**3.1P Bradycardia – Pediatric**

**EMT/ADVANCED EMT STANDING ORDERS**
- Routine Patient Care.
- Consider the underlying causes of bradycardia (e.g. hypoxia, hypoglycemia, hypovolemia, and hypothermia).
- Begin/continue CPR if heart rate is <60 bpm with hypoperfusion despite adequate ventilation and oxygenation.
- 12-lead ECG if available.

**PARAMEDIC STANDING ORDERS**

**For symptomatic bradycardia:**

**If hemodynamically unstable:**
- Epinephrine (0.1mg/mL) 0.01 mg/kg IV (0.1 ml/kg of 0.1mg/mL) every 3 – 5 minutes.
- Consider atropine 0.02 mg/kg IV for increased vagal tone or AV blocks, may repeat once (minimum single dose: 0.1 mg; maximum single dose 0.5 mg.)
- Consider transcutaneous pacing.
- Administer procedural sedation prior to/during pacing, if feasible:
  - *Midazolam 0.05 mg/kg IV/IM or 0.1 mg/kg IN (maximum dose 3 mg); may repeat once in 5 minutes, OR*
  - Lorazepam 0.05 mg/kg IV/IM (maximum dose 1 mg); may repeat once in 5 minutes, OR
  - Diazepam 0.1 mg/kg IV (maximum dose 5 mg); may repeat once in 5 minutes

**Other Causes:**
- For hypoglycemia see Hypoglycemia 2.9P Protocols.
- For symptomatic beta blocker or calcium channel blocker overdose, consider glucagon 0.025 – 0.05 mg/kg.
- For suspected hyperkalemia with ECG changes or symptomatic calcium channel blocker overdose consider:
  - Calcium gluconate (10% solution) 100 mg/kg IV with a maximum 2 gm/dose over 5 minutes; may repeat in 10 minutes if clinical indication persists, OR
  - Calcium chloride (10% solution) 20 mg/kg IV (0.2 ml/kg) with a maximum 1 gm/dose over 5 minute; not to exceed 1 ml per minute. May repeat in 10 minutes if clinical indication persists.

*For IN administration of midazolam use a 5 mg/mL concentration.

For calcium chloride administration, ensure IV patency and do not exceed 1 mL per minute.

**PEARLS:**
- Combine age specific heart rates with signs of respiratory failure and shock while assessing.
- If child is asymptomatic, consider no treatment.
- When pushed too quickly, glucagon can cause nausea and vomiting.

The New Hampshire Bureau of EMS has taken extreme caution to ensure all information is accurate and in accordance with professional standards in effect at the time of publication. These protocols, policies, or procedures MAY NOT BE ALTERED OR MODIFIED.