

Severe Bradycardia (Pediatric)

CRITERIA

- This protocol is for pediatric patients who have severe bradycardia that is defined as having ALL of the following:
 - Heart rate < 60 beats/min
 - Signs of shock OR altered mental status

CFR and All Provider Levels

1. Begin chest compressions and ventilations as per AHA guidelines
2. Check for a pulse every two (2) minutes and perform the following:
 - Heart rate is between 60-100 beats/min, ventilate at a rate of 20 breaths/min using a bag valve mask and oxygen. Check for a pulse every one (1) minute
 - Heart rate > 100 beats/min AND patient is adequately breathing (both in rate and volume for age), administer oxygen via non-rebreather mask

CFR STOP

EMT

3. Request ALS assistance
4. Transport

EMT STOP

Paramedic

5. Begin cardiac monitoring
6. Obtain intravascular access
7. Administer Epinephrine 0.01 mg/kg IV (maximum 1 mg) (0.1 ml/kg of a 1:10,000 concentration). Repeat as needed every 3-5 minutes
8. If severe bradycardia is caused by an increase in vagal tone or a primary AV block, administer Atropine 0.02 mg/kg IV (minimum 0.1 mg; maximum 0.5 mg)
9. Perform advanced airway management only if unable to provide effective bag valve mask ventilations

Paramedic STOP

Medical Control Options

10. Administer Atropine 0.02 mg/kg IV (minimum 0.1 mg; maximum 0.5 mg)
11. Begin transcutaneous pacing

Key Points / Considerations

- Effective bag valve mask ventilation is a reasonable alternative to advanced airway interventions (endotracheal intubation or use of a supraglottic airway) in the management of pediatric patients
- Consider contacting OLMC for procedural sedation prior to any electrical therapy for conscious patients

Procedural Sedation (Adult and Pediatric)

CRITERIA

- This protocol is for patients who are conscious and require medications for:
 - Short-term analgesic and/or anxiolytic therapy for procedures such as synchronized cardioversion, transcutaneous pacing, and CPAP
 - Sedation for advanced airway management
- In order to sedate the patient under standing orders to perform advanced airway management, the patient must meet **ALL** of the following criteria:
 - Adult
 - Altered mental status
 - Respiratory rate < 10 breaths/min
 - SpO₂ < 90% without supplemental oxygen
 - No immediate reversible cause of symptoms (e.g. opiate overdose responding to Naloxone)
- Adult patients who do not meet the above criteria **MUST** have prior approval of medications through OLMC
- Pediatric patients requiring procedural sedation, sedation for endotracheal intubation or post-intubation sedation **MUST** have prior approval of medications through OLMC
- Intubated patients must be monitored using waveform capnography
- Other procedures should be monitored using non-invasive capnography, if available

CFR and All Provider Levels

CFR STOP

EMT

EMT STOP

Paramedic

1. ABCs and vital signs
2. Administer oxygen
3. Obtain intravascular access
4. Begin cardiac monitoring
5. Monitor vital signs every 2-3 minutes
6. For an **ADULT** patient requiring procedural sedation, administer one of the following:
 - OPTION A: Etomidate 0.15 mg/kg IV (maximum 20 mg)
 - OPTION B: Diazepam 0.1 mg/kg IV (maximum 10 mg)
 - OPTION C: Midazolam 0.1 mg/kg IV (maximum 5 mg)
 - OPTION D: Lorazepam 0.02 mg/kg IV (maximum 4 mg)
 - OPTION E: Ketamine 1 mg/kg IV (maximum 100 mg)