**PEARL/S:**

- Bradycardia is commonly a manifestation of hypoxia.
- IV medications should be followed by a 2-3 mL flush of NS in most proximal port.
- ETT placement should be reconfirmed every time the patient is moved or for change of status.
- Continuous ETCO2 is mandatory in intubated patient.
- Consider orogastric tube for abdominal distention.
- Use length-based resuscitation tape.

<table>
<thead>
<tr>
<th>Medication Name</th>
<th>Medication Dose</th>
<th>Newborn</th>
<th>10 kg</th>
<th>12 kg</th>
<th>15 kg</th>
<th>20 kg</th>
<th>22 kg</th>
<th>25 kg</th>
<th>30 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epi 1:10,000 (Adrenalin)</td>
<td>0.01 mg/kg</td>
<td>0.5 mL</td>
<td>1 mL</td>
<td>1.2 mL</td>
<td>1.5 mL</td>
<td>2 mL</td>
<td>2.2 mL</td>
<td>2.5 mL</td>
<td>3 mL</td>
</tr>
<tr>
<td>Atropine sulfate</td>
<td>0.02 mg/kg</td>
<td>2 mL</td>
<td>2.4 mL</td>
<td>3 mL</td>
<td>4 mL</td>
<td>4.4 mL</td>
<td>5 mL</td>
<td>5 mL</td>
<td>5 mL</td>
</tr>
</tbody>
</table>

**EMT**

*Universal Care Guidelines with an emphasis on adequate oxygenation*

If heart rate is persistently < 60 for child/infant or neonate, begin CPR. Refer to Cardiac Arrest: Unknown Rhythm (i.e. BLS) Guideline

**I/P**

- Epinephrine 1:10,000; 0.01 mg/kg, IV or IO, maximum 1 mg. Repeat every 3 – 5 minutes
- If suspected vagal tone: atropine sulfate; 0.02 mg/kg, IV or IO, repeat every 5 minutes. Maximum single dose for child 0.5 mg with total maximum of 1 mg
  - Identify and treat reversible causes

**Med Control**

- Consider transcutaneous pacing
PEARL/S:

- Treatment of sinus tachycardia should be aimed at searching for and treating reversible causes (hypovolemia, hypoxia, fever, pain, anxiety, medication/drug effect). Please refer to the appropriate guideline(s) based on differential.
- Consider vagal maneuvers for supraventricular tachycardia, if stable.

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<th>25 kg</th>
<th>30 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenosine (Adenocard)</td>
<td>0.1 mg/kg</td>
<td>0.33 mL</td>
<td>0.4 mL</td>
<td>0.5 mL</td>
<td>0.66 mL</td>
<td>0.73 mL</td>
<td>0.83 mL</td>
<td>1 mL</td>
<td></td>
</tr>
<tr>
<td>Midazolam (Versed)</td>
<td>0.1 mg/kg</td>
<td>0.2 mL</td>
<td>0.24 mL</td>
<td>0.3 mL</td>
<td>0.4 mL</td>
<td>0.44 mL</td>
<td>0.5 mL</td>
<td>0.6 mL</td>
<td></td>
</tr>
</tbody>
</table>

EMT Universal Care Guidelines with an emphasis on adequate oxygenation

I/P

**Probable Sinus Tachycardia**
(P waves present and normal, variable R-R with constant P-R child rate < 180, infant rate < 220). Search for and treat potential causes as listed above in differential diagnoses

**Probable Supraventricular Tachycardia**
(QRS < 0.08 seconds, P waves absent, abrupt change to or from normal, child rate > 180, infant rate > 220)
Consider vagal maneuvers if stable

**Med Control**

Adenosine (Adenocard®): 0.1 mg/kg, rapid IV push, maximum initial dose 6 mg, may repeat one time at twice the first dose to a maximum of 12 mg

Synchronized cardioversion 0.5 to 1 j/kg, may increase up to 2 j/kg if ineffective

Consider midazolam (Versed®): 0.1 mg/kg IV, maximum single dose of 2 mg
Do not delay cardioversion
PEAKS:
- VT is uncommon in the pediatric patient.
- The ventricular rate may vary from near normal to near 300 beats per minute.
- Slow rates may be well tolerated.
- IV medications should be followed by a 2-3 mL flush of NS in the most proximal port.
- The majority of children who develop VT have underlying structural heart disease or prolonged QT syndrome.

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<th>30 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amiodarone (Cordarone)</td>
<td>5 mg/kg</td>
<td>1 mL</td>
<td>1.2 mL</td>
<td>1.5 mL</td>
<td>2 mL</td>
<td>2.2 mL</td>
<td>2.5 mL</td>
<td>3 mL</td>
<td></td>
</tr>
<tr>
<td>Midazolam (Versed)</td>
<td>0.1 mg/kg</td>
<td>0.2 mL</td>
<td>0.24 mL</td>
<td>0.3 mL</td>
<td>0.4 mL</td>
<td>0.44 mL</td>
<td>0.5 mL</td>
<td>0.6 mL</td>
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</table>

**EMT**
- Universal Care Guidelines with an emphasis on adequate oxygenation
- IV/IO/Vascular Access
- Confirm QRS > 0.08 seconds
- If patient is unstable, synchronized cardioversion at 0.5 j/kg to 1 j/kg, may increase to 2 j/kg
- Consider amiodarone (Cordarone®); 5 mg/kg IV or IO, over 10 to 20 minutes
- Consider midazolam (Versed®); 0.1 mg/kg IV or IO. Do not delay cardioversion