





**SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES**

EMS POLICY	605
Effective:	April 2022
Approval: EMS Director Travis Kusman, MPH	Signed: 
Approval: EMS Medical Director Greg Gilbert, MD	Signed: 

STEMI RECEIVING CENTER STANDARDS AND DESIGNATION

I. PURPOSE

This policy defines the criteria for designation as a STEMI Receiving Center in San Mateo County.

II. AUTHORITY

Health and Safety Code, Division 2.5, Sections 1791.102, 1797.100, 1797.102, 1797.103, 1797.104, 1797.107, 1797.114, 1797.174, 1797.176, 1797.200, 1797.202, 1797.204, 1797.206, 1797.214, 1797.220, 1797.222, 1797.250, 1797.254, 1797.540, 1798.150, 1798.167, 1798.170, 1798.172, and 1798.175.; and California Code of Regulations, Title 22, Division 9, Chapter 7.1.

III. DEFINITIONS

Cardiac Catheterization Laboratory (“Cath lab”): The setting within the hospital where diagnostic and therapeutic procedures are performed on patients with cardiovascular disease.

Cardiac Catheterization Team: The specially trained health care professionals that perform percutaneous coronary intervention. The Team may include, but is not limited to, an interventional cardiologist, mid-level practitioners, registered nurses, technicians, and other health care professionals.



CARES: Cardiac Arrest Registry to Enhance Survival.

Emergency Medical Services Agency (“LEMSA”) [or “Agency”]: The San Mateo County EMS Agency is designated as the Local Emergency Medical Services Agency (“LEMSA”) and is statutorily charged with primary responsibility for administration and medical control of emergency medical services in San Mateo County.

Immediately Available: Unencumbered by conflicting duties or responsibilities, responding without delay upon receiving notification, or being physically available to the specified area of the hospital when the patient is delivered in accordance with EMS Agency policies and procedures.



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Interfacility Transfer: The transfer of a patient from one acute general care facility to another acute general care facility.

MEDS Viewer: A proprietary product furnished at no cost by American Medical Response which allows the receiving hospital to view and obtain a copy of the prehospital patient care record for the STEMI patient.

Percutaneous Coronary Intervention (“PCI”): A procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart, usually done on an emergency basis for a STEMI patient.

Quality Improvement (“QI”): Methods of evaluation that are composed of structure, process, and outcome evaluations that focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process, and recognize excellence in performance and delivery of care.

ST Segment Elevation Myocardial Infarction (“STEMI”): A clinical syndrome defined by symptoms of myocardial infarction in association with ST-segment elevation on Electrocardiogram (“ECG”).

STEMI Critical Care System [or “STEMI Care System”]: An integrated prehospital and hospital program that is intended to direct patients with field or Referral Hospital identified STEMI directly to hospitals with specialized capabilities to promptly treat these patients.

STEMI Care: Emergency cardiac care for a STEMI Patient.

STEMI Information System: The computer information system maintained by each SRC which captures the presentation, diagnostic, treatment and outcome data sets required by the EMS Agency and the SRC Standards.

STEMI Medical Director: A qualified physician board-certified by the American Board of Medical Specialties (“ABMS”) as defined by the EMS Agency and designated by the hospital that is responsible for the STEMI program, performance improvement, and patient safety programs related to a STEMI critical care system.

STEMI Patient: A patient with symptoms of myocardial infarction in association with ST-Segment Elevation in an ECG.

STEMI Program: An organizational component of the hospital specializing in the care of



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STEMI patients.

STEMI Program Manager: A registered nurse or qualified individual as defined by the EMS Agency, and designated by the hospital responsible for monitoring, coordinating and evaluating the STEMI program.

STEMI Quality Improvement Committee: The confidential multi-disciplinary peer-review committee, comprised of representatives from the STEMI Receiving Centers (“SRC”), STEMI Referral Hospitals (“SRH”) and other professionals designated by the EMS Agency, which audits the STEMI Critical Care System, makes recommendations for system improvements, and functions in an advisory capacity to the EMS Agency on other STEMI and cardiac care system issues. Committee members designated by the EMS Agency may include, but are not limited to, SRC medical directors and program managers, representatives from SRH, interventional and non-interventional cardiologists, emergency medicine sub-specialists, and representatives from ground and air emergency medical services providers.

STEMI Receiving Center (“SRC”): A licensed general acute care facility that enters into a written agreement with the LEMSA, meets the minimum hospital STEMI care requirements pursuant to Section 100270.124 and can perform PCI.

STEMI Receiving Center Services: The customary and appropriate hospital and physician services provided by a SRC to STEMI patients, which, at a minimum, meet SRC Standards.

STEMI Referral Hospital (“SRH”): A licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.125.

STEMI Team: Clinical personnel, support personnel, and administrative staff that function together as part of the hospital’s STEMI program.



IV. POLICY

A. A STEMI Receiving Center (“SRC”), approved and designated by the Agency, shall meet the following requirements:

1. Enter into a written agreement with the Agency;
2. The hospital shall have established protocols for triage, diagnosis, and Cath Lab activation following field notification;
3. The hospital shall have a single call activation system to activate the cardiac



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catheterization team directly;

4. Written protocols shall be in place for the identification of STEMI patients;
 5. At a minimum, these written protocols shall be applicable in the Intensive Care Unit/Coronary Care Unit, Cath Lab, and the Emergency Department;
 6. The hospital shall be available for treatment of STEMI patients twenty-four (24) hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year;
 7. The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients;
 8. The hospital shall maintain STEMI Team and Cardiac Catheterization Team call rosters;
 9. The Cardiac Catheterization Team, including appropriate staff determined by the Agency, shall be immediately available;
 10. The hospital shall agree to accept all STEMI patients according to the local policy;
 11. STEMI receiving centers shall comply with the requirement for a minimum volume of procedures for designation required by the Agency;
 12. The hospital shall have a STEMI program manager and a STEMI medical director;
 13. The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team;
 14. The hospital shall participate in and comply with all aspects of the Agency quality improvement processes related to a STEMI critical care system;
 15. A SRC without cardiac surgery capability on-site shall have a written transfer plan and agreements for transfer to a facility with cardiovascular surgery capability; and
 16. A SRC shall have reviews by the Agency or other designated agency conducted at least every three years.
- B. STEMI Referring Hospital (“SRH”) Requirements:
1. The hospital shall be committed to supporting the STEMI Program;
 2. The hospital shall be available to provide care for STEMI patients twenty-four (24)



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hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year;

3. Written protocols shall be in place to identify STEMI patients and provide an optimal reperfusion strategy, using fibrinolytic therapy;
4. The Emergency Department shall maintain a standardized procedure for the treatment of STEMI patients;
5. The SRH shall have a transfer process through interfacility transfer agreements and have pre-arranged agreements with EMS ambulance providers for rapid transport of STEMI patients to a SRC;
6. The SRH shall have a program to track and improve treatment of STEMI patients;
7. The SRH must have a plan to work with a STEMI receiving center and the EMS Agency on quality improvement processes; and
8. A SRH designated by the EMS Agency shall have a review conducted at least every three years.

C. Personnel

1. SRC Medical Director
 - a. The SRC shall designate a medical director for the STEMI program who shall be a physician certified by the American Board of Internal Medicine (ABIM) with current ABIM sub-specialty certification in cardiovascular disease and interventional cardiology who will ensure compliance with these SRC standards and perform ongoing Quality Improvement (“QI”) as part of the hospital QI Program.
 - b. The SRC Medical Director must be a credentialed member of the medical staff with PCI privileges.
2. SRC Program Manager

The SRC shall designate a program manager for the STEMI program who shall have experience in Emergency Medicine or Cardiovascular Care, who shall assist the SRC Medical Director to ensure compliance with these SRC standards and the QI program.
3. Cardiovascular Lab Coordinator



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The SRC shall have a Cardiovascular Lab Coordinator who shall assist the SRC Medical Director and the SRC Program Manager to ensure compliance with these SRC Standards and the QI Program.

4. Physician Consultants

The SRC shall maintain a daily roster of on-call Interventional Cardiologists with privileges for PCI and credentialed by the hospital in accordance with the American College of Cardiology/ American Heart Association national standards. This requirement may be waived by EMS Agency for physicians with SRC primary privileges if the following are met:

- a. Board certified by the ABIM with subspecialty certification in cardiovascular disease;
- b. Demonstrated lifetime minimum of 500 PCI procedures and 11 primary or 75 PCI annually;
- c. These physicians must respond immediately upon notification and be available within 30 minutes of when a STEMI patient presents to the hospital; and
- d. The SRC will submit a list of Cardiologists with active PCI privileges to the Agency annually.

D. Clinical Process Performance Standard

1. The overall goal of the STEMI Care System in San Mateo County is to minimize the interval between first medical contact to coronary artery reperfusion.
2. SRCs will adopt evidence-based strategies to reduce time to reperfusion.
3. An on-going internal quality improvement process, including data measurements and feedback from STEMI patients and SRHs.

E. Additional Requirements

Internal policies and procedures shall be developed for the following:

1. STEMI Alert: Through a “one call” process, the interventional cardiologist and cardiac catheterization lab team will be immediately contacted upon notification by prehospital personnel that they are transporting a patient on whom a 12-Lead ECG that has been interpreted as an “Acute MI Suspected” or “Meets ST Elevation MI Criteria;”
2. Interventional cardiologist and cardiac catheterization laboratory staff will be required



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to respond immediately upon notification and have a response time standard of 20-30 minutes;

3. Emergency medicine physicians will have the authority to activate the cardiac catheterization laboratory staff;
4. Allow the automatic acceptance of any STEMI patient from a San Mateo County hospital upon notification by the transferring physician;
5. An interventional cardiologist assumes care of the patient from the time the patient arrives at the SRC;
6. Accept all patients meeting STEMI patient triage criteria or upon transfer notification from a SRH, except when on an internal disaster, and provide a plan for triage and treatment of simultaneously presenting STEMI patients, regardless of ICU/ CCU or ED status;
7. Criteria for patients to receive emergent angiography or emergent fibrinolysis based on physician decisions for individual patients;
8. Data listed in 902 – STEMI Data Dictionary shall be collected on an ongoing basis and provided to the Agency;
9. Data will be entered into the Agency approved collection system(s) and submitted monthly, by no later than the 15th calendar day of the following month. The Agency specified data system at the present time is *Get with the Guidelines CAD*; and
10. In consultation with the STEMI CQI Committee, the Agency will update the data dictionary and/ or identify another process to expedite data submission and reduce duplication.

F. Data Management

1. In accordance with Title 22, Division 9, Chapter 7.1 – ST-Elevation Myocardial Infarction Critical Care System regulations, data listed in this section shall be collected on an ongoing basis and provided to the Agency.
2. Data will be submitted and entered in the Agency approved data collection system and submitted monthly, by no later than the 15th calendar day of the following month.



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3. In consultation with the STEMI CQI Committee, the Agency will update the data dictionary and/ or identify another process to expedite data submission and reduce duplication.

G. Quality Improvement and Evaluation Process

1. The Quality Improvement (“QI”) program will include a process to review all cases of STEMI patients taken to the catheterization laboratory at the end of the procedure and provide immediate feedback to the staff in the Emergency Department and the catheterization laboratory – prior to the end of that shift. Additionally, formal feedback utilizing the standardized format designated by the Agency will be provided to any prehospital agency or SRH that participated in the care of a “STEMI Activation” patient, within 72 hours. Approved feedback back forms include the Mission: Lifeline Feedback Report in *Get with the Guidelines CAD*.
2. A SRC QI program shall be established, maintained, and conducted to review performance and outcome data for STEMI patients.
3. The SRC will actively participate in the Agency STEMI QI Program. This will require regular meeting attendance by the SRC Medical Director or designee, who will be a staff interventional cardiologist, and the SRC Program Manager.
4. A quality improvement process shall include, at a minimum:
 - a. Evaluation of program structure, process, and outcome;
 - b. Review of STEMI-related deaths, major complications, and transfers;
 - c. A multidisciplinary STEMI Quality Improvement Committee, including both prehospital and hospital members;
 - d. Participation in the QI process by all designated STEMI centers and prehospital providers involved in the STEMI critical care system;
 - e. Evaluation of regional integration of STEMI patient movement; and
 - f. Compliance with California Evidence Code, Section 1157.7 to ensure confidentiality and a disclosure-protected review of selected STEMI cases.

VI. PROCEDURE

A. Designation



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A SRC may be designated following satisfactory review of written documentation and a site survey, when deemed necessary, by the Agency.

1. Application: Eligible hospitals shall submit a written letter of intent and request for SRC approval to the Agency, as well as complete a formal application documenting the compliance of the hospital with Agency SRC Standards.
2. Approval: SRC approval or denial shall be made in writing by the Agency to the requesting hospital within a reasonable time (30 days) after receipt of the request for approval, application completion and submission of all required documentation.

B. Re-designation

1. The Agency may suspend or revoke the approval of a SRC at any time for failure to comply with any applicable policies, procedures, or regulations.
2. An SRC may be re-designated following a satisfactory Agency review in accordance with current standards and the term of the written agreements.
3. SRCs shall receive notification of evaluation from the EMS Agency.
4. SRCs shall respond in writing regarding program compliance.
5. On-site SRC visits for evaluative purposes may occur.
6. SRCs shall notify the Agency by telephone, followed by a letter or email within 48 hours of changes in program compliance or performance.

C. Discontinuation

The SRC shall submit a written 90 calendar day notice to Agency prior to the discontinuation of SRC services.