Chest Pain Discomfort / Acute Coronary Syndrome

A. Indications for this protocol include one or more of the following:

1. The classic symptom associated with an Acute Coronary Syndrome (ACS) is chest discomfort, but symptoms may also include discomfort in other areas of the upper body, shortness of breath, sweating (diaphoresis), nausea, vomiting, and dizziness. Many patients complain of substernal chest pain, pressure, or discomfort unrelated to an injury or other readily identifiable cause.

2. Most patients complaining of substernal chest pain, pressure, or discomfort unrelated to an injury or other readily identifiable cause.

3. History of previous ACS / AMI with recurrence of similar symptoms.

4. Any patient with a history of cardiac problems who experiences lightheadedness or syncope.

5. Patients of any age with suspected cocaine abuse and chest pain.

6. Diabetic, female, and/or elderly patients with atypical chest discomfort or other symptoms associated with ACS / AMI in the absence of pain.

B. Perform **Initial Treatment / Universal Patient Care Protocol.** Assessment should be directed toward identifying ACS / AMI vs. identifying a non-cardiac cause of the symptom(s).

C. If patient has no history of a **true** allergy to aspirin **and** has no signs of active bleeding (i.e., bleeding gums, bloody or tarry stools, etc.), administer 4 (four) 81 mg chewable **Aspirin** orally (324 mg total). Note: May be administered prior to obtaining 12 lead ECG and/or establishment of IV access.

D. Obtain 12 lead ECG, unless it **significantly** delays treatment or transport. Transmission of 12 lead ECG or interpretation should be sent to the receiving facility or **Medical Command**. Pre-treatment 12 lead ECG preferred.

1. If 12 lead ECG indicates STEMI or presumably new LBBB, transport patient to nearest facility capable of emergency PCI if this transport can be accomplished in < 30 minutes. If transport time to a facility with these capabilities will be > 30 minutes, consider transport options in the following order. All transport destinations should be directed by consultation with **Medical Command.**

   a. Aeromedical transport to PCI capable facility, if available.

b. Transport to closest facility with fibrinolytic capability.

c. Transport to closest facility capable of providing stabilizing care and expeditious transfer to facility with PCI.

2. If 12 lead ECG indicates signs of ischemia, possible NSTEMI, or is normal/non-diagnostic, transport to closest facility capable of providing stabilizing care and transfer to facility with PCI, if indicated.

3. If patient has a BP < 90 **DO NOT** administer nitroglycerin.

a. If 12 lead ECG indicates Inferior Wall AMI as indicated by ST Segment elevation in two or more of leads II, III or aVF, a 12 lead ECG should be obtained using right chest leads (V4R at a minimum). If right chest leads show ST Segment elevation, **DO NOT** administer sublingual **Nitroglycerin**. Follow **Right Ventricular Infarct Protocol 4213**.

4. If 12 lead ECG indicates PVC's evaluate for underlying causes. Consult **Medical Command Physician** for treatment options.

5. If blood pressure is > 90 mm/hg systolic and patient has **not** taken Sildenafil (*Viagra®)* or Vardenafil (*Levitra®)* within last 24 hours or Tadalafil (*Cialis®)* within the last 72 hours:

a. Administer **Nitroglycerin** 0.4 mg SL. Note: May be administered prior to establishment of IV access.

b. Repeat **Nitroglycerin** 0.4 mg SL every 3 - 5 minutes to a maximum of three (3) doses unless pain is relieved.

c. If blood pressure falls below 90 systolic or decreases more than 30 mm/Hg below patient's normal baseline blood pressure, then discontinue dosing and **consult Medical Command Physician** to discuss further treatment.

d. If blood pressure < 90 systolic and/or patient is experiencing severe bradycardia or tachycardia, treat according to appropriate protocol. Further treatment **per MCP orders.** If patient has taken Sildenafil (*Viagra®)* or Vardenafil (*Levitra®)* within last 24 hours, or Tadalafil (*Cialis®)* within the last 72 hours, nitroglycerin should only be given **by Medical Command Physician order**.

E. If chest pain persists:

1. Administer **Morphine Sulfate** 2 mg slow IV; may repeat every five (5) minutes up to 10 mg unless pain is relieved.

   - Use caution if hypotensive and/or bradycardic. Consider use of **Fentanyl (Sublimaze®)**.
   - If systolic BP drops below 90 mm/Hg during administration of **Morphine Sulfate**, discontinue analgesic administration and administer IV fluid bolus 250 mL Normal Saline and contact Medical Command.

-OR-

Administer **Fentanyl** (*Sublimaze*®) 1 microgram/kilogram – up to 100 micrograms max single dose, slow IV. Additional doses require **MCP order.**

NOTE: Administration of pain medications may not be tolerated well in patients over 55 years of age. Doses should be initiated low and repeated as needed. Administration of these medications in patients > 55 years of age shall be as follows:

Administer **Morphine Sulfate** 1 mg slow IV; may repeat every five (5) minutes up to 10 mg unless pain is relieved.

- Use caution if hypotensive and/or bradycardic. Consider use of **Fentanyl (Sublimaze®)**.
- If systolic BP drops below 90 mm/Hg during administration of **Morphine Sulfate**, discontinue analgesic administration and administer IV fluid bolus 250 mL Normal Saline and contact Medical Command.

-OR-

Administer **Fentanyl** (*Sublimaze*®) 0.5 microgram/kilogram– up to a max initial dose of 100 micrograms. Providers may repeat this dose one (1) time as a standing order. Additional doses require **MCP order.**

2. If discomfort persists, **consult Medical Command Physician** to discuss further treatment with nitroglycerin, additional Morphine Sulfate, or Fentanyl. Monitor blood pressure and respiratory effort.

F. Treat dysrhythmias according to specific protocols.

G. If transport time permits, complete AHA Fibrinolytic Checklist. (Appendix A)