Sierra – Sacramento Valley EMS Agency Treatment Protocol	C-7
Bradycardia	
Approval: Troy M. Falck, MD – Medical Director	Effective: 12/01/2017
Approval: Victoria Pinette – Executive Director	Next Review: 11/2019

- **Symptomatic bradycardia is defined as a heart rate <60/min that elicits signs and symptoms. When bradycardia is the cause of symptoms, the rate is generally <50/min**
- **Symptomatic bradycardia exists clinically when the following 3 criteria are present: 1.) The heart rate is slow; 2.) The patient has symptoms; and 3.) The symptoms are due to the slow heart rate**

BLS

- Manage airway and assist ventilations as necessary
- Assess V/S, including SpO_2
- O_2 at appropriate rate (if hypoxemic)

ALS

- Cardiac monitor, 12-lead ECG at appropriate time (do not delay therapy)
- Establish vascular access at appropriate time (may bolus up to 1000 mL NS)

Persistent bradycardia causing (any):

- Hypotension?
- Acutely altered mental status?
- Signs of shock?
- Ischemic chest discomfort
- Acute heart failure?

NO:

- Monitor and reassess
- Contact base hospital for consultation if necessary

YES:

Atropine

- 0.5 mg IV/IO
- May repeat every 3 – 5 minutes (max total: 3 mg)

If atropine ineffective:

Transcutaneous Pacing*

- Consider sedation with one of the following:
  - **Midazolam:** 5 mg IV/IO; **OR**
  - **Morphine:** 2 – 5 mg IV/IO; **OR**
  - **Fentanyl:** 25 – 50 mcg IV/IO
- May repeat sedation x 1 after 5 minutes

If patient remains symptomatic:

Dopamine

- 2-10 µg/kg/min infusion to maintain BP > 90

***Transcutaneous Pacing Information**

- **If patient is symptomatic, do not delay pacing to start an IV/IO or wait for atropine to take effect.**
- Set initial rate at 60/min.
- Set initial current at 10 mA and increase by 10 mA increments while assessing for mechanical capture.
- Once pacing is initiated (mechanical capture achieved), adjust the rate based on the patient's clinical response. Most patients will improve with a rate of 60 - 70/min if the symptoms are primarily due to bradycardia.
- Monitor/re-evaluate patient as needed, and increase current as necessary to maintain mechanical capture.