### Pearls

- Many STEMIs evolve during prehospital care and may not be noted on the initial 12-Lead ECG.
- An ECG should be obtained prior to treatment for bradycardia if patient condition permits.
- If a patient has taken their own Nitroglycerin without relief, consider potency of medication. Provider maximum doses do not include patient administered doses.
- Monitor for hypotension after administration of nitroglycerin and opioids.
- Diabetics, geriatric, and female patients often have atypical pain, or only generalized complaints. Suspect cardiac etiology in these patients, and perform a 12-Lead ECG.

### History
- **Age**
- **Medications (Erectile dysfunction medications)**
- **Past medical history (e.g., MI, angina, diabetes, or post menopausal)**
- **Allergies**
- **Recent physical exertion**
- **Onset**
- **Provocation**
- **Quality (e.g., pressure, constant, sharp, dull, etc.)**
- **Region/Radiation/Referred**
- **Severity (0 – 10 scale)**
- **Time (onset/duration/repetition)**

### Signs and Symptoms
- **Heart rate < 60 with associated hypotension, acute altered mental status, chest pain, acute CHF, seizures, syncope, or shock secondary to bradycardia**
- **Chest pain**
- **Respiratory distress**
- **Hypothermia or shock**
- **Syncope**
- **Nausea**
- **Abdominal Pain**
- **Diaphoresis**

### Differential
- **Acute myocardial infarction**
- **Hypoxia**
- **Pacemaker failure**
- **Hypothermia**
- **Sinus bradycardia**
- **Athletes**
- **Head injury (elevated ICP) or stroke**
- **Spinal cord lesion**
- **Sick sinus syndrome**
- **AV blocks (e.g., 1°, 2°, or 3°)**
- **Overdose**

### Treatment Protocol

**Chest pain?**

**Signs/symptoms consistent with cardiac etiology?**

- **Yes**
  - Chest Pain: Cardiac
  - **Consider**, cardiac monitor
  - **Consider**, 12-Lead ECG
  - Establish IV/IO
  - Notify receiving facility
  - **Consider**, Fentanyl
  - For pain
  - If age-dependent hypotensive
  - Normal Saline bolus IV/IO
  - May repeat x2

- **No**
  - Oxygen for sat < 92%
  - Position of comfort for pain control
  - **Consider**, 12-Lead ECG
  - Establish IV/IO
  - For pain
  - If age-dependent hypotensive
  - Normal Saline bolus IV/IO
  - May repeat x2
  - Notify receiving facility
  - **Consider** Base Hospital
  - for medical direction

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**San Mateo County Emergency Medical Services**

**Pediatric Chest Pain: Not Cardiac**

*For musculoskeletal and pleuritic pain and any chest pain that is NOT of possible cardiovascular etiology*

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**Effective July 2020**

**Treatment Protocol P06**