TREATMENT PROTOCOL: SYMPTOMATIC BRADYCARDIA (ADULT)

1. Basic airway
2. Pulse oximetry
3. Oxygen prn
4. Cardiac monitor: document rhythm and attach ECG strip if dysrhythmia identified
   Bradycardia in acute MI may reflect a protective cardiac mechanism
   Perform a 12-lead ECG
5. Venous access
6. Supine position prn
7. Advanced airway prn
8. Continuous monitoring enroute, assess for signs of poor perfusion
9. Poor perfusion
   **Atropine**
   0.5mg IV
10. If hyperkalemia suspected
    **Albuterol**
    5mg via continuous mask nebulization two times
11. If no improvement:
    **Transcutaneous pacing (TCP)** if available
    Immediate TCP for patients with heart rate equal to or less than 40bpm and SBP equal to or less than 80mmHg in 2nd degree (Type II) heart block or 3rd degree heart block
    Do not delay TCP for venous access
    Recommended setting initial rate at 70bpm/0mA, slowly increase mA's until capture is achieved
12. **ESTABLISH BASE CONTACT (ALL)**
13. If hyperkalemia suspected, **Calcium Chloride** 1gram slow IV push over 60 seconds
   May repeat one time.
14. Consider fluid challenge
    **Normal Saline**
    10ml/kg IV, reassess for pulmonary edema at each 250ml increments
    Stop infusion if pulmonary edema develops
15. If TCP is not available or patient non-responsive to TCP consider:
    **Push-dose Epinephrine**
    Mix 1mL Epinephrine 0.1mg/mL (IV formulation) with 9mL Normal Saline in a 10mL syringe. Administer **Push-dose Epinephrine 1mL IV/IO every 1-5 minutes, titrate to maintain a SBP >90mmHg**
16. If TCP is utilized in the awake patient, consider sedation or analgesia
    **Midazolam**
    1-2mg slow IV push titrate for sedation
    2.5mg IM or IN if unable to obtain venous access
    May repeat every 5min, maximum total adult dose 10mg all routes
    **Morphine**
    2-8mg slow IV push for analgesia
    Maximum total adult dose 20mg
    **Fentanyl**
    50-100mcg slow IVP/IM/IN for analgesia
    May repeat every 5min, maximum adult dose 200mcg
17. If patient continues to have symptomatic bradycardia or TCP is not available:
    **Atropine**
    0.5mg IV push
    May repeat every 3-5min, maximum total adult dose 3mg
SPECIAL CONSIDERATIONS

1. Patients at risk for hyperkalemia are those with renal failure, missed dialysis or patients taking potassium sparing diuretics. EKG signs of hyperkalemia include peaked T-waves, wide QRS, bradycardia, long PR internal, and absent p-waves.

2. In consultation with the base hospital, consider sodium bicarbonate 50mEq slow IVP for suspected hyperkalemia.

3. Ondansetron may be administered prior to morphine administration reduce potential for nausea/vomiting.

4. If the child is off the Broselow™ and adult size, move to the Adult protocol and Adult dosing.

5. Absolute contraindications: Altered LOC, respiratory rate less than 12 breaths/min, hypersensitivity or allergy.