

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Basic**

**SMO: Adult Symptomatic Bradycardia**

**Overview:** Adult Bradycardia is defined as a patient having a pulse rate of < 50. Well trained athletes may have low pulse rates as well as patients on certain medications. As long as the patient is tolerating the slow heart rate well, treatment of the slow rhythm is not necessary. This protocol is intended to define “symptomatic bradycardia” and its treatment.

**INFORMATION NEEDED**

- \_\_\_ Presenting symptoms: time of onset, gradual or sudden
- \_\_\_ Associated signs / symptoms: discomfort (pain, location, quality, radiation, severity, previous occurrences), palpitations, dizziness, syncope, dyspnea, nausea, vomiting, fever, cough
- \_\_\_ Medical history: dysrhythmias, cardiac disease, stress, drug abuse, diabetes mellitus, renal failure, pacemaker

The definition of a “symptomatic bradycardia” is a patient with a pulse rate <50 bpm and any one or more of the following “serious signs or symptoms”:

**OBJECTIVE FINDINGS**

- \_\_\_ SBP less than 90 and signs of hypoperfusion
- \_\_\_ Altered Mental Status, syncope or near syncope due to a decrease in cerebral perfusion
- \_\_\_ Signs/symptoms of CHF (dyspnea, crackles, pitting edema)
- \_\_\_ Ischemic chest pain

**TREATMENT**

- \_\_\_ Assess ABC’s, secure airway, administer oxygen at 15L/min via NRB mask, assist breathing as necessary with BVM
- \_\_\_ Assess vital signs and perform secondary survey
- \_\_\_ RMC
- \_\_\_ ILS or ALS Intercept

**Documentation of adherence to protocol:**

- \_\_\_ Vital Signs taken and monitored appropriately
- \_\_\_ ILS or ALS intercept

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Intermediate**

**SMO: Adult Symptomatic Bradycardia**

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**INFORMATION NEEDED**

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- \_\_\_ Associated signs / symptoms: discomfort (pain, location, quality, radiation, severity, previous occurrences), palpitations, dizziness, syncope, dyspnea, nausea, vomiting, fever, cough
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The definition of a “symptomatic bradycardia” is a patient with a pulse rate <50 bpm and any one or more of the following “serious signs or symptoms”:

**OBJECTIVE FINDINGS**

- \_\_\_ SBP less than 90 and signs of hypoperfusion
- \_\_\_ Altered Mental Status, syncope or near syncope due to a decrease in cerebral perfusion
- \_\_\_ Signs/symptoms of CHF (dyspnea, crackles, pitting edema)
- \_\_\_ Ischemic chest pain

**TREATMENT**

- \_\_\_ Assess ABC’s, secure airway, administer oxygen at 15L/min via NRB mask, assist breathing as necessary with BVM
- \_\_\_ Assess vital signs and perform secondary survey
- \_\_\_ RMC
- \_\_\_ Attach monitor, 12 lead ECG if available (do not delay therapy)
- \_\_\_ IV/ IO of NS
- \_\_\_ Perform 12 lead
  - A) if STEMI or LBBB, call medical control for direction to give Atropine or not.
  - B) if nonSTEMI then may proceed to administer **Atropine 0.5 mg IVP or IO**, may repeat q 3-5 min. to a max dose of 3 mg (See PRECAUTIONS AND COMMENTS)
- \_\_\_ If STEMI or Cardiac Ischemia is present on 12 lead, **Call Medical Control to administer Atropine 0.5 mg IVP or IO**, call for repeat doses q 3-5 min. to a max dose of 3 mg (See PRECAUTIONS AND COMMENTS)
- \_\_\_ **Trancutaneous pacing (TCP)**
- \_\_\_ Contact Medical Control for permission to use **Valium (diazepam) 5 mg OR Versed (midazolam) 2 mg IVP** for sedation prior to TCP if patient conscious and Systolic BP >100.

- \_\_ Contact Medical Control for permission to use **Morphine sulfate** 2 mg IVP for pain control if needed (see PAIN MANAGEMENT protocol)
- \_\_ If the heart rate normalizes but hypotension persists:
  - Repeat fluid challenge of 500cc
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<b>Medical Control Contact Criteria</b>
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| <ul style="list-style-type: none"><li>__ Permission for use of Valium or Versed</li><li>__ Permission for use of Morphine Sulfate</li></ul> |
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**Documentation for Adherence to Protocol:**

- \_\_ Vital signs obtained
- \_\_ Correct doses of medications administered if indicated
- \_\_ Transcutaneous pacing (TCP) results in HR>50

**PRECAUTIONS AND COMMENTS**

- Call Medical Control before administering Atropine 0.5 mg for patients with STEMI or Cardiac ischemia present on 12 lead.
- If utilizing TCP, verify mechanical capture and patient tolerance. Utilize sedation and pain management as needed, but use with caution in the hypotensive patient.
- If the patient is symptomatic and one of the following conditions exists, go directly to transcutaneous pacing (TCP):
  - an IV/IO cannot be established and the patient has serious signs or symptoms associated with the bradycardia,

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Paramedic**

**SMO: Adult Symptomatic Bradycardia**

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The definition of a “symptomatic bradycardia” is a patient with a pulse rate <50 bpm and any one or more of the following “serious signs or symptoms”:

**OBJECTIVE FINDINGS**

- \_\_\_ SBP less than 90 and signs of hypoperfusion
- \_\_\_ Altered Mental Status, syncope or near syncope due to a decrease in cerebral perfusion
- \_\_\_ Signs/symptoms of CHF (dyspnea, crackles, pitting edema)
- \_\_\_ Ischemic chest pain unrelieved by NTG

**TREATMENT**

- \_\_\_ Assess ABC’s, secure airway, administer oxygen at 15l via NRB mask, assist breathing as necessary with BVM
- \_\_\_ Assess vital signs and perform secondary survey
- \_\_\_ RMC
- \_\_\_ Attach monitor, perform 12 lead if available (not to delay therapy)
- \_\_\_ IV/ IO of NS
- \_\_\_ Perform 12 lead
  - A) if STEMI or LBBB, call medical control for direction to give Atropine or not.
  - B) if nonSTEMI then may proceed to administer **Atropine 0.5 mg IVP or IO**, may repeat q 3-5 min. to a max dose of 3 mg (See PRECAUTIONS AND COMMENTS)
- \_\_\_ If STEMI or Cardiac Ischemia is present on 12 lead, **Call Medical Control to administer Atropine 0.5 mg IVP or IO**, call for repeat doses, may repeat q 3-5 min. to a max dose of 3 mg (See PRECAUTIONS AND COMMENTS)
- \_\_\_ **Transcutaneous pacing (TCP)**
- \_\_\_ Consider use of **Valium (diazepam) 5 mg** OR **Versed (midazolam) 2 mg** IVP for sedation prior to TCP if patient conscious and Systolic BP >100.
- \_\_\_ **Morphine sulfate 2 mg** IVP for pain control if needed (see PAIN MANAGEMENT protocol)

\_\_\_ If the heart rate normalizes but hypotension persists:

- Repeat fluid challenge 500cc
- **Dopamine** titrated to SBP>90 mm Hg. Start at 2-10mcg/kg/minute and titrate up in increments of 5mcg/kg/minute until SBP >90 or maximum of 20 mcg/kg/minute reached.

**Documentation for Adherence to Protocol:**

- \_\_\_ Vital signs obtained
- \_\_\_ Correct doses of medications administered if indicated
- \_\_\_ Transcutaneous pacing (TCP) results in HR>50

**PRECAUTIONS AND COMMENTS**

- Call Medical Control before administering Atropine 0.5 mg for patients with STEMI or Cardiac ischemia present on 12 lead.
- If utilizing TCP, verify mechanical capture and patient tolerance. Utilize sedation and pain management as needed, but use with caution in the hypotensive patient.
- If the patient is symptomatic and one of the following conditions exists, go directly to transcutaneous pacing (TCP):
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