

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Basic**

**SMO: Pediatric Bradycardia**

**Overview:** Bradycardia in children is a serious sign. The most common cause of bradycardia in children is hypoxia so EARLY airway and ventilation intervention is crucial. This protocol is intended to guide EMS Responders through the assessment and treatment of these children.

**INFORMATION NEEDED**

- History, onset and duration of symptoms, appearance, and neurological baseline
- History of respiratory or respiratory insufficiency, failure, obstruction, or respiratory arrest
- History of cardiac disease or etiology, previous episodes, treatment required, medications or possibility of ingestion
- Antecedent symptoms; dizziness, syncope, or other related chief complaint

**OBJECTIVE FINDINGS**

**Clinical signs of respiratory distress or Failure/hypoxemia**

- Apnea
- Slowed or absent capillary refill (< 3 seconds)
- Hypotension
- Retractions, flaring or grunting

**Signs of decreased perfusion**

- AMS/Abnormal appearance (“TICLS”)
- Inequality of central and distal pulses
- Loss of distal pulses

**TREATMENT**

- Routine Medical Care.
- Call for ALS assist
- ABC’s—oxygenation and ventilation, Oxygen high flow by NRB mask; if no response assist ventilations using BVM and 100% oxygen
- Shock and heart rate < 80/min infant;< 60/min child < 8 yrs begin chest compressions,
- Shock position for decreased perfusion prn

**Documentation of adherence to protocol:**

- Respiratory status—airway treatment provided as needed
- Perfusion status—color, pulses, capillary refill
- Response to treatment

<b>Medical Control Contact Criteria</b>
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<input type="checkbox"/> Notify Medical Control ASAP regarding patient condition
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**PRECAUTIONS AND COMMENTS**

- In children, Bradycardia almost always means HYPOXIA. Treat for hypoxia FIRST.
- Be sure that the patient is adequately oxygenated and ventilated

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Paramedic**

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**OBJECTIVE FINDINGS**

\_\_\_ **Clinical signs of respiratory distress or Failure/hypoxemia**

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\_\_\_ **Signs of decreased perfusion**

- AMS/Abnormal appearance (“TICLS”)
- Inequality of central and distal pulses
- Loss of distal pulses

**TREATMENT**

- \_\_\_ Routine Medical Care
- \_\_\_ ABC’s—oxygenation and ventilation, Oxygen high flow by NRB mask; if no response assist ventilations using BVM and 100% oxygen
- \_\_\_ Shock and heart rate < 80/min infant;< 60/min child < 8 yrs begin chest compressions
- \_\_\_ Shock position for decreased perfusion prn
- \_\_\_ Cardiac Monitor, advanced airway if no response to BVM with high flow oxygen IV/IO access
- \_\_\_ **Epinephrine (1:10,000) 0.01mg/kg IV or IO** max single dose 0.1mg—dilute with NS to volume of 10 cc, may repeat x 1 in 5 min. Epinephrine (1:1000 0.1 mg/kg, repeat x1 in 5 min
- \_\_\_ **Atropine 0.02mg/kg IV or IO**, repeat x1 in 3-5 min. Minimum single dose:
  - CHILD: 0.5mg (max total dose=1.0mg)
  - ADOLESCENT: 1 mg (max total dose = 2.0 mg)

**Documentation of adherence to protocols:**

- Respiratory status—airway treatment provided as needed
- Perfusion status—color, pulses, capillary refill
- Response to treatment
- Identify medications given and response

<b>Medical Control Contact Criteria</b>
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| <input type="checkbox"/> Notify hospital ASAP regarding patient condition. Verify medications with Medical Control. |
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**PRECAUTIONS AND COMMENTS**

- In children, Bradycardia almost always means HYPOXIA. Treat for hypoxia FIRST, then proceed to medications.
- Atropine is rarely effective in treating pediatric Bradycardia; be sure that the patient is adequately oxygenated and ventilated