Bradycardia

Note: Bradycardia should be considered to be due to hypoxia until proven otherwise. For bradycardia with a pulse that causes cardiopulmonary compromise:

Pre-Medical Control
1. Follow the General Pre-Hospital Care Protocol.
2. If no signs of Cardiorespiratory compromise consider the contributing factors.
   a. Continue ventilation, if need.
   b. Initiate IV/IO NS, if needed.
   c. Consider blood glucose check.
   d. Determine Broselow color.
3. Contact Medical Control.
4. If signs of Cardiorespiratory compromise are evident:
   a. Perform chest compression/CPR.
   b. If HR less than 60 despite oxygenation & ventilation, administer Epinephrine 0.01 mg/kg IV/IO (1:10,00; 0.1 ml/kg). May be repeated every 3-5 minutes.
5. If suspected increased vagal tone or primary AV block:
   a. Administer Atropine 0.02 mg/kg IV/IO (minimum dose 0.1 mg) may repeat once in 5 minutes. Maximum dose is 1 mg AND/OR
   b. Begin pacing at rate up to 100 bpm.
   c. Contact Medical Control.
6. Sedation may be used to facilitate transcutaneous pacing per MCA selection.

<table>
<thead>
<tr>
<th>Sedation :</th>
<th>(Select Options)</th>
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<tr>
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<td>(Titrate to minimum amount necessary)</td>
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<tr>
<td>□ Midazolam 1-5 mg IV/ IO (0.05 mg/kg) titrated slowly may repeat every 5 minutes until maximum of 0.1 mg/kg</td>
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<tr>
<td>□ Diazepam 5-10 mg IV/ IO (0.1 mg/kg) titrated slowly may repeat every 5 minutes until maximum 0.3 mg/kg</td>
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<td>□ Lorazepam 1-2 mg IV/ IO (0.1 mg/kg, max 4 mg/dose) titrated may repeat every 5 minutes until maximum of 8 mg</td>
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<td>□ Fentanyl 1 mcg/kg IV/IO</td>
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Post-Medical Control
7. Additional orders as appropriate.
Notes:
1. Serious signs or symptoms include:
   a. Poor perfusion - indicated by absent or weak peripheral pulses, increased capillary refill time, skin cool/mottled.
   b. Hypotension is SBP less than 70 + (age x 2).
   c. Respiratory difficulty (respiratory rate greater than 60/minute) indicated by increased work of breathing (retractions, nasal flaring, grunting), cyanosis, altered level of consciousness (unusual irritability, lethargy, failure to respond to parents), stridor, wheezing.
2. When CPR is required, a precise diagnosis of the specific bradyarrhythmia is not important. Perform chest compressions if, despite oxygenation and ventilation, the heart rate is less than 60/minute and associated with poor systemic perfusion in infant or child. If severe hypothermia, do not perform chest compressions and follow Hypothermia Protocol.
Bradycardia should be considered to be due to hypoxia until proven otherwise. For bradycardia with a pulse that causes cardiopulmonary compromise:

Follow General Pre-hospital Care Protocol

**Continued Bradycardia AND Signs of Cardiorespiratory Compromise?**

- Consider contributing factors
- Continue ventilation, if needed
- Initiate IV/IO NS, if needed
- Consider blood glucose check
- Determine Broselow color

**Suspected increased vagal tone or primary AV block**

- Atropine 0.02 mg/kg IV/IO (minimum dose 0.1 mg)
  May repeat once in 5 minutes. Maximum dose is 1 mg
  AND/OR
- Begin pacing (at rate up to 100 bpm)

Sedation may be used to facilitate transcutaneous pacing per MCA selection

Additional orders as appropriate
Notes:

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   a. Poor perfusion - indicated by absent or weak peripheral pulses, increased capillary refill time, skin cool/mottled.
   b. Hypotension is SBP less than 70 + (age x 2).
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