Patient has signs suggestive of ischemia or infarction

**ACUTE CORONARY SYNDROMES ALGORITHM**

**1. MONITOR & SUPPORT ABC’S**
- Prepare to provide CPR or defibrillate if needed

**2. ADMINISTER ASPIRIN**
- Consider oxygen, nitroglycerin, and morphine

**3. OBTAIN 12-LEAD ECG: INTERPRET/TRANSMIT**
- If ST elevation, note time of onset and first medical contact and notify receiving hospital.

**EMS ASSESSMENT, CARE, AND HOSPITAL PREPARATION**

**4. STEMI RESPONSE**
- Notified hospital should mobilize hospital resources

**5. COMPLETE FIBRINOLYTIC CHECKLIST**
- If considering prehospital fibrinolysis, use fibrinolytic checklist

**CONCURRENT ED ASSESSMENT (<10 MINUTES)**

**START OXYGEN**
- At 4 L/min, titrate if O2 sat <90%

**ADMINISTER ASPIRIN**
- 160 to 325 mg (if not given by EMS)

**ADMINISTER NITROGLYCERIN**
- Sublingual or spray

**ADMINISTER MORPHINE IV**
- If nitroglycerin doesn’t relieve discomfort

**ST-Elevation MI (STEMI)**
- ST elevation or new or presumably new LBBB, strongly suspicious for injury

- Start adjunctive therapies as indicated
- Don’t delay reperfusion

- Time from onset of symptoms is:
  - ≤ 12 Hours
  - > 12 Hours

**High-Risk Non-ST-Elevation ACS**
- ST depression or dynamic T-wave inversion; strongly suspicious for ischemia

**Troponin Elevated OR High-Risk Patient**
- Consider Early invasive strategy if:
  - Refractory ischemic chest discomfort
  - Recurrent / persistent ST deviation
  - Ventricular tachycardia
  - Hemodynamic instability
  - Signs of heart failure

- Start Adjunctive Therapies
  - eg. Nitroglycerin, heparin as indicated
  - See AHA/ACC NSTE-ACS guidelines

**Low/Intermediate-Risk ACS**
- Normal or nondiagnostic changes in ST segment or T wave

**Admission OR Monitoring**
- Consider admission to ED chest pain unit or to appropriate bed for further monitoring and possible intervention

**IMMEDIATE ED GENERAL TREATMENT**

**PORTABLE CHEST X-RAY (<30 MIN)**

**ECG Interpretation**

**ST-Elevation MI (STEMI)**
- ST elevation or new or presumably new LBBB; strongly suspicious for injury

- Start adjunctive therapies as indicated
- Don’t delay reperfusion

- Time from onset of symptoms is:
  - ≤ 12 Hours
  - > 12 Hours

**Reperfusion Goals:**
- Therapy defined by patient & center criteria
  - Door-to-balloon inflation (PCI)
    - Goal: 90 Minutes
  - Door-to-needle fibrinolysis
    - Goal: 30 Minutes

This Algorithm is based on the latest (2015) American Heart Association standards and guidelines.

American Health Training Center | www.AmericanHealthTrainingCenter.com