

DYSRHYTHMIAS: BRADYCARDIA - PEDIATRIC

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Information Needed:

- Bradycardia, in pediatric patients, typically is the result of some form of respiratory depression and initial treatment should be directed to ensuring that the patient is breathing adequately and providing supplemental oxygenation and ventilation as needed.
- Clinically significant bradycardia is defined as heart rate less than 60 bpm with signs of instability or a rapidly dropping heart rate associated with poor systemic circulation despite adequate oxygenation and/or ventilation
- History, onset and duration of symptoms, mental status, and neurologic baseline
- History of respiratory insufficiency, failure, obstruction, or respiratory arrest
- History of cardiac disease or etiology, previous episode, treatment required, medications or possibility of ingestion
- Antecedent symptoms: dizziness, syncope, or other related chief complaint
- For neonates (<29 days) refer to the Neonatal Resuscitation Protocol
- Utilize the Broselow Tape to measure length and then SMC Pediatric Reference Card for determination of drug dosages, fluid volumes, defibrillation/cardioversion joules and appropriate equipment sizes.

Objective Findings:

- Assess rhythm as bradycardia and determine if any of the following signs of instability are present:
 - Hypoperfusion
 - Hypotension
 - Respiratory difficulty
 - Altered mental status

Treatment:

- Routine medical care
- For unstable patients: deliver high flow O₂ via non-rebreather mask. Consider BVM with 100% oxygen.
- Confirm rhythm as bradycardia. If heart rate remains < 60/min with continued signs of instability after oxygenation and ventilation, begin cardiac compressions.
- Establish IV/IO
- Give epinephrine (1:10,000) IV/IO. May repeat q 3-5 minutes.

- Give IV/IO fluid bolus of NS for any signs of hypoperfusion. Reassess. May repeat twice as needed. Contact Pediatric Base Hospital Physician for additional fluid orders.
- If rhythm changes, check for pulses, and proceed to appropriate Pediatric Cardiac Arrest or Dysrhythmia Protocol as indicated.

Precautions and Comments:

- Bradycardia in infants < 6 months of age is more likely to cause symptoms as cardiac output is more dependent on heart rate in this age group.