	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9003.18
	PROGRAM DOCUMENT:	Initial Date:	04/25/95
	Pediatric Respiratory Distress: Reactive Airway Disease, Asthma, Bronchospasm, Croup, or Stridor	Last Approval Date:	03/08/23
		Effective Date:	11/01/25
		Next Review Date:	03/01/25

Signature on File	Signature on File
EMS Medical Director	EMS Administrator

# Purpose:

- A. To establish a treatment standard for pediatric patients assessed to have respiratory distress and a history of asthma, bronchospasm, or reactive airway disease.
- B. To 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 establish a treatment standard for pediatric patients assessed to have a 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:

# A. Asthma/Bronchospasm - Mild or Moderate:

The patient presents with intercostal retractions, nasal flaring, and capillary refill > 2 seconds.

### **BLS**

- 1. Supplemental  $O_2$  as necessary to maintain  $SpO_2 \ge 94\%$ . Use the lowest concentration and flow rate of  $O_2$  possible.
- 2. Assess vital signs, including SpO<sub>2</sub>, when available.
- 3. Assess lung sounds.
- 4. Consider Noninvasive Ventilation (NIV), when appropriate, for moderate to severe distress (patients≥ twelve (12) years of age only).
- 5. Begin immediate transport.

#### **ALS**

- 1. Albuterol: 2.5 mg (3 ml unit dose):
  - Nebulizer (HHN) or mask; reassess after the first treatment. May be repeated as needed, based on reassessment.
- 2. Pulse Oximetry, when available, may be used to titrate oxygen saturation to a  $SpO_2 \ge 94\%$ .
- 3. Cardiac monitor.
- 4. Consider vascular access.

# B. **Asthma/Bronchospasm - Condition is severe**: Immediate transport.

The patient is unable to speak, and patient may have decreased/elevated pulse and/or decreased/elevated blood pressure; mental status is altered.

### **BLS**

- 1. Basic Life Support (BLS) airway interventions as needed.
- 2. Supplemental  $O_2$  as necessary to maintain  $SpO_2 \ge 94\%$ . Use the lowest concentration and flow rate of  $O_2$  as possible.
- 3. Assess vital signs, including SpO<sub>2</sub>, when available.
- 4. Consider NIV, when appropriate, for moderate to severe distress (patients≥ twelve (12) years of age only).
- 5. Consider administering an Epinephrine auto-injector if needed:
  - > 30 kg Epinephrine Auto-Injector 0.3 mg IM. No repeat. Record the time of injection.
  - 15-30kg Pediatric Epinephrine Auto-Injector 0.15 mg IM. No repeat. Record the time of injection.
- 6. Begin immediate transport in the position of comfort.

#### ALS

- 1. Airway management as per PD# 8837- Pediatric Airway Management.
- 2. Pulse Oximetry, when available, may be used to titrate oxygen saturation to a  $SpO_2 \ge 94\%$ .
- 3. Albuterol: 5 mg via HHN, mask or BVM.
- 4. **Epinephrine**: 0.01 mg/kg of 1:1,000 (1 mg/ml) solution Intramuscular (IM) up to a maximum dose of 0.3 ml.
- 5. Initiate vascular access. Titrate to a minimal Systolic Blood Pressure (SBP) for the patient's age. Vascular access shall not take precedence over the administration of Albuterol or Epinephrine.
- 6. Cardiac Monitor.

### 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.

#### **BLS**

- 1. Basic Life Support (BLS) airway interventions as needed.
- 2. Supplemental O2 as necessary to maintain  $SpO_2 \ge 94\%$ . Use the lowest concentration and flow rate of  $O_2$  as possible.
- 3. Assess vital signs, including SpO<sub>2</sub> when available.
- 4. Begin immediate transport in the position of comfort.

### ALS

1. Saline: 3ml HHN reassess after first treatment.

# D. Croup/Stridor - Condition is severe:

The patient is unable to speak. The 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**

- 1. Basic Life Support (BLS) airway interventions as needed.
- 2. Supplemental  $O_2$  as necessary to maintain SpO2  $\geq$  94%. Use the lowest concentration and flow rate of  $O_2$  as possible.
- 3. Assess vital signs, including SpO<sub>2</sub>, when available.
- 4. Begin immediate transport in the position of comfort.

#### ALS

- 1. Airway management as per PD# 8837
- 2. Pulse oximetry, when available, will be used to titrate oxygen saturation to SpO2 ≥ 94%.
- 3. **Epinephrine**: 0.01 mg/Kg of 1:1,000 (1mg/ml) solution IM up to a maximum dose of 0.3 ml
- 4. Initiate vascular access. Titrate to a minimal Systolic Blood Pressure (SBP) for patient's age. Vascular access shall not take precedence over the administration of Epinephrine.
- 5. Cardiac Monitoring.

**Cross Reference:** PD# 8837 – Pediatric Airway Management

PD# 8829 - Noninvasive Ventilation (NIV)