Chest Pain/Acute Coronary Syndrome

The goal is to reduce cardiac workload and to maximize myocardial oxygen delivery by reducing anxiety, appropriately oxygenating, and relieving pain. For non-cardiac causes of chest pain, refer to appropriate protocol which may include **Pain Management-Procedure Protocol.**

1. Follow **General Pre-Hospital Care Protocol.**
2. Obtain 12-lead as early as possible without delaying medication administration. (Per MCA selection, may be a BLS or Specialist procedure, follow **12 Lead ECG Procedure-Protocol**).
3. Administer oxygen 4 L/min per nasal cannula if pulse oximetry SpO2 < 94%.
4. Assist patient in the use of their own **aspirin** up to a dose of 325 mg and per formulation (chew, swallow, etc.)
5. Administer **aspirin** up to 325 mg PO, chew and swallow if no aspirin or suspected insufficient dose since the onset of chest pain. (Per MCA selection may be MFR and/or EMT skill).

Aspirin Administration	
☐ MFR	☐ EMT

6. Inquire of all patients regardless of identified gender if they have taken an erectile dysfunction medication or medications used to treat pulmonary hypertension in the last 48 hours.
   a. If yes, DO NOT ADMINISTER/ ASSIST WITH NITROGLYCERIN AND CONTACT MEDICAL CONTROL.
7. Consider **fentanyl** early when nitroglycerin is contraindicated due to erectile dysfunction medication (see 14. below for **fentanyl** administration)
8. If no erectile dysfunction medication, systolic BP is above 120 mmHG and patient has **nitroglycerin** sublingual tabs prescribed to them available (check expiration date): assist patient in use of their own nitroglycerin, up to a maximum of 3 doses.
9. Prior to IV administration if no erectile dysfunction medication and systolic BP is above 120 mmHG, **nitroglycerin** 0.4mg sublingual may be administered up to a maximum of 3 doses. (Per MCA selection may be EMT skill)

Nitroglycerin Administration
☐ EMT

10. Start an IV **NS** or **LR** KVO per **Vascular Access and IV Fluid Therapy-Procedure Protocol**.
11. If the patient has a SBP of less than 100 mmHg:
    a. Administer 250 ml fluid bolus (may repeat 3 times for a total of 1 liter)
    b. Between boluses assess patient response and monitor for pulmonary edema.
    c. If pulmonary edema is noted stop fluids and contact Medical Control

12. If no erectile dysfunction medication, IV has been established, and systolic BP is above 100 mmHG, administer **nitroglycerin** 0.4 mg sublingual. Dose may be repeated at 3-to-5-minute intervals if chest pain persists and systolic BP remains above 100 mmHg.
13. Obtain 12-lead ECG (Per MCA selection, may be a BLS or Specialist procedure, follow **12 Lead ECG Procedure-Protocol**). Follow local MCA transport protocol if ECG is positive for acute ST Elevation Myocardial Infarction (STEMI) and alert the hospital as soon as possible.
14. For patients with suspected cardiac chest pain refractory to **nitroglycerin**, or **nitroglycerin** is contraindicated due to erectile dysfunction medication, consider **fentanyl** administration:
    a. Adults (< 65 years of age) administer **fentanyl** 1 mcg/kg IV/IO/IN, max single dose 100 mcg, may repeat one time. Total dose may not exceed 200 mcg.
    b. Adults (> 65 years of age) administer **fentanyl** 0.5 mcg/kg IV/IO/IN, max single dose 50 mcg, may repeat three times. Total dose may not exceed 200 mcg.
    c. Total dose may not exceed 200 mcg without Medical Control contact and approval.

Medication Protocols
Aspirin
Fentanyl
Nitroglycerin