</li> <li>5. Initiate vascular access. Titrate to a minimal Systolic Blood Pressure (SBP) for patient's age. Vascular access shall not take precedence over administration of Albuterol or Epinephrine.</li> <li>6. Cardiac Monitor.</li> </ol>

- C. Croup/Stridor - Condition is mild to moderate:**  
 Slow onset of mild to moderate respiratory distress, barking cough, fever and respiratory stridor. Unilateral stridor may be due to bronchial foreign body.

<b>BLS</b>
<ol style="list-style-type: none"> <li>1. Basic Life Support (BLS) airway interventions as needed.</li> <li>2. Supplemental O<sub>2</sub> as necessary to maintain SpO<sub>2</sub> SpO<sub>2</sub> ≥ 94%. Use lowest concentration and flow rate of O<sub>2</sub> O<sub>2</sub> as possible.</li> <li>3. Assess vital signs, including SpO<sub>2</sub> SpO<sub>2</sub> when available.</li> <li>4. Begin immediate transport in position of comfort.</li> </ol>
<b>ALS</b>
<ol style="list-style-type: none"> <li>1. Saline: 3ml HHN reassess after first treatment.</li> </ol>

**D. Croup/Stridor - Condition is severe:**

Patient is unable to speak/ patient may have decreased/elevated pulse and/or decreased/elevated blood pressure/ mental status is altered. Unilateral stridor may be due to bronchial foreign body.

BLS
<ol style="list-style-type: none"><li>1. Basic Life Support (BLS) airway interventions as needed.</li><li>2. Supplemental O2 as necessary to maintain SpO2 <math>\geq</math> 94%. Use lowest concentration and flow rate of O2 as possible.</li><li>3. Assess vital signs, including SpO2 when available.</li><li>4. Begin immediate transport in position of comfort.</li></ol>
ALS
<ol style="list-style-type: none"><li>1. Airway management as per PD# 8837</li><li>2. Pulse oximetry, when available, <b>may</b> will be used to titrate oxygen saturation to SpO2 <math>\geq</math> 94%.</li><li>3. <b>Epinephrine:</b> 0.01 mg/Kg of 1:1,000 (1mg/ml) solution IM up to a maximum dose of 0.3 ml.</li><li>4. Initiate vascular access. Titrate to a minimal Systolic Blood Pressure (SBP) for patient's age. Vascular access shall not take precedence over administration of Epinephrine.</li><li>5. Cardiac Monitoring.</li></ol>

**Cross Reference:** PD# 8837 - Pediatric Airway Management  
PD# 8829 - Noninvasive Ventilation (NIV)