PEDIATRIC CARDIAC DYSRHYTHMIAS

Cardiac dysrhythmias are rare in children. Bradycardia is almost always caused by hypoxia and is frequently a pre-arrest situation. Tachycardia may be SVT, VT, or sinus tachycardia. Tachycardia may be from hypoxia or pain, however, children may tolerate heart rates >200 without immediate serious consequences. Carefully assess the patient, and if they are essentially asymptomatic, then expedite transport and monitor closely.

A. Perform **Initial Treatment / Universal Patient Care Protocol** and follow the proper protocol for medical management based on clinical presentation.

B. Bradycardia (Heart Rate < 60): usually due to hypoxia. Always look for potentially reversible causes. Aggressively manage the airway.

1. If no pulse, treat per **Cardiac Arrest Protocol 4406.**

2. If pulse present but patient is hemodynamically unstable with low blood pressure, poor perfusion, and decreased level of consciousness:

   a. Reassess airway and assist ventilations.

   b. **Contact Medical Command** and administer **Epinephrine** (1:10,000) 0.01 mg/kg IV/IO, or **Epinephrine** (1:1000) 0.1 mg/kg down ET tube **per MCP order**. Repeat every 3 to 5 minutes **per MCP order**.

   c. **If ordered by MCP**, administer **Atropine** 0.02 mg/kg IV/IO, or ET. Minimum dose: 0.1 mg. Maximum single dose: 0.5 mg for child; 1.0 mg for adolescent.

3. If child is essentially asymptomatic, monitor closely and expedite transport. Continually reassess airway and oxygenation.

C. Narrow Complex with rate > 220 (probably SVT), with a pulse and no evidence of hemodynamic instability, shock, or decreased level of consciousness.

1. Vagal maneuvers.

2. If no conversion, administer **Adenosine** 0.1 mg/kg IV/IO followed by immediate 20 ml flush of normal saline **per order of MCP**. Maximum first dose of 6 mg.

3. If no conversion, may double and repeat dose once **per order of MCP.** Maximum second dose of 12 mg.

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D. Narrow complex with rate > 220 (probably SVT), with low blood pressure and other signs and symptoms of shock including decreased level of consciousness.

1. If vascular access is in place and **Adenosine** can be given within 90 seconds, then treat as in “C2 and C3" above **per order of MCP**.
2. If no conversion and still in shock, then synchronized cardioversion at 0.5 - 1.0 joules/kg **per order of MCP**.
3. If no conversion and still in shock, then synchronized cardioversion at 2.0 joules/kg **per order of MCP.**

E. Wide complex with rate > 150 (probably VT).

1. If conscious, administer **Lidocaine** 1mg/kg IV/IO or **Amiodarone** 5 mg/kg over 20 – 60 minutes, **per order of MCP.**
2. If unconscious with signs of shock, deliver synchronized cardioversion as outlined in “D2 and D3" above **per order of MCP.**