



# EMT-Paramedic Treatment Protocol 4407

## Pediatric Emergencies Cardiac Dysrhythmias

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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 **Peds-MAMP Protocol 4401**.
- B. Bradycardia (heart rate <60). Usually due to hypoxia. Always look for potentially reversible causes as outlined in **MAMP Protocol 4201-F**. 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 or 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.





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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 or 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.



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 "C 2 and C 3" above **per order of MCP**.

2. If no conversion and still in shock, then synchronized cardioversion at 0.5 to 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, **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**.

