

Initial Date: 11/15/2015
Revised Date: 11/17/2025

Section 5-5

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 by nasal cannula if 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.

Michigan
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- ① 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.
 - ① 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.
 - ① 14. For patients with suspected cardiac chest pain refractory to **nitroglycerin**, or **nitroglycerin** is contraindicated due to erectile dysfunction medication, consider **fentanyl** administration:
 - a. Administer 1 mcg/kg IV/IO/IM/IN dosage rounded as per below:
 - a. Up to and including 25 kg - administer 25 mcg
 - b. 26-50 kg – administer 50 mcg
 - c. 51-75 kg - administer 75 mcg
 - d. 76 kg and above – administer 100 mcg
 - e. IV/IO/IN may repeat one-time, total dose may not exceed 200 mcg
 - f. If IM administration may NOT repeat

Medication Protocols: Aspirin, Fentanyl, Nitroglycerin