

	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8827.10
	PROGRAM DOCUMENT:	Initial Date:	02/23/05
	12-Lead ECG	Last Approval Date:	11/01/16
		Effective Date:	11/01/18
		Next Review Date:	05/01/20

 EMS Medical Director

 EMS Administrator

Purpose:

- A. To serve as an advanced life support skill guideline for utilizing 12-Lead Electrocardiogram (ECG).

Authority:

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

Indications:

- A. Discomfort/Pain of Suspected Cardiac Origin policy, PD#8030 in stable adult patients.
- ~~B. Symptomatic Bradycardia per Cardiac Dysrhythmias policy, PD#8024.~~
- ~~C. Symptomatic Tachycardia per Cardiac Dysrhythmias policy, PD#8024.~~
- ~~D. Consider for Upper Abdominal Pain per Abdominal Pain policy, PD#8007~~
- E. Consider in ~~diabetic~~ patients ~~over~~ forty (40) years or older, ~~or any patient over seventy-five (75) years~~ with atypical signs or symptoms of acute coronary syndrome (ACS).
 Note, Atypical ACS signs and symptoms include:
 1. atypical chest pain, shortness of breath, nausea, hypotension, brady/tachydysrhythmias or syncope.
 2. High risk populations for atypical ACS signs and symptoms include: Diabetics, elderly (> 75 years of age), and women.
 3. Patients under 40 years of age account for only 0.3% of STEMIs (AHA data) and most often have typical ACS symptoms.
- ~~F. If 12-Lead indicates STEMI or Acute MI refer to Discomfort/Pain Suspected Cardiac Origin policy, PD# 8030.~~

Special Considerations:

- A. Consider for Upper Abdominal Pain per Abdominal Pain policy, PD#8007
- B. Consider in diabetic patients over forty (40) years or older, or any patient over seventy-five (75) years with atypical signs* or symptoms of acute coronary syndrome (ACS).
 *Atypical ACS signs and symptoms include:
 - atypical chest pain, shortness of breath, nausea, hypotension, brady/tachydysrhythmias or syncope.
- C. Consider for Symptomatic Bradycardia per Cardiac Dysrhythmias policy, PD#8024.
- D. Consider for Symptomatic Tachycardia per Cardiac Dysrhythmias policy, PD#8024.

Equipment:

- A. Cardiac Monitor with 12-Lead capabilities
- B. Electrodes
- C. Skin preparation equipment

Procedure:

- A. Assemble the required equipment.
- B. Explain the procedure to the patient.
- C. Place the electrodes for a standard 12-Lead ECG.
- D. Obtain 12-Lead ECG and rhythm strip.

Special Notes:

- A. Patients should not have transport unduly delayed by attempts to obtain a 12-Lead ECG.
- B. All 12-lead ECGs consistent with an acute STEMI, shall be transmitted to the STEMI receiving facility. If the 12 lead is not transmitted, the reason must be documented in the ePCR.
- C. A copy of all 12-Leads obtained during prehospital care, shall be delivered to the receiving facility with the patient.
- D. 12-Lead ECGs may be transmitted to an ALS Base Hospital when requesting a medical consult for interpretation.
- E. 12 Lead ECG computer interpretations reading "Acute MI", "Acute MI Suspected", "ST Elevation Criteria Met", or "STEMI" are accepted as consistent with an acute myocardial infarction.
- ~~F. The most appropriate facility for hemodynamically stable patients (SBP > 90 mmHg) who have a 12-Lead ECG consistent with an acute myocardial infarction (MI) is a facility providing interventional cardiac catheterization services. Examples of 12-Lead ECG computer interpretations reading "ACUTE MI", "ACUTE MI SUSPECTED", "ST Elevation Criteria Met" or "STEMI" are accepted as consistent with an acute myocardial infarction.~~
- ~~G. Hemodynamically unstable patients (SBP < 90 mmHg) shall be transported to the time closest facility providing interventional cardiac catheterization services.~~
- ~~H. Patients should not have transport unduly delayed by attempts to obtain a 12-Lead ECG.~~
- ~~I. "+STEMI" 12-Lead ECGs shall be transmitted to the STEMI receiving facility when technologically possible or when requested by receiving facility.~~
- ~~J. A copy of all 12-Leads shall be delivered to the receiving facility with the patient.~~
- ~~K. 12-lead ECGs may be transmitted when requesting a medical consult from an ALS Base Hospital.~~

Cross Reference:

Discomfort/Pain of Suspected Cardiac Origin PD #8030
Hospital Services PD #2060
Cardiac Dysrhythmias PD #8024
Abdominal Pain PD #8007