I. Purpose

The purpose of this policy is to reduce the morbidity and mortality related to ST-Elevation Myocardial Infarction (STEMI) by organizing a system of STEMI centers to serve our residents and visitors through preventative education, emergency care, hospitalization, rehabilitation, and research. This critical care system links prehospital and hospital care to deliver optimal treatment to the population of STEMI patients.

II. Definitions

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

B. STEMI Receiving Center (SRC) - A hospital with cardiac capabilities (Cardiac catheterization laboratory licensed to perform emergency Percutaneous Coronary Intervention [PCI] and/ or cardiovascular surgery) and designated by the Santa Clara County EMS Agency to provide rapid intervention for STEMI patients. A STEMI receiving center without cardiac surgery capability on-site shall have a written transfer plan and agreements for transfer to a facility with cardiovascular surgery capability.

C. STEMI Referring Hospital (SRH) - A licensed general acute care facility that meets the minimum hospital STEMI care requirements to stabilize and transfer patients to a PCI-capable facility.

III. Designation by Santa Clara County (SCC) as a STEMI Center

Initial SCC Designation as a STEMI Receiving Center in the EMS System requires an application, satisfactory site survey and verification of the following:
A. Currently serving in the EMS system as a Prehospital Receiving Center (PRC) or a Base Hospital (BH).

B. Compliance with all standards and requirements listed in this policy.

C. Compliance with all requirements listed in Title 22, Division 9, Chapter 7.1 - ST- Elevated Myocardial Infarction Critical Care System.

D. Enrollment and participation in the STEMI data management system and commitment to provide additional data as required by SCC EMS Agency and the STEMI System Committee.

E. Current written agreement with SCC EMS Agency for designation as a STEMI Center to provide services in Santa Clara County.

F. STEMI Center designation may be granted following satisfactory review of a completed application, supporting written documentation, an initial site survey by SCC EMS Agency personnel/designees.

IV. Designation Renewal

A. The STEMI Receiving Center may be re-designated after satisfactory review of written documentation and a site survey by SCC EMS Agency personnel/designees.

B. Re-designation shall occur every three (3) years.

C. Failure to comply with the criteria outlined in this policy at any time will result in disciplinary action up to and including suspension or rescission of EMS STEMI Receiving Center designation.

V. Standards for All Hospitals Designated by SCC EMS Agency as an SRC

A. Staffing Requirements

1. STEMI Centers shall staff the following positions:

   a. STEMI Medical Director: a qualified board-certified physician by the American Board of Medical Specialties (ABMS) as defined by the local 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.

   b. STEMI Program Manager: a registered nurse or qualified individual as defined by the local EMS agency, and designated by the hospital responsible for monitoring, coordinating, and evaluating the STEMI program.
c. Clinical STEMI Team: specially trained health care professionals that perform percutaneous coronary intervention. It may include, but is not limited to, an interventional cardiologist, midlevel practitioners, registered nurses, technicians, and other health care professionals.

d. Registrar: an individual dedicated to the registry must be available to process the data capturing of the ACC/NCDR, and SCC EMS data fields.

B. Data Collection and Submission

1. The STEMI Centers shall:

   a. Participate in the STEMI data management system

   b. Submit data to SCC EMS Agency via the SCC EMS Agency approved data collection method on the schedule agreed upon by the STEMI System Committee, but no less than a quarterly basis. This data shall include but not be limited to:

      i. All data elements included in section 100270.126 of CCR Title 22 STEMI requirements.

      ii. ACC and National Cardiovascular Data Registry (NCDR) data elements.

      iii. Any additional data elements as requested by SCC EMS Agency and/or the SCC EMS STEMI system committee.

C. Performance Standards

1. Written EMS policies and procedures shall be reviewed at a minimum of every three (3) years but may be updated sooner based upon identified CQI needs.

2. STEMI Centers must operate a cardiac catheterization laboratory licensed by the Department of Health Services and approved for emergency PCI’s. 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.

   a. To ensure uninterrupted services, written policies and procedures for two patients, requiring simultaneously PCIs must be in place.
3. Additional performance measures as determined by SCC EMS Agency and/or the STEMI Critical Care System Committee.

4. The STEMI center shall establish adequate procedures for self-monitoring and quality control and assurance in compliance with standards, in this policy, on a continuous basis. Documentation of such efforts shall be made available to SCC EMS Agency upon request.

D. Education

1. Provide STEMI related continuing education to EMS personnel and annually report these activities to SCC EMS Agency. A minimum of 2 educational events annually is required.

2. Provide STEMI education to the public and annually report these activities to SCC EMS Agency.

E. STEMI System Participation

1. STEMI Center representatives shall actively participate as members of the STEMI Critical Care System Committee.

2. Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases.

3. All STEMI-related deaths, major complications, and transfers shall be reported to and reviewed by the STEMI Critical Care System Committee.

F. Hospital Services/Obligations

1. The STEMI Center shall have established protocols for triage, diagnosis, and cath lab activation following field notification of an inbound suspected STEMI patient.

2. The STEMI Center shall have a single call activation system to activate the Cardiac Catheterization Team directly.

3. Written protocols shall be in place for the identification of STEMI patients. At a minimum, these written protocols shall be applicable in the intensive care unit/coronary care unit, Cath lab and the emergency department.

4. The hospital shall maintain STEMI team and Cardiac Catheterization Team call rosters.
5. The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.

6. The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients.

7. Internal policies shall be developed for the following:
   a. Protocol to be used in unforeseen circumstances when PCI of a STEMI patient is not possible, or delay of the cath lab team to the patient exceeds 30 (thirty) minutes.
   b. Diversion of STEMI patients will be according to SCC EMS Policy for Ambulance Diversion.

8. The hospital shall have the ability to receive ECGs wirelessly transmitted by prehospital personnel.

9. The hospital shall have a dedicated audio recorded phone line or radio system, capable of being answered twenty-four (24) hours per day, seven (7) days per week, used by paramedics to notify SRCs of incoming STEMI patients.

10. Hospitals that must temporarily close their cardiac catheterization laboratory due to equipment failure must do the following:
    a. Immediately contact the EMS Duty Chief to notify them of the temporary closure and the expected downtime.
    b. Once the cath lab is open and functional make the same contact to notify the system that the cath lab is now open and functional.
    c. All STEMI patients that were diverted during the down time must be reported to SCC EMS Agency. The accepting STEMI Receiving Center must do 100% CQI on these patients.

G. Reporting Requirements:

1. SRC shall notify SCC EMS Agency in writing of any failure to meet the EMS STEMI Receiving Center Standards and/or change of STEMI Medical Director or STEMI Program Manager within 10 (ten) business days.