

PEORIA AREA EMS SYSTEM
PREHOSPITAL CARE MANUAL

Unstable/Stable Bradycardia Protocol

Bradycardia is defined as a heart rate less than sixty beats per minute (< 60 bpm). Determining the stability of the patient with bradycardia is an important factor in patient care decisions. The assessment of the patient with bradycardia should include evaluation for signs and symptoms of hypoperfusion.

The patient is considered **stable** if the patient is asymptomatic (i.e. alert and oriented with warm, dry skin and a systolic BP > 100mmHg).

The patient is considered **unstable** if he/she presents with:

- An altered level of consciousness (ALOC).
- Diaphoresis.
- Dizziness.
- Chest pain or discomfort.
- Ventricular ectopy.
- Hypotension (systolic BP < 100mmHg).

First Responder Care

First Responder Care should be focused on assessing the situation and initiating Universal patient care to treat for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen**: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask.

BLS Care

BLS Care should be directed at conducting a thorough patient assessment, initiating routine patient care to treat for shock and preparing the patient for or providing transport.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen**: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask.
3. Obtain 12-Lead EKG and transmit to the receiving hospital as soon as possible

****3-Lead monitoring is not in the scope of the EMT-B****

4. Initiate ALS intercept and transport as soon as possible.

ILS Care

ILS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen**: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask.
3. Obtain **12-Lead EKG** and transmit to receiving hospital as soon as possible.

4. **IV Fluid Therapy:** 20mL/kg fluid bolus for systolic BP less than 100mmHg.
5. Initiate ALS intercept and transport as soon as possible. (*Transport can be initiated at any time during this sequence*).
6. **Atropine:** 0.5mg IV if the patient's perfusion does not improve after the fluid bolus, if the patient is hemodynamically unstable or if the cardiac rhythm is an AV block (other than a 3rd degree block). May repeat 0.5mg IV every **5 minutes** (with Medical Control order) up to a total of 3mg.
7. Contact receiving hospital (or Medical Control if needed) as soon as possible.

ALS Care

ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask.
3. Obtain **12-Lead EKG** and transmit to receiving hospital as soon as possible.
4. **IV Fluid Therapy:** 20mL/kg fluid bolus for systolic BP less than 100mmHg.
5. Atropine: 0.5mg IV/IO if the patient's perfusion does not improve after the fluid bolus, if the patient is hemodynamically unstable or if the cardiac rhythm is an AV block (other than a 3rd degree block). May repeat 0.5mg IV/IO every **5 minutes** (with Medical Control order) up to a total of 3mg.
6. **Immediate Transcutaneous Pacing:** If the patient is in a 3rd degree AV blocks (or in a Type II 2nd degree AV block unresponsive to Atropine).
 - Target heart rate should be set at **70 bpm**.
 - Current should be set at minimum to start and increased until capture is achieved.
 - Refer to the *Transcutaneous Pacing Procedure* for additional information.
7. **Midazolam (Versed):** 2mg IV/IO for patient comfort after pacing is initiated. Re-check vital signs 5 minutes after administration. May repeat dose one time if systolic BP > 100mmHg and respiratory rate is > 10 rpm. Additional doses require Medical Control order.

Midazolam (Versed): Intranasal if unable to obtain IV access. (See **intranasal dosing sheet**).

8. **Push-dose epinephrine:** (10mcg/mL) (*for short transports*)
 - **To make:** Draw up 1 mL of 1:10,000 cardiac epinephrine into a 10 mL syringe, and then draw up 9 mL of Normal Saline.
 - The syringe should be mixed by rolling it between the palms prior to administration.
 - **Administration:** 0.5 - 1.0 mL slow IV push every 1 - 5 minutes to maintain Systolic BP > 90.
9. **(Agency Optional) Norepinephrine (Levophed) infusion:** (*for prolonged scene times or transports*)
 - **To make:** Mix (2) 4mL Vials of Levophed in 250mL of NS to achieve proper concentration.
 - **Administration:** 1 - 20 mcg/min. Start a 5mcg/min, titrate every 5 - 10 minutes to maintain Systolic BP > 90.
 - Administer through a confirmed patent, large bore (> 18gauge) IV in a proximal vein (Antecubital preferred).
 - This medication may cause limb necrosis if extravasation occurs, if it does immediately stop medication infusion and notify receiving hospital.
 - Monitor blood pressure every 5 minutes.
10. Transport as soon as possible (*Transport can be initiated at any time during this sequence*).
11. Contact receiving hospital as soon as possible.

Critical Thinking Elements

- Monitor respiratory status, SPO2 and or Waveform Capnography if available if Versed or Ativan is given.

- Treat the patient -- not the monitor. Bradycardia does not necessarily mean that the patient is unstable or requires intervention.
- Treat underlying etiologies according to protocol.
- Atropine is NOT to be given if the patient's blood pressure is normal or elevated.
- *Bradycardia may be present due to increased intracranial pressure from a stroke or head injury. Contact Medical Control.*
- Caution must be taken in giving pressors in the setting of MI as they may worsen ischemia/infarct.
- Assess for underlying causes (e.g. hypoxia, hypovolemic shock, cardiogenic shock, or overdose).
- Fluid bolus should not delay Atropine administration or TCP if the patient is unstable.
- If the patient's presenting rhythm is a 3rd degree block, immediately prepare to pace. If the patient is symptomatic, pacing should be started without delay.
- The goal of the EMT-B is to obtain a 12-Lead EKG and transmit it to the receiving hospital as soon as possible
- 10 minutes is the goal for EKG's to be performed at all levels.

