PEORIA AREA EMS SYSTEM
PREHOSPITAL CARE MANUAL

Universal Cardiac Care Protocol

Patients experiencing chest pain with a suspected cardiac origin may present with signs and symptoms which include:

- Substernal chest pain / pressure
- Heaviness, tightness or discomfort in the chest
- Radiation and/or pain/discomfort to the neck or jaw
- Pain/discomfort/weakness in the shoulders/arms
- Nausea/vomiting
- Diaphoresis
- Dyspnea

Priorities in the care of chest pain patients include:

- Assessing and securing ABCs.
- Determining the quality and severity of the patient's distress.
- Identifying contributing factors of the event.
- Obtaining a medical history (including medications & allergies).

Timely transportation to the emergency department is an important factor in patient outcome.
**Strongly encourage transport to a hospital with an interventional catheterization lab when STEMI is present on 12-Lead ECG.

First Responder Care

First Responder Care should be focused on assessing the situation and initiating care to reassure the patient, reducing the patient's discomfort and beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol.*
2. **Oxygen**: 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. **Aspirin (ASA)**: 324mg PO (4 tablets of 81mg chewable aspirin by mouth).

    - **Ask the patient specifically about any history of hypersensitivity to ASA.**
    - **Do not give ASA to patients with active ulcer disease, asthma or known allergy to ASA.**

BLS Care

BLS Care should be directed at conducting a thorough patient assessment, providing care to reassure the patient, reducing the patient's discomfort, beginning treatment for shock and preparing or providing patient transportation.

1. Render initial care in accordance with the Universal Patient Care Protocol.
2. **Oxygen:** 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. **Aspirin (ASA)**: 324mg PO (4 tablets of 81mg chewable aspirin by mouth).

    - **Ask the patient specifically about any history of hypersensitivity to ASA.**
    - **Do not give ASA to patients with active ulcer disease, asthma or known allergy to ASA.**

1. **Nitroglycerin (NTG):** 0.4mg SL (1 metered spray dose sublingually). May repeat every **3-5 minutes** to a total of 3 doses (if systolic BP remains > 100mmHg).

- NTG (& ASA) may be administered without contacting Medical Control if the patient is age 30 or older, has chest pain consistent with acute myocardial infarction (AMI) and has a systolic BP > 100mmHg. *If the patient does not meet criteria, consult Medical Control prior to administering NTG.*

5. Obtain **12-Lead EKG** and transmit to Medical Control as soon as possible.

   3-Lead monitoring is not within the scope of practice of the EMT-B

6. Initiate ALS (or ILS) intercept if necessary and transport as soon as possible.
7. **Contact Medical Control** as soon as possible.

ILS Care

ILS Care should be directed at conducting a thorough patient assessment, providing care to reassure the patient, reducing the patient's discomfort, beginning treatment for shock and preparing or providing patient transportation.

1. Render initial care in accordance with the *Universal Patient Care Protocol.*
2. **Oxygen:** 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. **Aspirin (ASA):** 324mg PO (4 tablets of 81mg chewable aspirin by mouth).

   - **Ask the patient specifically about any history of hypersensitivity to ASA.**
   - **Do not give ASA to patients with active ulcer disease, asthma or known allergy to ASA.**

4. **Nitroglycerin (NTG):** 0.4mg SL (1 metered spray dose sublingually). May repeat every **3-5 minutes** to a total of 3 doses (if systolic BP remains > 100mmHg).

   NTG (& ASA) may be administered without contacting Medical Control if the patient is age 30 or older, has chest pain consistent with acute myocardial infarction (AMI) and has a systolic BP > 100mmHg.

5. Initiate ALS intercept if necessary and transport as soon as possible (transport can be initiated at any time during this sequence).
6. Obtain **12-Lead EKG** and transmit to receiving hospital. Contact Medical Control if wide complex tachycardia or consultation is needed.
7. **Ondansetron (Zofran):** *For nausea and vomiting* - **Choose one of the following:**
   - 4mg PO orally disintegrating tablet
   - 4mg IM
   - 4mg IV over 2 minutes
8. **Fentanyl:** *For pain* - **Choose one of the following:**
   - Intranasal *(See Intranasal Fentanyl Dosing Chart)*
   - 50mcg IV, over 2 minutes. May repeat every ***5 minutes*** to a total of 200mcg.
   - *If unable to initiate IV access* - 50mcg IM. May repeat as needed to a total of 200mcg.
9. **Contact Medical Control** as soon as possible, regardless of EKG transmission.

ALS Care

ALS Care should be directed at conducting a thorough patient assessment, providing care to reassure the patient, reducing the patient's discomfort, beginning treatment for shock and preparing or providing patient transportation.

1. Render initial care in accordance with the *Universal Patient Care Protocol.* If time permits, establish a 2nd line (preferably an 18g saline lock) en route.
2. **Oxygen:** 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. **Aspirin (ASA):** 324mg PO (4 tablets of 81mg chewable aspirin by mouth).

   - **Ask the patient specifically about any history of hypersensitivity to ASA.**
   - **Do not give ASA to patients with active ulcer disease, asthma or known allergy to ASA.**

4. **Nitroglycerin (NTG)**: 0.4mg SL (1 metered spray dose sublingually). May repeat every **3-5 minutes** to a total of 3 doses (if systolic BP remains > 100mmHg).
    - NTG (& ASA) may be administered without contacting Medical Control if the patient is age 30 or older, has chest pain consistent with acute myocardial infarction (AMI) and has a systolic BP > 100mmHg.
5. Obtain **12-Lead EKG** and transmit to receiving hospital. Contact Medical Control if wide complex tachycardia or consultation is needed.
6. **Nitropaste (Nitro-Bid):** 1 inch to anterior chest wall if patient's systolic BP is greater than 100mmHg.
7. **Ondansetron (Zofran)**: *For nausea and vomiting* - **Choose one of the following:**
    - 4mg PO orally disintegrating tablet
    - 4mg IM
    - 4mg IV over 2 minutes
8. **Fentanyl:** *For pain* - **Choose one of the following:**
    - Intranasal *(See Intranasal Fentanyl Dosing Chart)*
    - 50mcg IV, over 2 minutes. May repeat every ***5 minutes*** to a total of 200mcg.
    - *If unable to initiate IV access* - 50mcg IM. May repeat as needed to a total of 200mcg.
9. Transport as soon as possible (transport can be initiated at any time during this sequence).
10. **Contact Medical Control** as soon as possible, regardless of EKG transmission.

Critical Thinking Elements

- ILS & ALS may administer Nitroglycerin when the patient's systolic blood pressure is between 90-100mmHg **if IV access has been established.**
- Use caution with acute inferior wall MI (II, III, aVF) – Place IV and administer 20ml/kg Normal Saline as needed following Nitroglycerin
- Use caution with acute septal wall MI (V1, V2) – Watch for AV blocks and consider pacing.
- Initiate ALS intercept if the patient's chest pain is not eliminated with Oxygen or NTG.
- Consider the patient to be in cardiogenic shock if the patient has dyspnea, diaphoresis, a systolic BP < 100mmHg, and signs of congestive heart failure.
- Obtaining a 12-Lead EKG should not significantly delay initiation of transport.
- EKG limb leads should actually be placed on the patient's limbs!
- A pulse oximeter is a tool to aid in determining the degree of patient distress and the effectiveness of EMS interventions. A high pulse oximeter reading should not result in oxygen therapy being withheld.
- NTG that the patient self-administers prior to EMS arrival should be reported to Medical Control. Subsequent doses should be provided by the EMS unit's stock.
- **Medications should not be administered IM to a suspected AMI patient.**
- Nitro paste can be placed on the patient's upper back instead of the anterior chest if needed (e.g. if the patient has excessive chest hair).
- If the patient's systolic BP drops **below 90mmHg**, wipe the Nitropaste off.
- The goal of the EMT-B is to obtain a 12-Lead EKG and send it to the receiving hospital as soon as possible
- 10 minutes is the goal for EKG's to be performed at all levels.
- Avoid use of Zofran in patients with congenital long QT syndrome as these patients are at particular risk for Torsades de Pointes