

STEMI TRIAGE AND DESTINATION

I. PURPOSE

Utilizing prehospital 12-lead electrocardiograms (P12ECG), patients presenting with ST-segment elevation myocardial infarction (STEMI) shall be triaged and transported, with patient consent, directly to STEMI centers for rapid intervention. This policy outlines the process of triage and transport of STEMI patients.

II. DEFINITIONS

Prehospital 12-lead ECG (P12ECG): A 12-lead electrocardiogram obtained by EMS crews or in rare circumstances by a medical facility or office other than a hospital.

ST-Segment Elevation Myocardial Infarction (STEMI): A specific finding on P12ECG showing ST-segment elevation of 1 mm or greater in anatomically contiguous leads, indicating this specific type of myocardial infarction.

Computer Interpretation of STEMI: With printout of P12ECG done, a patient with a STEMI is identified distinctly with *****Acute MI***** or *****Acute MI Suspected***** by a computerized algorithm present in the monitor-defibrillator unit (wording varies by manufacturer). Other abnormalities of P12 ECG do not signify STEMI.

STEMI Receiving Center (SRC): Hospitals designated by Contra Costa EMS as those to which patients with identified STEMI on P12ECG will be transported based on the center's prompt availability of invasive cardiac care.

STEMI Alert: Report from prehospital personnel that notifies a STEMI Receiving Center as early as possible that a patient has a computer-interpreted P12ECG indicating a STEMI. The alert allows the SRC to prepare equipment and personnel for arrival of the patient in order to provide intervention in the most rapid fashion possible.

III. TRIAGE

- A. Patients with chest pain or other symptoms suggestive of Acute Coronary Syndrome (ACS) should have a P12ECG performed.
1. Exceptions include patients who are not cooperative with the procedure, or patients in whom the need for critical resuscitative measures preclude performance of the P12ECG.
 2. Paramedic personnel should review the P12ECG tracing in all instances to assure that little or no artifact exists (steady baseline, lack of other electrical interference, complete complexes present in all 12 leads). Repeat P12ECG may be necessary to obtain an accurate tracing.
- B. If computerized interpretation of accurately performed P12ECG indicates either *****Acute MI***** or *****Acute MI Suspected*****, the patient qualifies as a candidate for transport to a STEMI Receiving Center. Patients without these findings should be transported per the EMS "Patient Destination Determination" policy.

IV. DESTINATION

- A. With consent, a patient with an identified STEMI should be transported to a designated STEMI Receiving Center (SRC) if estimated transport time is 30 minutes or less.
1. If estimated transport time to an SRC exceeds 30 minutes, patients with STEMI should be transported to the closest basic emergency department.



2. Patients with identified STEMI maintain the ability to consent to transport, whether to an SRC or other receiving facility. In cases in which no preference is stated, transport to the closest SRC (if within 30 minutes).
 3. STEMI Receiving Centers with less than a 15-minute difference in transport time (but still within 30 minutes) should be considered equidistant.
- B. Patients developing cardiac arrest or unmanageable airway en route shall be transported to the closest basic emergency department.

V. STEMI ALERT/PATIENT REPORT

- A. In patients with identified STEMI, desired destination shall be promptly determined after the P12 ECG is completed and read, and that hospital shall be contracted as soon as possible after destination determined.
- B. The STEMI Alert should contain the following essential information:
1. Situation:
 - a. Identify the call as a "STEMI Alert."
 - b. Give estimated time of arrival (ETA) in minutes.
 - c. Patient age and gender.
 - d. State ECG findings and any urgent concerns.
 - 1) P12ECG shows ***Acute MI*** (ZOLL) or
 - 2) P12ECG shows ***Acute MI Suspected*** (LP12).
 - c. If patient elects to go to a facility that is not STEMI designated inform receiving facility.
 2. Background:
 - a. Presenting/chief complaint and symptoms.
 - b. Pertinent past cardiac history.
 - c. Pacemaker placement.
 3. Assessment:
 - a. General impression.
 - b. Pertinent vital signs and physical exam.
 - c. Pain level.
 4. Rx-Recap:
 - a. Prehospital treatments given.
 - b. Patient response to prehospital treatments.
- C. Emergency Room Patient handoff report should repeat STEMI Alert information and include:
1. Patient identification.
 2. Presenting complaint.
 3. Additional background information:
 - a. Past medical history.
 - b. Advanced directives if known.
 4. Allergy and medication history including high risk medications.
 - a. Anticoagulants
 - b. Insulin

- c. Digoxin
- d. Erectile Dysfunction Drugs (ERDs)
- 5. Previous history of Coronary Artery Surgery or thrombolytic (clot busting) therapy.
- 6. Cardiologist if known.

VI. DOCUMENTATION

- A. A copy of the P12ECG (multiple if performed) shall be delivered to the nurse caring for the patient at arrival in the Emergency Department.
- B. A copy of the P12ECG (multiple if performed) shall be generated for inclusion in the prehospital Patient Care Record or incorporated via electronic means into the record. The finding of STEMI on P12ECG and confirmation of the STEMI Alert shall also be recorded in the Patient Care Record.

VII. LIST OF STEMI CENTERS (Applications in progress)

IN-COUNTY STEMI CENTERS	OUT-OF-COUNTY STEMI CENTERS
Doctors Medical Center San Pablo	ValleyCare - Pleasanton
John Muir Medical Center – Concord Campus	Oakland Summit Medical Center
John Muir Medical Center – Walnut Creek Campus	
Kaiser Permanente Medical Center– Walnut Creek	
San Ramon Regional Medical Center	