

EMERGENCY MEDICAL SERVICES AUTHORITY

10901 GOLD CENTER DR., SUITE 400
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875



February 23, 2020

Travis Kusman, EMS Director
San Mateo County EMS Agency
801 Gateway Blvd 2nd Floor
South San Francisco, CA 94080

Dear Travis,

The EMS Authority (EMSA) has reviewed the San Mateo County EMS Agency's STEMI Critical Care System Plan submitted in accordance with the California Code of Regulations, Title 22, Chapter 7.1 STEMI Critical Care Systems. The San Mateo County EMS Agency's STEMI system plan is in compliance with the STEMI regulations and is approved.

In accordance with the Section 100270.122 of the STEMI regulations, your STEMI System Status Report will be due by February 23, 2021.

Please contact Farid Nasr, M.D. at (916) 431-3685 or farid.nasr@emsa.ca.gov for any questions and technical assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom McGinnis", written over a large, stylized flourish.

Tom McGinnis, EMT-P
Chief, EMS Systems Division



SAN MATEO COUNTY HEALTH
**EMERGENCY
MEDICAL SERVICES**

**2019-2020 | STEMI CRITICAL CARE
SYSTEM PLAN**

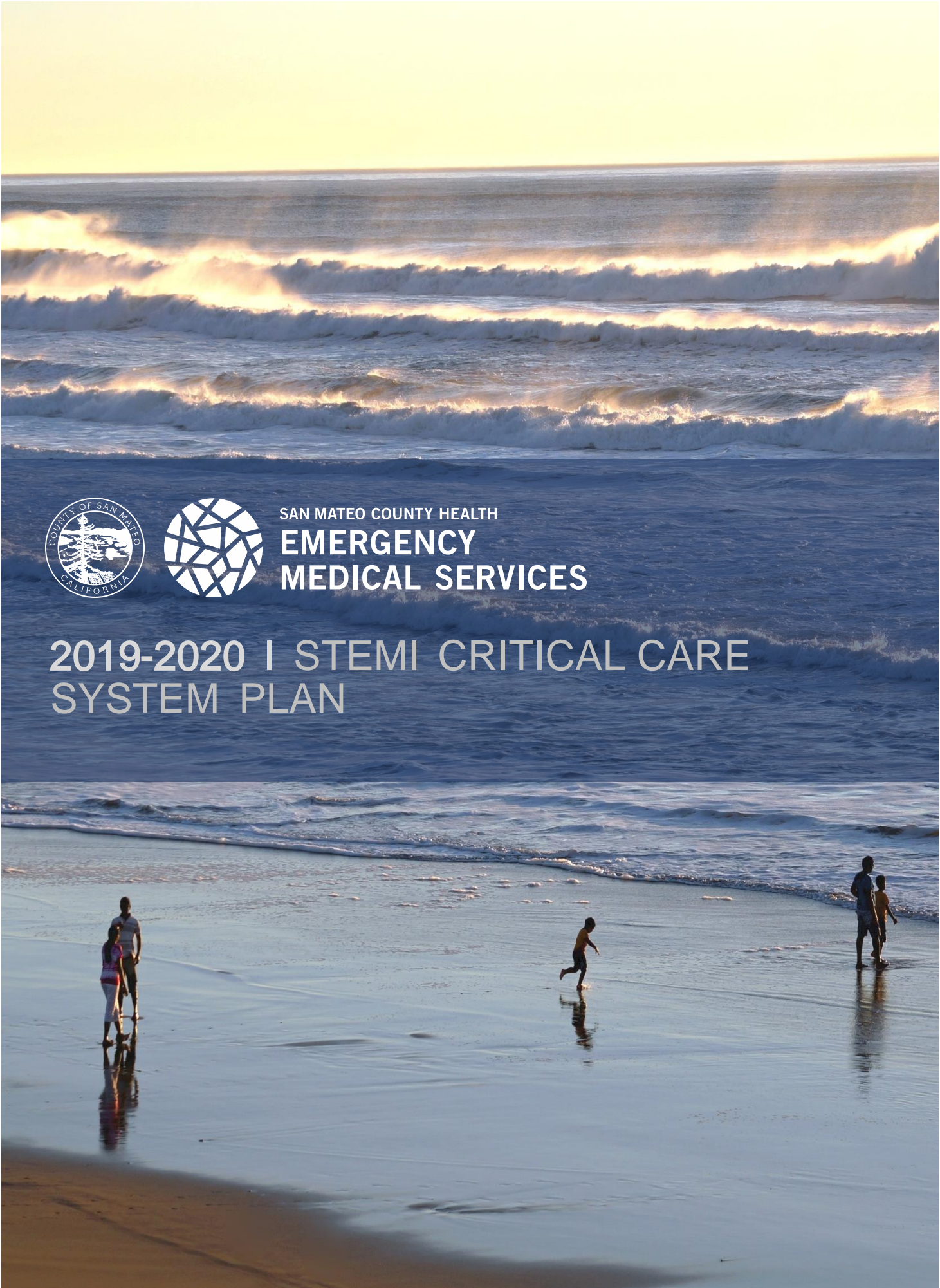


Table of Contents

- Introduction 3
- LEMSA Personnel & Roles in the STEMI Critical Care System..... 3
- STEMI QI Committee..... 4
 - Structure, Organizational Description & Members 4
 - Mission, Purpose & Goals..... 5
- STEMI Receiving Center (SRC) Designation..... 6
 - SRC Designation Site Visit Evaluation Agenda..... 6
 - SCR Designation Validation Tool..... 7
- SCR and SHR Locations in San Mateo County..... 16
- SRC Designation Agreement..... 17
- Facilities 9 - STEMI System Receiving Center Standards & Designation Policy..... 30
- San Mateo County EMS STEMI Field Feedback Form..... 39
- San Mateo County EMS STEMI Data Dictionary..... 40
- Quality Improvement..... 53
 - Get With The Guidelines Summary Report – 2018..... 54
 - Action to Improve..... 55
- San Mateo County EMS ECMO Alert Hospital Designation Validation Tool..... 56
- Training & Education..... 61
- Annual Update..... 61

Introduction

San Mateo County has a well-developed STEMI Critical Care System that focuses on providing quality clinical care that is evidence-based, striving to achieve the best outcomes for our patients.

To attain this, many stakeholders come together in a collaborative system. These parties include the San Mateo County EMS Agency (SMC LEMSA), Emergency Medical Dispatch (EMD) services performed by our County Public Safety Communications (PSC) center, our fire first responders, our 911 emergency ambulance services transport providers American Medical response (AMR) and South San Francisco Fire Department, as well as our STEMI Receiving Centers (SRC) and STEMI Referral Hospitals (SRH).

The purpose of the San Mateo County Emergency Medical Services STEMI Critical Care System Plan is to ensure excellent cardiac services for both 911 and walk-in patients.

Names and Titles of LEMSA Personnel and Their Roles in the STEMI Critical Care System

- Travis Kusman, MPH, Paramedic, EMS Director
- Gregory H. Gilbert, MD, FAAEMS, EMS Medical Director
- Linda Allington RN, MPH, MPA, FACHE, EMS Clinical Services Manager
- Chad Henry, MBA, Paramedic, EMS Operations Manager
- Garrett Fahey, MBA, EMS Office Manager

STEMI QI Committee - Organizational Description, Structure, and Members

The STEMI Quality Improvement Committee is a confidential committee which meets quarterly. The committee is comprised of both interventional and non-interventional cardiologists, ED physicians, the EMS Medical Director, and EMS Agency staff.

The committee mission, purpose, and goals follow on the next page. The committee is advisory to the SMC LEMSA.

The San Mateo County EMS Agency STEMI Continuous Quality Improvement Committee (SMC STEMI CQI) meets quarterly with meeting locations rotating between the SRC and SRH facilities.

The SMC STEMI CQI committee has the following values:

- Patient & community-oriented system
- Provide a caring environment to inspire and produce teamwork
- Clinical care based on research, scientific examination, and focused process improvement
- Promotion of candor, integrity, and mutual respect
- Multidisciplinary partnerships with our STEMI community, which help us produce excellence

Our STEMI CQI program is a method of evaluation comprised of structure, process, and outcome focusing on improvement efforts, to identify root causes of problems, intervening to reduce or eliminate these causes, and implementing steps towards corrective action. Additionally, recognizing excellence in performance and identifying and sharing best practices in the performance and delivery of care are integral to this work.

Implementing the recent EMSA regulations, the committee reviews cases, looks at data for walk-in, ambulance transport, and transfer cases from a STEMI Referral Hospital (of which we have two in our County) to a STEMI Receiving Center (SRC). A pilot trial of hospital-based extracorporeal membrane oxygenation (ECMO) has been implemented for out of hospital refractory ventricular tachycardia/fibrillation patients with certain inclusion criteria in a specific catchment area. These patients are transported to a specific cardiac receiving center.

SMC STEMI CQI meetings are closed and confidential. Each SRC and SRH identifies who will represent their facility - most commonly the representatives for each facility are the STEMI medical director and the STEMI program manager. Select Emergency Medicine (EM) physicians and the Senior Regional Director for Quality and Systems from the American Heart Association also participate in these meetings.

STEMI QI Committee - Mission, Purpose, and Goals

Mission: Improve STEMI outcomes in the SMC STEMI system through data review, quality improvement, education and innovation.

Committee Purpose: Serve as an advisory committee to the EMS agency regarding the STEMI system.

Goals:

Goal	Objectives	Responsible Party(ies)	Target Date	Evaluation/Outcome
1. Improve the quality and service delivered to STEMI patients.	<ol style="list-style-type: none"> 1. Identify best practices through evidence-based data that can be implemented as needed. 2. Evaluate and reduce time from symptom onset to definitive care for the STEMI patient. 	Designated STEMI Centers STEMI Referral Hospitals EMS Provider Agencies EMS Agency	Ongoing	Committee recommendation on Dual Anti-platelet Therapy (DAPT) Ongoing
2. Use data collection to identify clinical excellence and identify opportunities for improvement.	<ol style="list-style-type: none"> 1. Collect and analyze data regularly on STEMI patients from the EMS system and hospitals to evaluate the continuum of care. 2. Recognize excellence in the provision of care. 3. Identify and communicate excellence, areas of concern, or opportunities for improvement to the STEMI stakeholders. 	STEMI QI Committee EMS Agency	Annually or as noted	Reviewed quarterly Mission Lifeline recognition STEMI site visits completed in 2019
3. Provide education to identify clinical excellence.	<ol style="list-style-type: none"> 1. Deliver up-to-date and relevant education to health care professionals. 2. Raise public awareness regarding the signs and symptoms of heart attack, the importance of activation of the 911 system, and provide education to identified target groups. 	Designated STEMI Centers STEMI Referral Hospitals EMS Provider Agencies EMS Agency	Quarterly	Conference held in March in collaboration with AHA Ongoing throughout the year Surveillance with FirstWatch

STEMI Designation Site Visit Evaluation Agenda

These were completed for all SRC's from September to December of 2019. Going forward, we will look at accepting The Joint Commission (TJC) Cardiac Certification at the appropriate level.

1. Welcome, review schedule
2. Hospital provide brief overview of program
3. Review Self-Assessment Tool and on-site supporting documentation with STEMI team
4. Tour of ED, Cath Lab
5. EMS Staff & STEMI Team meet and discuss
6. EMS & STEMI Team Hospital Administration wrap-up/finding/recommendations

San Mateo County Emergency Medical Services
STEMI Receiving Center Designation Validation

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Hospital Standards-STEMI Receiving Hospitals			
HOSPITAL SERVICES			If anything has changed since initial designation, provide. If no changes, please indicate no change.
Licensed General Acute Care Hospital	Copy of hospital license		As above.
Current license to provide Basic Emergency Care	Copy of license		As above.
Operate a cardiac catheterization lab (CCL) licensed by the Department of Health Services and approved for emergency percutaneous coronary interventions (PCI)	Copy of permit		As above.
PCI capability 24 hrs per day/7 days /week/365 days a year	<ul style="list-style-type: none"> ▪ On call schedule ▪ On call policy and procedures document 		As above.
Permit for Cardiovascular Surgery or plan for transfer as below:	<ul style="list-style-type: none"> ▪ Copy of permit 		As above.
<i>Alternate criteria for cardiovascular surgical capability:</i> <ul style="list-style-type: none"> ▪ Written transfer agreements with one hospital within 20 miles that has cardiovascular capability and transfer plan for rapid transfer of patients needing cardiovascular surgery. ▪ An active process to monitor time expectations for transfer of patients needing cardiovascular surgery 	<ul style="list-style-type: none"> ▪ Policy for emergent transfer of STEMI patient needing surgical intervention ▪ Contract with a company providing critical care (CCT) transfers ▪ Transfer policies for cardiovascular pt 		As above.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Intra-aortic Balloon pump capability with staffing available 24/7/365	Staffing policies that demonstrate support of operations		If there have been any changes since initial designation, please provide for each item:
Protocols for triage, diagnosis and Cardiac Catheterization Laboratory activation <ul style="list-style-type: none"> ▪ Single activation phone call for alert of the STEMI team initiated from the ED ▪ Criteria for activation of the STEMI team prior to patient's arrival. 	Copy of internal policies		As above. Written protocols are available in the ICU/CCU, CCL, and Emergency Department (ED).
30-minute door-to-patient arrival in the CCL. *Strive for 20 minutes.	<ul style="list-style-type: none"> ▪ Copy of policy ▪ Copy of any existing measurement to audit response time of all team members ▪ Copy of last three months of call schedule 		If door-to-patient arrival in CCL is >30 minutes, please indicate frequency # over the past year and measures implemented to improve.
Universal acceptance of STEMI patients (no ED or CCL diversion) unless there is a declared internal disaster, equipment failure or scheduled maintenance of essential equipment for interventional cardiac procedures. If unable to accept a STEMI patient due to equipment failure, scheduled maintenance, or internal disaster, the hospital status is immediately changed to reflect this in ReddiNet™.	<ul style="list-style-type: none"> ▪ Copy of policy ▪ Record of performance 		Provide documentation of any internal disasters, equipment failure, or scheduled maintenance that precluded the SRC from accepting a patient. If none, please indicate this.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Ability to receive electronic transmission of the EMS 12-lead EKG to one or more sites	<ul style="list-style-type: none"> ▪ Copy of policy ▪ Copy of contract with vendor 		Please report any problems with receiving prehospital 12-lead transmissions.
Participation in EMS education	Participation at County Level		Please list any EMS educational activities the SRC has completed since the last site visit.
Collaborates with San Mateo County STEMI Referral Hospitals (SRH) in receiving acute STEMI patients in transfer	<ul style="list-style-type: none"> ▪ Copies of transfer agreements ▪ Copy of policies for receiving transfers 		Please provide any new information or changes since the last site visit.
Hospital Personnel			
STEMI Receiving Center Program Medical Director qualifications: <ul style="list-style-type: none"> ▪ Board Certified in Internal Medicine (ABIM) ▪ Subspecialty certification in cardiovascular disease with interventional cardiology ▪ Credentialed member of medical staff with privileges for Primary PCI. ▪ Participates in San Mateo County STEMI QI activities 	<ul style="list-style-type: none"> ▪ Copy of current board certification in internal medicine (ABIM) with current ABIM subspecialty certification in Cardiovascular Disease, and Interventional Cardiology ▪ Copy of medical staff privileges 		As above.
STEMI Program Manager <ul style="list-style-type: none"> ▪ Current RN License, or Other qualified experience ▪ STEMI program experience ▪ Participates in SMC STEMI QI Program 	<ul style="list-style-type: none"> ▪ Copy of license and resume or CV ▪ Documentation of participation in hospitals QI process for STEMI 		Provide information for any new staff members.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Provide job descriptions and organizational structure clarifying the relationship between the STEMI Program Medical Director, the STEMI Program Manager, and the STEMI team.	Job descriptions and organizational chart		As outlined (EMSA Regulation)
Cardiac Cath Lab Manager <ul style="list-style-type: none"> ▪ May by same individual as the program manager 	Job description		As above.
Interventional Cardiologists <ul style="list-style-type: none"> ▪ Current Board Certified in Cardiovascular Disease ▪ Current Board Certified in Interventional Cardiology. ▪ Active credentialed member of medical staff with privileges for Primary PCI ▪ Actively taking call 	<ul style="list-style-type: none"> ▪ Copy of current board certification in internal medicine (ABIM) with current ABIM subspecialty certification in Cardiovascular Disease, and Interventional Cardiology ▪ Copy of medical staff privileges ▪ Documentation of number of PCI procedures during the last 12 months ▪ Documentation of the number of primary cath PCI patients in the past 12 months ▪ Copy of call schedule for 3 – 6 months 		Provide information for any new cardiologists since designation. Include a statement regarding SRC Medical Director oversight for each practitioner that is not currently board certified in interventional cardiology.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
<p><i>Alternate plan for cardiovascular surgery capability:</i></p> <ul style="list-style-type: none"> ▪ Policies and agreements in place that will allow for a transfer within 30 minutes ▪ Transfer agreements with at least one facility for emergent CV surgery. 	<ul style="list-style-type: none"> ▪ Copy of transfer agreement with at least one facility for cardiovascular surgery ▪ Policy that facilitates rapid transfer of STEMI patients requiring cardiovascular surgery 		<p>Please provide any update since the last site visit. If none, please indicate so.</p>
Clinical Capabilities			
<p>A plan for triage and treatment of simultaneous presentation of STEMI patients without diversion of a STEMI patient to an alternate facility</p>	<p>Copy of policy</p>		<p>Did this occur over the last 3 years? If so, what was the frequency and how was this managed?</p>

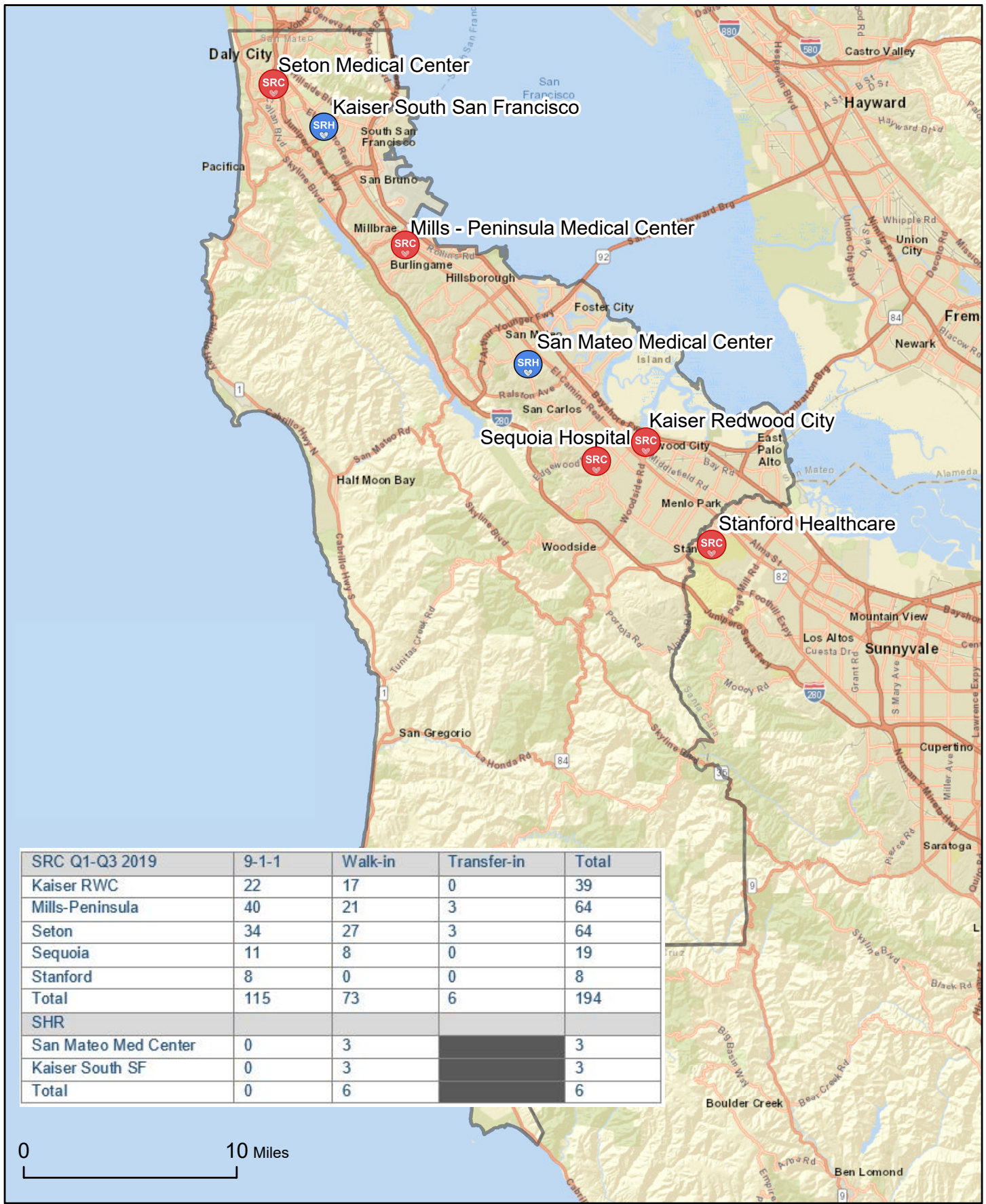
Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
<p>Volume of primary and total PCI procedures per year for each cardiologist</p>	<p>List of total procedures for each cardiologist taking call</p>		<p>Provide call rosters for the past year for the CCL Team.</p> <p>Provide the practitioner name and total volume for each practitioner indicating the quantity of procedures that are radial PCI and the quantity that were performed as femoral PCI.</p> <p>For the subset of patients with multi-vessel disease, please indicate the number that underwent multi-vessel primary PCI and the number that underwent multi-vessel staged PCI.</p> <p>What system is in place for the SRC Medical Director to monitor low volume (<11 Primary PCI/75 PCI cases) interventionalists?</p>
<p>STEMI-Receiving Center should meet ACC/AHA criteria for volume: (TBD)</p> <ul style="list-style-type: none"> ▪ perform a minimum of 36 primary PCI procedures, or ▪ 200 total PCI procedures annually 	<p>Documentation of current hospital volume for both primary PCI procedures and total PCI procedures annually</p>		<p>If SRC is performing < 36 primary and 200 PCI total cases, provide what peer review and quality initiatives are in place or are targeted to be implemented.</p>

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
The STEMI Receiving Center shall participate in the approved data collection tool, Get with the Guidelines (GWTG CAD). Data shall be submitted per established timelines. SRC shall communicate to the LEMSA if there are any circumstances that delay data submission.	Provide data to SMC for evaluation of the STEMI System		Please provide any feedback on the data collection tool.
A program shall be in place to track and improve treatment (acutely and at discharge) with ACC/AHA guideline-based Class 1 therapies	Documentation of compliance with ACC/AHA guidelines		Is there any data that is not being collected that the SRC would like to see?
Policy with identifying criteria used for patients to receive emergent angiography.	Copy of Policy or criteria		Have there been any changes.
Process Improvement			
Policy for internal and system process improvement	Copy of policy or QI plan		Please provide a copy of the policy & QIP with any updates.
Program review including: <ul style="list-style-type: none"> ▪ Deaths ▪ Complications ▪ Transfers ▪ Sentinel events ▪ System issues ▪ Organization issues ▪ Post D/C results 	Copy of reports Minutes of meetings		Provide an example of one complex case and how it was reviewed from a quality improvement plan. Describe any institutional or practice changes that were or are currently being implemented as a quality improvement system enhancement.
SMC EMS QI program participation	Written agreement with SMC EMS Agency		New agreements will be forthcoming.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
First medical contact to (first device used) time in less than 90 minutes for 90% of STEMI patients	Provides Data to SMC EMS Agency		Provide median time for all cases for the past year (July 1, 2018-June 30, 2019) stratified by arrival to the ED time frame: 07-1500, 1501-2300, and 2301-0659. Indicate any system-wide changes implemented to improve times.
Door to first EKG for walk-in patients	Goal: 10 min or <		Please provide the median door to first EKG stratified by arrival to the ED time frame: 07-1500, 1501-2300, and 2301-0659.
STEMI Referral Hospital ED door –to-balloon (first device used) time transfer within 120 minutes.	Provides Data to SMC EMS Agency		For transfers from an SRH to an SRC, indicate the number of transfers where this was >120 min and the reason for the delay for each case.
Proportion of eligible patients receiving reperfusion therapy	Provides Data to SMC EMS Agency		Provide the actual number over the past 12 months (July 1, 2018-June 30, 2019).
Number of patients who either underwent CABG within 24 hours of hospital arrival or were transferred for CABG within 24 hours of hospital arrival.	Provides Data to SMC EMS Agency		Provide the actual number over the past 12 months (July 1, 2018-June 30, 2019).
Proportion of patients with field diagnosis of STEMI and activation of the cardiac Catheterization Laboratory for intended primary PCI that <ul style="list-style-type: none"> ▪ Do not undergo acute catheterization because of misdiagnosis ▪ Undergo acute catheterization and found to have no elevation in cardiac biomarkers and on revascularization in the first 24 hours 	Provides Data to SMC EMS Agency		Please provide the number of cases over the last year (July 1, 2018-June 30, 2019).

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
System Provider Follow up	Follow up is given to first responder agency		Please provide the number of times follow up was given to the first responder agency.

STEMI Receiving Centers (SRC) and STEMI Referral Hospitals (SRH) for San Mateo County



SRC Designation Agreement - Sample

AGREEMENT BETWEEN THE COUNTY OF SAN MATEO AND [HOSPITAL]

This Agreement is entered this first day of November 2019, by and between the County of San Mateo, a political subdivision of the state of California, hereinafter called "COUNTY," and _____, hereinafter called "HOSPITAL."

* * *

Whereas, pursuant to Section 31000 of the California Government Code, COUNTY may contract with independent HOSPITALS for the furnishing of such services to or for COUNTY or any Department thereof; and

Whereas, COUNTY has implemented a ST Segment Elevation Myocardial Infarction (STEMI) Care System of care for patients with STEMI; and

Whereas, COUNTY wishes to assure the highest quality of care by directing STEMI patients, as defined below, to facilities committed to meeting STEMI Receiving Center (SRC) standards; and

Whereas, COUNTY has found the HOSPITAL meets COUNTY SRC standards; and

Whereas, HOSPITAL is willing to accept designation as a SRC; and

Whereas HOSPITAL by virtue of the parties' execution of this Agreement, will be designated by as a SRC under the terms of the Agreement; and

Whereas the San Mateo County EMS Agency (EMS AGENCY) shall represent the COUNTY in all matters pertaining to this Agreement and shall serve as the Agreement Administrator on behalf of the COUNTY;

Now, therefore, in consideration of the recitals and the mutual obligations of the parties expressed herein, both COUNTY and HOSPITAL do hereby expressly agree as follows:

1. Exhibits and Attachments

The following exhibits and attachments to this Agreement are incorporated into this Agreement by this reference:

- Exhibit A—Services
- Exhibit B—Payments
- Attachment I—§ 504 Compliance

2. Services to be performed by HOSPITAL

Hospital shall perform services for COUNTY in accordance with the terms, conditions, and specifications set forth herein.

3. Payments

HOSPITAL shall pay COUNTY an annual fee of TWENTY-FIVE THOUSAND DOLLARS (\$25,000.00) for the STEMI Receiving Center Designation for a maximum obligation of SEVENTY-FIVE THOUSAND DOLLARS (\$75,000.00) over the term of the contract. The fee shall be used to pay COUNTY costs of administering and evaluating the STEMI Care System, updating and enhancing the data collection system,

and providing public information/outreach education. The fee shall be paid annually in full within thirty (30) calendar days following receipt by HOSPITAL of the invoice issued by the COUNTY.

4. Term

Subject to compliance with all terms and conditions, the term of this Agreement shall be from November 1, 2019, through October 31, 2022.

5. Termination

This Agreement may be terminated by HOSPITAL or by the COUNTY at any time without a requirement of good cause upon ninety (90) days' advance written notice to the other party.

COUNTY may terminate this Agreement for cause. To terminate for cause, COUNTY must first give HOSPITAL written notice of the alleged breach, upon the occurrence of any one or more of the following events, and is subject to HOSPITAL's opportunity to correct the underlying breach issues as set forth in item 6 below:

- a. Any material breach of this Agreement by HOSPITAL:
- b. Any violation by HOSPITAL of any applicable laws, regulations, or local ordinances;
- c. Any failure to provide timely surgical and non-surgical physician coverage for STEMI patients, causing unnecessary risk of mortality and/or morbidity for STEMI patients;
- d. Submission by HOSPITAL to COUNTY of reports or information that HOSPITAL knows or should know are incorrect in any material respect;
- e. Any failure by HOSPITAL to comply with STEMI Receiving Center Standards;
- f. Loss or suspension of licensure as an acute care hospital or loss or suspension of any existing or future special permits (Cardiac Catheterization Lab, Cardiovascular Surgery Service) issued by state or federal agencies necessary for the provision of the services provided by HOSPITAL under the terms of this Agreement.
- g. Any failure to comply with a plan of correction related to a breach of any term of this Agreement imposed by COUNTY;
- h. Any failure to remedy HOSPITAL's diversion of ambulances transporting STEMI patients intended for HOSPITAL; and
- i. Repeated failure to submit specified reports, STEMI Information System data, or other information required under this Agreement.

6. Opportunity to Cure

Prior to the exercise of COUNTY right to terminate for cause, COUNTY shall give HOSPITAL at least thirty (30) days written notice (hereinafter "Correction Period") specifying in reasonable detail the grounds for termination and all deficiencies requiring correction. COUNTY may shorten the Correction Period to immediate termination if COUNTY determines that HOSPITAL's action or inaction has seriously threatened,

or will seriously threaten, public health and safety. If HOSPITAL has not remedied each deficiency prior to the end of the Correction Period to the satisfaction of COUNTY, or COUNTY has not approved a plan of correction within the Correction Period, COUNTY may terminate this Agreement upon written notice to HOSPITAL, specifying the effective date of termination. No opportunity to cure is required prior to COUNTY termination of this Agreement for failure by HOSPITAL to complete any plan of correction imposed by COUNTY.

7. Relationship of Parties

HOSPITAL agrees and understands that the work/services performed under this Agreement are performed as an independent HOSPITAL and not as an employee of COUNTY and that neither HOSPITAL nor its employees acquire any of the rights, privileges, powers, or advantages of COUNTY employees.

8. Hold Harmless

a. General Hold Harmless

HOSPITAL shall indemnify and save harmless COUNTY and its officers, agents, employees, and servants from all claims, suits, or actions of every name, kind, and description resulting from this Agreement, the performance of any work or services required of HOSPITAL under this Agreement, or payments made pursuant to this Agreement brought for, or on account of, any of the following:

(A) injuries to or death of any person, including HOSPITAL or its employees/officers/agents;

(B) damage to any property of any kind whatsoever and to whomsoever belonging;

(C) any sanctions, penalties, or claims of damages resulting from HOSPITAL's failure to comply, if applicable, with the requirements set forth in the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and all Federal regulations promulgated thereunder, as amended; or

(D) any other loss or cost, including but not limited to that caused by the concurrent active or passive negligence of COUNTY and/or its officers, agents, employees, or servants. However, HOSPITAL's duty to indemnify and save harmless under this Section shall not apply to injuries or damage for which COUNTY has been found in a court of competent jurisdiction to be solely liable by reason of its own negligence or willful misconduct.

The duty of HOSPITAL to indemnify and save harmless as set forth by this Section shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

9. Assignability and Subcontracting

HOSPITAL shall not assign this Agreement or any portion of it to a third party or subcontract with a third party to provide services required by HOSPITAL under this Agreement without the prior written consent of COUNTY. Any such assignment or subcontract without COUNTY's prior written consent shall give COUNTY the right to automatically and immediately terminate this Agreement without penalty or advance notice. Documentation of written agreements to provide cardiac surgery and transportation to facilities for cardiac surgery for hospitals that do not have this service on site will be demonstrated during the STEMI Receiving Center Standards review.

10. Insurance

a. General Requirements

HOSPITAL shall not commence work or be required to commence work under this Agreement unless and until all insurance required under this Section has been obtained and such insurance has been approved by COUNTY’s Risk Management, and HOSPITAL shall use diligence to obtain such insurance and to obtain such approval. HOSPITAL shall furnish COUNTY with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending HOSPITAL’s coverage to include the contractual liability assumed by HOSPITAL pursuant to this Agreement. These certificates shall specify or be endorsed to provide that thirty (30) days’ notice must be given, in writing, to COUNTY of any pending change in the limits of liability or of any cancellation or modification of the policy.

b. Workers’ Compensation and Employer’s Liability Insurance

HOSPITAL shall have in effect during the entire term of this Agreement workers’ compensation and employer’s liability insurance providing full statutory coverage. In signing this Agreement, HOSPITAL certifies, as required by Section 1861 of the California Labor Code, that (a) it is aware of the provisions of Section 3700 of the California Labor Code, which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and (b) it will comply with such provisions before commencing the performance of work under this Agreement.

c. Liability Insurance

HOSPITAL shall take out and maintain during the term of this Agreement such bodily injury liability and property damage liability insurance as shall protect HOSPITAL and all of its employees/officers/agents while performing work covered by this Agreement from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage which may arise from HOSPITAL’s operations under this Agreement, whether such operations be by HOSPITAL, any HOSPITAL, anyone directly or indirectly employed by either of them, or an agent of either of them. Such insurance shall be combined single limit bodily injury and property damage for each occurrence and shall not be less than the amounts specified below:

- (a) Comprehensive General Liability... \$1,000,000
- (b) Motor Vehicle Liability Insurance... \$1,000,000
- (c) Professional Liability..... \$1,000,000

COUNTY and its officers, agents, employees, and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that (a) the insurance afforded thereby to COUNTY and its officers, agents, employees, and servants shall be primary insurance to the full limits of liability of the policy and (b) if the COUNTY or its officers, agents, employees, and servants have other insurance against the loss covered by such a policy, such other insurance shall be excess insurance only.

In the event of the breach of any provision of this Section, or in the event any notice is received which indicates any required insurance coverage will be diminished or canceled, COUNTY, at its option, may, notwithstanding any other provision of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work and payment pursuant to this Agreement.



11. Compliance with Laws

All services to be performed by HOSPITAL pursuant to this Agreement shall be performed in accordance with all applicable Federal, State, County, and municipal laws, ordinances, and regulations, including but not limited to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Federal Regulations promulgated thereunder, as amended (if applicable), the Business Associate requirements set forth in Attachment H (if attached), the Americans with Disabilities Act of 1990, as amended, and Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of disability in programs and activities receiving any Federal or County financial assistance. Such services shall also be performed in accordance with all applicable ordinances and regulations, including but not limited to appropriate licensure, certification regulations, provisions pertaining to confidentiality of records, and applicable quality assurance regulations. In the event of a conflict between the terms of this Agreement and any applicable State, Federal, County, or municipal law or regulation, the requirements of the applicable law or regulation will take precedence over the requirements set forth in this Agreement.

HOSPITAL will timely and accurately complete, sign, and submit all necessary documentation of compliance.

12. Non-Discrimination and Other Requirements

a. General Non-discrimination

No person shall be denied any services provided pursuant to this Agreement (except as limited by the scope of services) on the grounds of race, color, national origin, ancestry, age, disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy), medical condition (cancer-related), military service, or genetic information.

b. Equal Employment Opportunity

HOSPITAL shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement. HOSPITAL's equal employment policies shall be made available to COUNTY upon request.

c. Section 504 of the Rehabilitation Act of 1973

HOSPITAL shall comply with Section 504 of the Rehabilitation Act of 1973, as amended, which provides that no otherwise qualified individual with a disability shall, solely by reason of a disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in the performance of any services this Agreement. This Section applies only to HOSPITALs who are providing services to members of the public under this Agreement.

d. Compliance with County's Equal Benefits Ordinance

HOSPITAL shall comply with all laws relating to the provision of benefits to its employees and their spouses or domestic partners, including, but not limited to, such laws prohibiting discrimination in the provision of such benefits on the basis that the spouse or domestic partner of the HOSPITAL's employee is of the same or opposite sex as the employee.

e. Discrimination Against Individuals with Disabilities

The nondiscrimination requirements of 41 C.F.R. 60-741.5(a) are incorporated into this Agreement as if fully set forth here, and HOSPITAL and any subHOSPITAL shall abide by the requirements of 41 C.F.R. 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime HOSPITALs and subHOSPITALs to employ and advance in employment qualified individuals with disabilities.

f. History of Discrimination

HOSPITAL certifies that no finding of discrimination has been issued in the past 365 days against HOSPITAL by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other investigative entity. If any finding(s) of discrimination have been issued against HOSPITAL within the past 365 days by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or other investigative entity, HOSPITAL shall provide COUNTY with a written explanation of the outcome(s) or remedy for the discrimination prior to execution of this Agreement. Failure to comply with this Section shall constitute a material breach of this Agreement and subjects the Agreement to immediate termination at the sole option of the COUNTY.

g. Reporting: Violation of Non-discrimination Provisions

HOSPITAL shall report to the County Manager the filing in any court or with any administrative agency of any complaint or allegation of discrimination on any of the bases prohibited by this Section of the Agreement or the Section titled "Compliance with Laws". Such duty shall include reporting of the filing of any and all charges with the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other entity charged with the investigation or adjudication of allegations covered by this subsection within 30 days of such filing, provided that within such 30 days such entity has not notified HOSPITAL that such charges are dismissed or otherwise unfounded. Such notification shall include a general description of the circumstances involved and a general description of the kind of discrimination alleged (for example, gender-, sexual orientation-, religion-, or race-based discrimination).

Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subject the HOSPITAL to penalties, to be determined by the County Manager, including but not limited to the following:

- i. termination of this Agreement;
- ii. disqualification of the HOSPITAL from being considered for or being awarded a COUNTY contract for a period of up to 3 years;
- iii. liquidated damages of \$2,500 per violation; and/or
- iv. imposition of other appropriate contractual and civil remedies and sanctions, as determined by the County Manager.

To effectuate the provisions of this Section, the County Manager shall have the authority to offset all or any portion of the amount described in this Section against amounts due to HOSPITAL under this Agreement or any other agreement between HOSPITAL and COUNTY.

13. Compliance with County Employee Jury Service Ordinance

HOSPITAL shall comply with Chapter 2.85 of the COUNTY's Ordinance Code, which states that HOSPITAL shall have and adhere to a written policy providing that its employees, to the extent they are full-time employees and live in San Mateo County, shall receive from the HOSPITAL, on an annual basis, no fewer than five days of regular pay for jury service in San Mateo County, with jury pay being provided only for each day of actual jury service. The policy may provide that such employees deposit any fees received for

such jury service with HOSPITAL or that the HOSPITAL may deduct from an employee's regular pay the fees received for jury service in San Mateo County. By signing this Agreement, HOSPITAL certifies that it has and adheres to a policy consistent with Chapter 2.85. For purposes of this Section, if HOSPITAL has no employees in San Mateo County, it is sufficient for HOSPITAL to provide the following written statement to COUNTY: "For purposes of San Mateo County's jury service ordinance, HOSPITAL certifies that it has no full-time employees who live in San Mateo County. To the extent that it hires any such employees during the term of its Agreement with San Mateo County, HOSPITAL shall adopt a policy that complies with Chapter 2.85 of the COUNTY's Ordinance Code." The requirements of Chapter 2.85 do not apply if this Agreement's total value listed in the Section titled "Payments", is less than one-hundred thousand dollars (\$100,000), but HOSPITAL acknowledges that Chapter 2.85's requirements will apply if this Agreement is amended such that its total value meets or exceeds that threshold amount.

14. Retention of Records; Right to Monitor and Audit

HOSPITAL shall maintain patient care, revenue, and expenditure data during the term of this Agreement and for a period of seven (7) years from the termination of this Agreement and for a period of seven (7) years from the termination of this Agreement or until all claims, if any, have been resolved, whichever period is longer, or longer is otherwise required by law for the provisions of this Agreement. Such records shall be maintained in such a fashion as to be able to separately identify STEMI patients from all other patients.

COUNTY and its authorized representatives shall be entitled to monitor, assess, and evaluate HOSPITAL's performance pursuant to this Agreement. To the extent permitted by law, such monitoring, assessments, or evaluations shall include, but not limited to, audits, inspection of premises, review of reports, review of patient records, and interviews of HOSPITAL's staff and STEMI program participants, so long as such activities do not interfere with the provision of patient care and hospital operations; and, any on-site activities are scheduled at least one (1) week in advance and at a time that is mutually convenient for both parties. At a mutually convenient to which the parties agree in advance, during normal business hours, as often as COUNTY may deem necessary, and to the extent permitted by law, HOSPITAL shall make available to COUNTY, upon COUNTY request, all of HOSPITAL's records with respect to HOSPITAL's performance under this Agreement.

HOSPITAL may, at its discretion, as may be reasonably requested by COUNTY, participate in evaluations and/or research designed to show the effectiveness of the STEMI response and shall submit reports and materials on its STEMI services as reasonably requested by COUNTY. These reports, evaluations and studies shall be used by COUNTY to analyze and generate aggregate statistical reports on the Comprehensive Cardiac Care System for STEMI.

HOSPITAL agrees to participate and enter data in COUNTY specified data system for each STEMI patient received to help in the assessment of the overall STEMI system of care. COUNTY represents and warrants that the data system complies with all California and Federal laws related to security of patient medical records and to patient privacy.

15. Merger Clause; Amendments

This Agreement, including the Exhibits and Attachments attached to this Agreement and incorporated by reference, constitutes the sole Agreement of the parties to this Agreement and correctly states the rights, duties, and obligations of each party as of this document's date. In the event that any term, condition, provision, requirement, or specification set forth in the body of this Agreement conflicts with or is inconsistent with any term, condition, provision, requirement, or specification in any Exhibit and/or Attachment to this Agreement, the provisions of the body of the Agreement shall prevail. Any prior

agreement, promises, negotiations, or representations between the parties not expressly stated in this document are not binding. All subsequent modifications or amendments shall be in writing and signed by the parties.

16. Controlling Law; Venue

The validity of this Agreement and of its terms, the rights and duties of the parties under this Agreement, the interpretation of this Agreement, the performance of this Agreement, and any other dispute of any nature arising out of this Agreement shall be governed by the laws of the State of California without regard to its choice of law or conflict of law rules. Any dispute arising out of this Agreement shall be venued either in the San Mateo County Superior Court or in the United States District Court for the Northern District of California.

17. Notices

Any notice, request, demand, or other communication required or permitted under this Agreement shall be deemed to be properly given when both: (1) transmitted via facsimile to the telephone number listed below or transmitted via email to the email address listed below; and (2) sent to the physical address listed below by either being deposited in the United States mail, postage prepaid, or deposited for overnight delivery, charges prepaid, with an established overnight courier that provides a tracking number showing confirmation of receipt.

In the case of COUNTY, to:

Name/Title: Travis Kusman, MPH, Paramedic / EMS Director
Address: San Mateo County EMS Agency
801 Gateway Blvd, Ste. 200
South San Francisco, CA 94080
Telephone: (650) 573-2579
Facsimile: (650) 573-2029
Email: tkusman@smcgov.org

In the case of HOSPITAL, to:

Name/Title:
Address:
Telephone:
Facsimile:
Email:

18. Electronic Signature

Both COUNTY and HOSPITAL wish to permit this Agreement and future documents relating to this Agreement to be digitally signed in accordance with California law and COUNTY's Electronic Signature Administrative Memo. Any party to this Agreement may revoke such agreement to permit electronic signatures at any time in relation to all future documents by providing notice pursuant to this Agreement.

19. Payment of Permits/Licenses

HOSPITAL bears responsibility to obtain any license, permit, or approval required from any agency for work/services to be performed under this Agreement at HOSPITAL's own expense prior to commencement of said work/services. Failure to do so will result in forfeit of any right to compensation under this Agreement.

* * *

THIS CONTRACT IS NOT VALID UNTIL SIGNED BY ALL PARTIES. NO WORK WILL COMMENCE UNTIL THIS DOCUMENT HAS BEEN SIGNED BY THE COUNTY PURCHASING AGENT OR AUTHORIZED DESIGNEE.

For HOSPITAL:

HOSPITAL Signature

Date

HOSPITAL Name (please print)



For COUNTY:

Purchasing Agent Signature
(Department Head or
Authorized Designee)
County of San Mateo

Date

Purchasing Agent Name (please print)
(Department Head or **Authorized** Designee)
County of San Mateo

Purchasing Agent or **Authorized** Designee
Job Title (please print)
County of San Mateo



Exhibit A

HOSPITAL shall provide the following services:

- I. Definitions for the purposes of this agreement are defined in EMS AGENCY policy Facilities-9, included as part of this Agreement.
- II. Obligations of HOSPITAL:
 - a. HOSPITAL shall provide all services, equipment and personnel including maintenance of adequate staffing levels, equipment, and facilities according to STEMI designation criteria which are described in EMS AGENCY policy Facilities -9 and included as part of this agreement.
 - b. Accept all San Mateo County EMS patients triaged as having a suspected STEMI transported or who “come” to HOSPITAL’s facility and provide appropriate medical management for said patients without regard to race, color, national origin, religious affiliation, age, sex, or ability to pay. For the purpose of this Agreement, the phrase “comes to the emergency department” shall have the same meaning as set forth in the Emergency Medical Treatment and Active Labor Act (42 U.S.C § 1395dd) and the regulations promulgated thereunder (EMTALA).
 - c. HOSPITAL acknowledges that EMS AGENCY makes no representation, does not guarantee that STEMI Patients will be delivered or diverted to HOSPITAL for care and cannot assure that a minimum number of STEMI Patients will be delivered to HOSPITAL during the term of this Agreement.
 - d. Any transfer of a STEMI Patient by HOSPITAL must be in accordance with EMTALA.
 - e. HOSPITAL shall comply with SRC Standards described in EMS AGENCY Facilities Policy 9 (STEMI Receiving Center Standards). Exhibit B, which is attached and incorporated into this Agreement. HOSPITAL shall monitor compliance with SRC Standards on a regular and ongoing basis. Documentation of such efforts shall be made available to the EMS AGENCY upon request. HOSPITAL shall comply with all ST-Elevation Myocardial Critical Care System regulations as outlined in Title 22, Division 9, Chapter 7.1 or most current version.
 - f. HOSPITAL shall notify the EMS AGENCY, in writing, within twenty-four (24) hours of any failure to meet SRC Standards and take corrective action within a reasonable period of time to correct the failure.
 - g. HOSPITAL shall immediately notify the EMS AGENCY of any circumstances that will prevent HOSPITAL from providing SRC services and immediately update its status in the ReddiNet system if unable to provide SRC services.
 - h. HOSPITAL shall comply with any EMS AGENCY plan of correction, regarding any identified failure to meet SRC Standards, within the timeframes established by the EMS AGENCY.
 - i. HOSPITAL shall maintain a designated telephone number to facilitate rapid access to an on-site physician for consultation with ems personnel, community physicians and other providers regarding care and transfer of STEMI Patients.
 - j. HOSPITAL shall actively and cooperatively participate as a member of the Continuous Quality Improvement Program STEMI committee, and such other related committees that may, from time to time, be named and organized by the EMS AGENCY.

- k. HOSPITAL shall submit STEMI Information System data and CARES data to the EMS AGENCY specified data system(s) in a timely manner until such time as a Bidirectional Healthcare Data Exchange network is established between EMS AGENCY and HOSPITAL enabling the same, for the purposes of continuous quality improvement and training to enhance the level of care. The EMS AGENCY specified data system at the present time is *Get with the Guidelines CAD*.
 - l. HOSPITAL shall, at a minimum, collect and maintain the data specified in the STEMI Receiving Center Standards identified in EMS AGENCY policy, unless additional data points are adopted by the STEMI Quality Improvement Committee.
 - m. Hospital shall allow and maintain access to the electronic prehospital patient care record via a secure link to PCR Viewer provided by American Medical Response, under contract with the EMS AGENCY.
 - n. HOSPITAL shall have available and functional at least one (1) EMS AGENCY approved mechanical CPR device with radiolucent back plate for use in the Cardiac Cath Lab within twelve (12) months of execution of this contract.
- III. Obligations of the San Mateo County EMS Agency (EMS AGENCY)
- a. The EMS AGENCY will consult with HOSPITAL prior to the adoption of any policy or procedure that concerns the administration of the STEMI Care System, STEMI public education efforts, or the triage, transport, and treatment of STEMI Patients through the HOSPITAL's participation on the STEMI Quality Improvement Committee.
 - b. The EMS AGENCY will provide or cause to be provided to HOSPITAL and/or the STEMI Quality Improvement Committee, prehospital system data related to STEMI care.
 - c. The EMS AGENCY will strive to optimize the overall effectiveness of the STEMI Care System and its individual components through the development of performance measures for each component and for the system function as a whole (both process and outcomes measures) and by employing continuous quality improvement strategies and collaboration with stakeholders.
 - d. The EMS AGENCY will update and maintain the STEMI Information System, that requires minimum data duplication and will engage with HOSPITAL to explore methods to establish bidirectional automated data health information exchange, as well as, provide appropriate training and/or training documents for its operation and use.

Exhibit B

In consideration of the services provided by COUNTY described in Exhibit A and subject to the terms of the Agreement, HOSPITAL shall pay COUNTY based on the following fee schedule and terms:

HOSPITAL shall pay COUNTY an annual fee of TWENTY-FIVE THOUSAND DOLLARS (\$25,000.00) for the STEMI Receiving Center Designation for a maximum obligation of SEVENTY-FIVE THOUSAND DOLLARS (\$75,000.00) over the term of the contract. The fee shall be used to pay COUNTY costs of administering and evaluating the STEMI Care System, updating and enhancing data collection system, and providing public information/outreach education.

The fee shall be paid annually in full within thirty (30) calendar days following receipt by HOSPITAL of the invoice issued by the COUNTY.



POLICY NO:	FAC – 9
EFFECTIVE:	11/2019

STEMI SYSTEM RECEIVING CENTER STANDARDS AND DESIGNATION

I. Purpose

To define 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.; California Code of Regulations, Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System.

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. It 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.

Clinical Staff: Individuals that have specific training and experience in the treatment and management of ST-Elevation Myocardial Infarction (STEMI) patients. This includes, but is not limited to, physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.

Emergency Medical Services Authority [or “EMS Authority” / “EMSA”]: The department in California responsible for the coordination and integration of all state activities concerning EMS.

Immediately Available:

- A. Unencumbered by conflicting duties or responsibilities.
- B. Responding without delay upon receiving notification.

APPROVED:

Travis S. Kusman, MPH, Paramedic, EMS Director

Gregory H. Gilbert, MD, EMS Medical Director

- C. Being physically available to the specified area of the hospital when the patient is delivered in accordance with EMS Agency policies and procedures.

Implementation [or “implemented” / “has implemented”]: The development and activation of a STEMI Critical Care System Plan by the EMS Agency, including the prehospital and hospital care components in accordance with the plan.

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

Local Emergency Medical Services Agency [or “EMS Agency”]: the agency, department, or office having primary responsibility for administration of emergency medical services in a county or region and which is designated pursuant Health and Safety Code commencing with section 1797.200. The San Mateo County EMS Agency is the Local Emergency Medical Services Agency for San Mateo County.

PCR 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 the purposes of these regulations.

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 board-certified physician 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 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 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 STEMI Receiving Center (SRC), approved and designated by San Mateo County EMS Agency shall meet the following requirements:

A. STEMI Receiving Center Requirements

1. The hospital shall have established protocols for triage, diagnosis, and cath lab activation following field notification.
2. The hospital 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.
4. At a minimum, these written protocols shall be applicable in the intensive care unit/coronary care unit, cath lab and the emergency department.

5. 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.
 6. The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients.
 7. The hospital shall maintain STEMI team and Cardiac Catheterization Team call rosters.
 8. The Cardiac Catheterization Team, including appropriate staff determined by the EMS Agency, shall be immediately available.
 9. The hospital shall agree to accept all STEMI patients according to the local policy.
 10. STEMI receiving centers shall comply with the requirement for a minimum volume of procedures for designation required by the EMS Agency.
 11. The hospital shall have a STEMI program manager and a STEMI medical director.
 12. The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.
 13. The hospital shall participate in and comply with all aspects of the EMS Agency quality improvement processes related to a STEMI critical care system.
 14. 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.
 15. A STEMI receiving center shall have reviews by EMS Agency or other designated agency conducted at least every three years.
- B. STEMI Referring Hospital 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) 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 hospital 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 hospital shall have a program to track and improve treatment of STEMI patients.
7. The hospital must have a plan to work with a STEMI receiving center and the EMS Agency on quality improvement processes.
8. A STEMI referring hospital 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

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.
 - d. The SRC will submit a list of Cardiologists with active PCI privileges to the EMS 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 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. That an interventional cardiologist assumes care of the patient from the time the patient arrives at the SRC.
6. To accept all patients meeting STEMI patient triage criteria or upon transfer notification from a STEMI Referral Hospital, 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 Appendix B of this policy, also referred to as the STEMI data dictionary, shall be collected on an ongoing basis and provided to the EMS Agency.
9. Data will be entered into the EMS Agency approved collection systems and submitted monthly, by no later than the 15th calendar day of the following month. The EMS Agency specified data system at the present time is *Get with the Guidelines CAD*.
10. In consultation with the STEMI CQI Committee, EMS 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 EMS Agency.
2. Data will be entered into the EMS Agency approved collection system and submitted monthly, by no later than the 15th calendar day of the following month.
3. In consultation with the STEMI CQI Committee, EMS will update the data dictionary and/or identify another process to expedite data submission and reduce duplication.
 - a. The STEMI patient data elements:
 - i. EMS ePCR Number
 - ii. Facility
 - iii. Name: Last, First
 - iv. Date of Birth
 - v. Patient Age
 - vi. Patient Gender
 - vii. Patient Race
 - viii. Hospital Arrival Date
 - ix. Hospital Arrival Time
 - x. Dispatch Date
 - xi. Dispatch Time
 - xii. Field ECG Performed
 - xiii. 1st ECG Date
 - xiv. 1st ECG Time
 - xv. Did the patient suffer out-of-hospital cardiac arrest
 - xvi. Cath Lab Activated
 - xvii. Cath Lab Activation Date
 - xviii. Cath Lab Activation Time
 - xix. Did the patient go to the Cath Lab
 - xx. Cath Lab Arrival Date
 - xxi. Cath Lab Arrival Time
 - xxii. PCI Performed
 - xxiii. PCI Date.
 - xxiv. PCI Time
 - xxv. Fibrinolytic Infusion
 - xxvi. Fibrinolytic Infusion Date
 - xxvii. Fibrinolytic Infusion Time
 - xxviii. Transfer
 - xxix. SRH ED Arrival Date
 - xxx. SRH ED Arrival Time
 - xxxi. SRH ED Departure Date
 - xxxii. SRH ED Departure Time
 - xxxiii. Hospital Discharge Date
 - xxxiv. Patient Outcome
 - xxxv. Primary and Secondary Discharge Diagnosis

- b. The STEMI patient data elements:
 - i. Number of STEMIs treated.
 - ii. Number of STEMI patients transferred.
 - iii. Number and percent of emergency department STEMI patients arriving by private transport (non-EMS).
 - iv. The false positive rate of EMS diagnosis of STEMI, defined as the percentage of STEMI alerts by EMS which did not show STEMI on ECG reading by the emergency physician.

G. Quality Improvement and Evaluation Process

1. The Quality Improvement 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 EMS 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* and the San Mateo County EMS Agency STEMI Feedback Form (see Appendix A).
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 EMS 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 the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases.

V. Procedure

A. Designation

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

1. Application: Eligible hospitals shall submit a written letter of intent and request for SRC approval to the SMC-EMSA, as well as complete a formal application documenting the compliance of the hospital with EMS Agency SRC Standards.
 2. Approval: SRC approval or denial shall be made in writing by the EMS 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. EMS 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 EMS Agency review in accordance to 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 EMS 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 EMS Agency prior to the discontinuation of SRC services.

Appendix A – San Mateo County EMS Agency STEMI Feedback Form

**San Mateo County EMS Agency
STEMI Feedback Form (EMS Field Providers & SRCs)**

Case Summary:	
Include pt. demographics, and any relevant case info in summary	
Measure	Time
EMS dispatch	
EMS at scene	
EMS w patient	
EMS 12-lead EKG	
EMS departs scene	
Code STEMI alert activated PTA	
ED arrival	
ED EKG	
ISTAT Troponin I	
Stick time	
Revascularization	
D2B	
E2B	

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

Prehospital Data Element	Hospital Data Element	Element Type	Code Text	Variable Name	Code Value or Format
n/a	Patient ID	Alphanumeric text		patientid	9 characters
Sex	Gender	Single Select	Male Female Unknown	gender	1 2 3
DOB	Date of Birth	Date		dob	MM/DD/YYYY (no future dates)
n/a	Zip Code	Numeric		zip	5
n/a	Payment Source	Single Select	Medicare Medicaid Private/Other Self-Pay/No Insurance	psource	1 2 3 4
Ethnicity	Race	Multi-select	American Indian or Alaska Native Black or African American White Asian Native Hawaiian or Pacific Islander UTD	1 2 3 4 5 6	
n/a	Asian	Multi-select	Asian Indian Chinese Filipino Japanese Korean Vietnamese Other Asian	asian	1 2 3 4 5 6 7
n/a	Native Hawaiian or Pacific Islander	Multi-select	Native Hawaiian Guamanian or Chamorro Samoan Other Pacific Islander	hawaiian	1 2 3 4
n/a	Hispanic Ethnicity	Single Select	Yes No/UTD	hisethni	1 2
n/a	Hispanic Ethnicity Specify	Multi-select	Mexican, Mexican American, Chicano/a	ethnicys	1

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

			Cuban Puerto Rican Another Hispanic, Latino or Spanish Origin		2 3 4
n/a	Attending Physician/Provider NPI:	Site List Drop Down		npi	Valid NPI
n/a	Arrival Date/Time	Date		arrdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Admission Date	Date		admdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Not admitted, transferred out to another acute care facility	Boolean	True False	notadm	1 Blank
n/a	Patient first evaluated	Single select	ED Cath Lab Other	pateval	1 2 3
n/a	Date/Time if ED discharge/transfer out	Date		edtrans	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	ED Physician	Site List Drop Down		ednpi	Valid NPI
n/a	Cardiac Diagnosis	Single Select	Confirmed AMI – STEMI Confirmed AMI – STEMI/non-STEMI unspecified Unstable Angina Confirmed AMI – non-STEMI Coronary Artery Disease Other	Cardiag	1 2 3 4 5 6
n/a	Means of transport to first facility	Single Select	Air Ambulance Walk-in	meanstrans	1 2 3
Unit	EMS Agency name/number	Site List Drop Down		emsnum	Valid AHA EMS ID

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

Case #	Run/Sequence Number	Alphanumeric text		runnum	25
Primary impression or Secondary impression	Cardiac arrest prior to arrival	Single Select	Yes No	capriorarr	1 2
Narrative	Was bystander CPR performed	Single Select	Yes No	bystndcpr	1 2
n/a	Was therapeutic hypothermia initiated during this episode of care	Single Select	Yes No	Hypothermia	1 2
At pt side time	EMS First Medical Contact	Date		emsfirst	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Non-EMS First Medical Contact	Date		nonemsfirst	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	EMS Non-System Reason for Delay	Boolean	True False	emssystdel	1 Blank
Dispatched time	EMS Dispatch	Date		emsdisp	MM/DD/YYYY HH:MM MM/DD/YYYY
At scene time	EMS arrive on scene	Date		emsarr	MM/DD/YYYY HH:MM MM/DD/YYYY
Transport time	EMS depart scene	Date		emsdepart	MM/DD/YYYY HH:MM MM/DD/YYYY
Facility activation	Destination pre-arrival alert or notification	Date		destinpre	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Method of 1 st notification	Single Select	ECG transmission Phone call Radio ND	methodnot	1 2 3 4
n/a	Transferred from other facility	Single Select	Yes No	transed	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Transferring facility	Site List Drop Down		transfac	Valid AHA ID
n/a	Arrival at first hospital	Date		outhosp	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Transport requested	Date		transreq	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Transport arrived Date/Time	Date		transarr	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Transfer out	Date		transout	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Facility the patient was transferred to	Site List Drop Down		faciltrans2	Valid AHA ID
n/a	Mode of transport from outside facility	Single Select	Air Ambulance	modetrans	1 2
n/a	Interfacility transport EMS agency name/number	Site List Drop Down		intertrans	Valid AHA EMS ID
EKG/ECG: 12-Lead	1 st ECG Date/Time	Date		firstecgdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	1 st ECG obtained	Single Select	Prior to hospital arrival After first hospital arrival	firstecgobt	1 2
n/a	1 st ECG non-system reason for delay	Boolean	True False	firstecgsystdel	1 Blank
n/a	STEMI or STEMI equivalent	Single Select	Yes No	stemi	1 2
n/a	If no, other ECG findings	Single select	New or presumed new ST depression Transient ST elevation <20 minutes	othecgfind	1 2
n/a	If yes, STEMI or STEMI equivalent first noted	Single select	First ECG Subsequent ECG	stemifirst	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	If subsequent ECG, date/time of positive ECG	Date		posecgdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Symptom onset date/time	Date		onsetdt	MM/DD/YYYY HH:MM MM/DD/YYYY
Vitals	Heart rate documented on first medical contact	Integer		hrfmc	0-300
n/a	Heart failure documented on first medical contact	Single select	Yes No	hffmc	1 2
n/a	Cardiogenic shock documented on first medical contact	Single select	Yes No	cardshockfmc	1 2
Medications	Patient current medications	Single select	Dabigatran Rivaroxaban Apixaban Warfarin None ND	ptcurmeds	1 2 3 4 5 6
n/a	Initial serum creatinine	Decimal		lnitscr	0.1 – 59.9
n/a	Aspirin within 24 hours of arrival?	Single select	Yes No Contraindicated	asp24h	1 2 3
n/a	Positive cardiac biomarkers in the first 24 hours?	Single select	Yes No	posbio24	1 2
n/a	History of smoking?	Single select	Yes No	smokinghist	1 2
n/a	History of peripheral artery disease	Single select	Yes No	hypad	1 2
n/a	Reperfusion candidate?	Single select	Yes No	repcand	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Primary reason not reperfusion candidate	Single select	No ST elevation/LBBB Chest pain resolved ST elevation resolved MI diagnosis unclear MI symptoms >12 hours No chest pain Other	noreprs	1 2 3 4 5 6 7
n/a	Thrombolytics?	Single select	Yes No	thromb	1 2
n/a	If yes, Thrombolytics dose start date/time	Date		dosest	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Documented non-system reason for delay thrombolytics?	Single select	Yes No	nsysreas	1 2
n/a	If yes, reason (check all that apply)	Multi-select	Cardiac arrest Intubation Patient refusal	reasday	1 2 3
n/a	Reason for not performing thrombolytic	Single select	Known bleeding diathesis Recent surgery/trauma Severe uncontrolled hypertension Ischemic stroke w/in 3 months except acute ischemic stroke w/in 3 hours Significant closed head or facial trauma w/in previous 3 months DNR at time of treatment decision Recent bleeding w/in 4 weeks Active peptic ulcer Traumatic CPR that precludes thrombolytics Any prior intracranial hemorrhage Pregnancy	nadmlytc	1 2 3 4 5 6 7 8 9 10 11 12 13

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

			Expected DTB <90 minutes Suspected aortic dissection Intracranial neoplasm, AV malformation, or aneurysm No reason documented Prior allergic reaction to thrombolytics Other Transferred for PCI		14 15 16 17 18
n/a	PCI?	Single select	Yes No	primarypci	1 2
n/a	Physician Interventionalist NPI	Site list – single select		intervnpi	Valid NPI
n/a	Reasons for not performing PCI	Single select	Non-compressible vascular puncture(s) Spontaneous reperfusion (documented by cath only) Other Active bleeding on arrival or w/in 24 hours Patient/family refusal Not performed Quality of life decision DNR at time of treatment decision No reason documented Anatomy not suitable to primary PCI Prior allergic reaction to IV contrast Thrombolytic administered	nperfpci	1 2 3 4 5 6 7 8 9 10 11 12
n/a	Cath Lab activation	Date		cathactv	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Patient arrival to Cath Lab	Date		ptarvcth	MM/DD/YYYY HH:MM

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

					MM/DD/YYYY
n/a	Attending arrival to Cath Lab	Date		atndarv	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Team arrival to Cath Lab	Date		teamarrv	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	First PCI date/time	Date		fstpci	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	PCI indication	Single select	Primary PCI for STEMI PCI for STEMI (unstable, >12 hr from sx onset) PCI for STEMI (stable, > 12 hr from sx onset_ PCI for STEMI (stable after successful fill-dose lytic) Rescue PCI for STEMI (after failed full-dose lytic) PCI for non-STEMI Other	pciind	1 2 3 4 5 6 7
n/a	Non-system reason for delay	Single select	Difficult vascular access Patient delays in providing consent Other Cardiac arrest and/or need for intubation Difficulty crossing the culprit lesion None	nsysrsn	1 2 3 4 5 6
n/a	LVF assessment	Integer		lvfasmt	0 – 99
n/a	LVF assessment obtained	Single select	This admission W/in the last year > 1 year ago Planned after discharge	lvfobtain	1 2 3 4

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	CABG during this admission	Single select	Yes No	cabg	1 2
n/a	LDL cholesterol value	Integer		ldl	0 – 999
n/a	LDL ND	Boolean	True False	ldlnd	1 Blank
n/a	Discharge date/time	Date		disdate	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Discharge status	Single select	Home Hospice – home Hospice – healthcare facility Acute care facility Other healthcare facility Expired Left against medical advice/AMA Not documented or unable to determine (UTD)	dschstat	1 2 3 4 5 6 7 8
	Comfort measures only	Single select	Yes No	cmo	1 2
n/a	Patient referred to cardiac rehab?	Single select	Yes No referral documented No – medical reason No – patient reason/preference No – healthcare system reason	refehab	1 2 3 4 5
n/a	Smoking cessation counseling	Single select	Yes No	smkcnci	1 2
n/a	ACEI at discharge – prescribed	Single select	Yes No	presacei	1 2
n/a	ACEI at discharge – contraindicated	Single select	Yes No	contacei	1 2
n/a	ARB at discharge – prescribed	Single select	Yes No	presarb	1 2
n/a	ARB at discharge – contraindicated	Single select	Yes No	contarb	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	ASA at discharge – prescribed	Single select	Yes No	presasa	1 2
n/a	Done (ASA)	Single select	75 – 100mg > 100 mg Other Unknown	doseasa	1 2 3 4
n/a	Frequency (ASA)	Single select	Every day 2 times a day 3 times a day 4 times a day Other Unknown	freqasa	1 2 3 4 5 6
n/a	ASA at discharge – contraindicated	Single select	Yes No	contasa	1 2
n/a	Clopidogrel at discharge – prescribed	Single select	Yes No	presclop	1 2
n/a	Dose (Clopidogrel)	Single select	75mg Other Unknown	doseclop	1 2 3
n/a	Frequency (Clopidogrel)	Single select	Every day Other Unknown	freqclop	1 2 3
n/a	Clopidogrel at discharge – contraindicated	Single select	Yes No	contclop	1 2
n/a	Prasugrel at discharge – prescribed	Single select	Yes No	prespras	1 2
n/a	Dose (Prasugrel)	Single select	5mg 10mg Other Unknown	dosepras	1 2 3 4
n/a	Frequency (Prasugrel)	Single select	Every day Other Unknown	freqpras	1 2 3

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Prasugrel at discharge – contraindicated	Single select	Yes No	contpras	1 2
n/a	Ticagrelor at discharge – prescribed	Single select	Yes No	prestica	1 2
n/a	Dose (Ticagrelor)	Single select	90mg Other Unknown	dosetica	1 2 3
n/a	Frequency (Ticagrelor)	Single select	2 times a day Other Unknown	frequica	1 2 3
n/a	Ticagrelor at discharge – contraindicated	Single select	Yes No	conttica	1 2
n/a	Ticlopidine at discharge – prescribed	Single select	Yes No	presticlo	1 2
n/a	Dose (Ticlopidine)	Single select	250mg Other Unknown	doseticlo	1 2 3
n/a	Frequency (Ticlopidine)	Single select	2 times a day Other Unknown	freticlo	1 2 3
n/a	Ticlopidine at discharge – contraindicated	Single select	Yes No	contticlo	1 2
n/a	Anticoagulation at discharge – prescribed	Single select	Yes No	presanticoag	1 2
n/a	Class (Anticoagulation)	Single select	Warfarin Direct thrombin inhibitor Factor Xa inhibitor	classanticoag	1 2 3
n/a	Medication (Anticoagulation)	Single select	Coumadin (warfarin) Argatroban Dabigatran	medanticoag	1 2 3

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

			Desirudin Lupirudin Other direct thrombin inhibitor Apixaban Edoxaban Fondaparinox Rovaroxaban Other Factor Xa inhibitor		4 5 6 7 8 9 10 11
n/a	Dose (Anticoagulation)	Single select	No dosage listed 2.5mg 5mg 7.5mg 10mg 15mg 60mg 75mg 150mg Other Unknown	doseanticoag	1 2 3 4 5 6 7 8 9 10 11
n/a	Frequency (Anticoagulation)	Single select	No frequency listed Every day 2 times a day 3 times a day 4 times a day Other Unknown	freqanticoag	1 2 3 4 5 6 7
n/a	Anticoagulation at discharge – contraindicated	Single select	Yes No	contanticoag	1 2
n/a	Beta blocker at discharge – prescribed	Single select	Yes No	presbeta	1 2
n/a	Beta blocker at discharge – contraindicated	Single select	Yes No	contbeta	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Statin at discharge – prescribed	Single select	Yes No	presstat	1 2
n/a	Statin at discharge – contraindicated	Single select	Yes No	contstat	1 2
n/a	Comments	Alphanumeric		comnt	500

Quality Improvement Activities

San Mateo County participates in the Cardiac Arrest Registry to Enhance Survival or CARES program and data is displayed below for CY 2018.

Approximately four years ago, the EMS Agency implemented high-performance CPR across our system. Since that time, all cardiac arrests (removing obvious death) are reviewed every Thursday by a multi-disciplinary team led by the EMS Medical Director. This type of collaboration leads to open, transparent communication focusing on how to improve both individual crew performance, but also system performance. As a result of these weekly calls, many system enhancements have been implemented. These enhancements include: metronome use on all cardiac arrest calls, Code Stat ® monitoring of key performance metrics such as compression rate, depth, time on chest, working with facilities to have Code Status information via a POLST, DNR, or Advanced Directive for Healthcare readily available upon first responder arrival. Extracorporeal membrane oxygenation as a pilot study for out of hospital refractory ventricular fibrillation is being studied in partnership with one of our high-volume STEMI receiving facilities. LEAN/LEAP for real-time problem solving was recently used to decrease the time metric from EMS at Patient Side to acquisition of the 12-lead EKG in patients with suspected ischemic chest pain. Using this process, we were able to decrease this metric for the last quarter from 14 minutes to less than 10 minutes. We continue to monitor this metric.

SAN MATEO COUNTY CARDIAC ARREST – CARES DATA

410 CASES
66% MALE
34% FEMALE
MEAN AGE OF 65.9
Utstein Survival % N=62 or 37.1% (witnessed by a bystander & found in a shockable rhythm)
Utstein Bystander Survival N=36 or 41.7% (witnessed by a bystander, found in a shockable rhythm, and received some bystander intervention-CPR and/or AED).

Get With The Guidelines Data - 2018

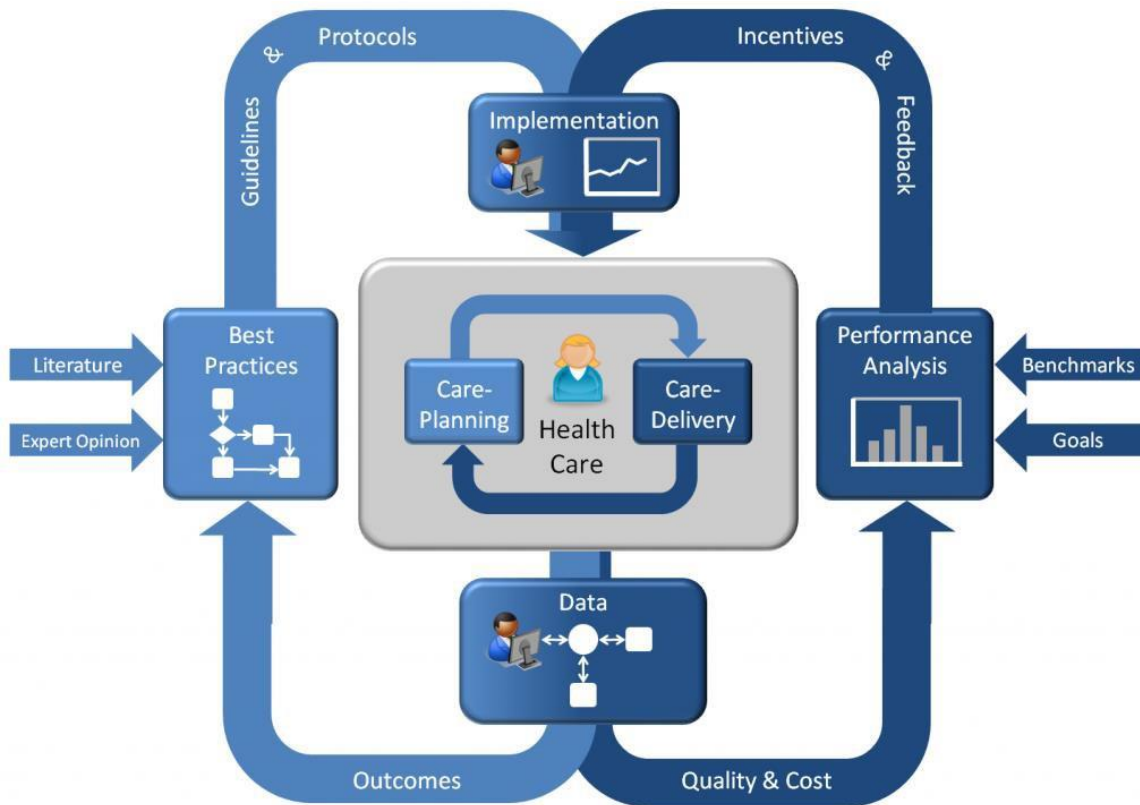
San Mateo County STEMI System

Summary for 2018 Quarter 4 (October, November, December)

#	SRC HOSPITALS	Summary			
		2018 Q4	2018 Q3	2018 Q2	2018 Q1
1	Total Cases Submitted to Registry	141	97	109	95
2	Total STEMI identified by PH EKG	89	66	81	62
3	Total STEMI not identified by PH EKG	3	1	2	1
4	Total STEMI identified by hospital EKG	83	44	60	48
5	Percent total STEMI volume per facility, as part of total STEMI population				
6	Total transports suspected STEMI	96	67	83	62
7	Median SRC D2B (excludes PCI delays)	57	62	49	48
8	90th Percentile SRC D2B (90% of D2B times were less than this value) (excludes PCI delays)	78	81	76	76
9	% of SRC D2B <90Min (Goal- 75% of cases) (excludes PCI delays)	95%	94%	70%	98%
10	% of SRC D2B <60Min (Goal- 75% of cases) (excludes PCI delays)	62%	48%	70%	98%
	Mode of arrival	2018 Q4	2018 Q3	2018 Q2	2018 Q1
11	Total Patients via EMS- direct to SRC	0	67	83	63
12	Total Patients via EMS- SRH to SRC	0	13	16	16
13	Total Patients via Walk-In	0	17	10	16
14	Total Patients via IFT or BLS	0	0	0	0
	Calculated Measures (Median values)	2018 Q4	2018 Q3	2018 Q2	2018 Q1
15	Amount of time patient was on-scene being treated before transport (standard= 20 mins)	16	17	17	19
16	Time from 911 dispatch to time ambulance arrives at SRC (goal= 55 mins)	40	41	36	40
17	Time from 911 dispatch to first balloon/device in Cath Lab at SRC (standard= 120 mins, excludes PCI delays)	93	89	83	89
18	Time from first ECG in the field to first balloon/device in Cath Lab at SRC (goal= 100 mins, excludes PCI delays)	71	77	64	66
19	Time from SRC ED arrival to ECG (standard= 10 mins)	6	6	5	4
20	Total time from first call to cardiologist to cardiologist arrival to SRC (standard= 30 mins)	37	35	36	29
21	Total time from first call to CVL Team to arrival to SRC (standard= 30 mins)	15	19	19	18

Action to Improve

The EMS Agency working with our clinical system stakeholders largely follows Deming's Circle concept of Plan-Do-Study-Act (PSDA).



Striving to create best practices, the STEMI committee focuses on clinical research, recommendations by the American College of Cardiology (ACC) and the AHA. Quarterly case reviews are presented and discussed with committee members.

The EMS Agency led a performance improvement project focusing on decreasing the time at patient side to acquisition of the 12-lead ECG in patients with chest pain of suspected cardiac origin to < 10 minutes. This involved prehospital education and monitoring. Now in month 13 of this initiative, we have seen the time decrease to a consistent < 10-minute standard.

Best clinical practices are shared at our STEMI meetings. For the past several years, the location of the meetings has been at the SRC and SHR hospitals allowing committee members to see the location, equipment, and workings of other hospitals' cardiac catheterization labs.

San Mateo County Emergency Medical
Services ECMO Alert Hospital Designation
Validation -This Tool serves as a guiding
document for those SRCs wishing to add ECMO
from the prehospital population.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Hospital Standards-ECMO Alert Hospitals			
HOSPITAL SERVICES			
Licensed tertiary care center with Adult Intensive Care Unit	Copy of hospital license		
Current license to provide Basic Emergency Care	Copy of license		
Operate a cardiac catheterization lab (CCL) licensed by the Department of Health Services and approved for emergency percutaneous coronary interventions (PCI)	Copy of permit		
ECMO cannulation capability and perfusionist staffing 24 hrs per day/7 days per week/365 days a year	<ul style="list-style-type: none"> ▪ On call schedule ▪ On call policy and procedures document 		
Cardiovascular operating room facilities with cardiopulmonary bypass capabilities available 24 hours per day	Copy of OR availability		
Trained in-hospital transport team 24 hours per day	<ul style="list-style-type: none"> ▪ Copy of shift schedule 		
Protocols for triage, diagnosis and ECMO team activation <ul style="list-style-type: none"> ▪ Single activation phone call for alert of the ECMO team initiated from the ED ▪ Criteria for activation of the ECMO team prior to patient’s arrival. 	Copy of internal policies		

<p>15-minute ECMO Alert activation to ECMO cannulation. *Strive for ECMO flow within one hour of arrest.</p>	<ul style="list-style-type: none"> ▪ Copy of policy ▪ Copy of any existing measurement to audit response time of all team members ▪ Copy of last three months of call schedule 		
<p>Universal acceptance of cardiac arrest patients (no ED diversion) unless there is a declared internal disaster, equipment failure or scheduled maintenance of essential equipment for procedures.</p>	<ul style="list-style-type: none"> ▪ Copy of policy ▪ Record of performance 		
<p>Participation in EMS education</p>	<p>Participation at County Level</p>		
<p>Hospital Personnel</p>			
<p>Physician ECMO Program Director:</p> <ul style="list-style-type: none"> ▪ Board certified critical-care specialist, cardiovascular, vascular or general surgeon with specific training and experience in ECMO support ▪ Assures appropriate specialist training and performance ▪ Directs quality improvement meetings and projects ▪ Assures proper and valid data submission to ELSO ▪ Is responsible for the credentialing of other physicians who care for ECMO patients or who manage the ECMO circuit ▪ Participates in San Mateo County ECPR QI activities 	<ul style="list-style-type: none"> ▪ Copy of current board certification ▪ Copy of medical staff privileges ▪ Documentation of participation in hospitals QI process for ECMO ▪ Proof of staff training and credentials 		

<p>ECMO coordinator</p> <ul style="list-style-type: none"> ▪ An experienced Adult Intensive Care RN or registered respiratory therapist, or other qualified individual with a strong ICU background (at least one year of ICU experience), or a certified clinical perfusionist with ECMO experience ▪ Responsible for the supervision and training of the technical staff, maintenance of equipment, and collection of patient data ▪ Participates in SMC ECPR QI Program 	<ul style="list-style-type: none"> ▪ Copy of license and resume or CV ▪ Documentation of participation in hospitals QI process for ECMO 		
<p>Provide job descriptions and organizational structure clarifying the relationship between the ECMO Program Director, the ECMO coordinator, and the ECMO team.</p>	<p>Job descriptions and organizational chart</p>		
<p>ECMO physician staff</p> <ul style="list-style-type: none"> ▪ Current Board Certified ▪ Active credentialed member of medical staff with training for ECMO cannulation ▪ Actively taking call 	<ul style="list-style-type: none"> ▪ Copy of current board certification in general surgery, vascular surgery, cardiovascular surgery, or critical care ▪ Copy of completion of specific ECMO training ▪ Copy of medical staff privileges ▪ Documentation of number of ECMO procedures during the last 12 months ▪ Documentation of the number of ECPR 		

	<p>ECMO patients in the last 12 months</p> <ul style="list-style-type: none"> ▪ Copy of call schedule for 3 – 6 months 		
<p>ECMO clinical specialist</p> <ul style="list-style-type: none"> • Strong intensive care background (at least one year of MICU, CCU, CVICU, or other critical care experience) • Board certified nurse; Registered Respiratory Therapist (certified by National Board of Respiratory Care); perfusionist (certified by American Board of Cardiovascular Perfusion); or physician trained in ECMO who has completed the institutional training requirements for clinical specialists 	<ul style="list-style-type: none"> ▪ Copy of CV, board certification, and ECMO training completion 		
Clinical Capabilities			
<p>The following should be readily available on a 24-hour basis</p> <ul style="list-style-type: none"> • Backup components of the ECMO system and supplies for all circuit components • Adequate lighting to support surgical interventions • Surgical instrument set for revision of cannulae or exploration for bleeding complications • A blood gas laboratory and laboratory for blood chemistry and hematologic testing • Blood bank • Radiographic support including CT scan • A device for monitoring the level of anticoagulation at the bedside 	<ul style="list-style-type: none"> • List of availability of these components 		

Volume total ECMO procedures (divided in categories below) per year the hospital as a whole and for each provider <ul style="list-style-type: none"> • Out of hospital cardiac arrest placed on ECMO upon arrival • In hospital cardiac arrest placed on ECMO • Non-arrest patients placed on ECMO 	Provide data requested		
ECMO Alert Hospital should be in area that can support a minimum of 6 ECMO patients per center per year	Documentation of current hospital volume for ECMO		
Policy with identifying criteria used for patients to be placed on ECMO	Copy of Policy or criteria		
Process Improvement			
Policy for internal and system process improvement	Copy of policy or QI plan		
Program review including: <ul style="list-style-type: none"> ▪ Deaths ▪ Complications ▪ Sentinel events ▪ System issues ▪ Organization issues ▪ Post D/C results 	Copy of reports Minutes of meetings		
SMC EMS QI program participation	Written agreement with SMC EMS Agency		
First medical contact to ECMO flow in <1h	Provides Data to SMC EMS Agency		
Proportion of eligible patients to be placed on ECM	Provides Data to SMC EMS Agency		
System Provider Follow up	Follow up is given to first responder agency		

Training and Education

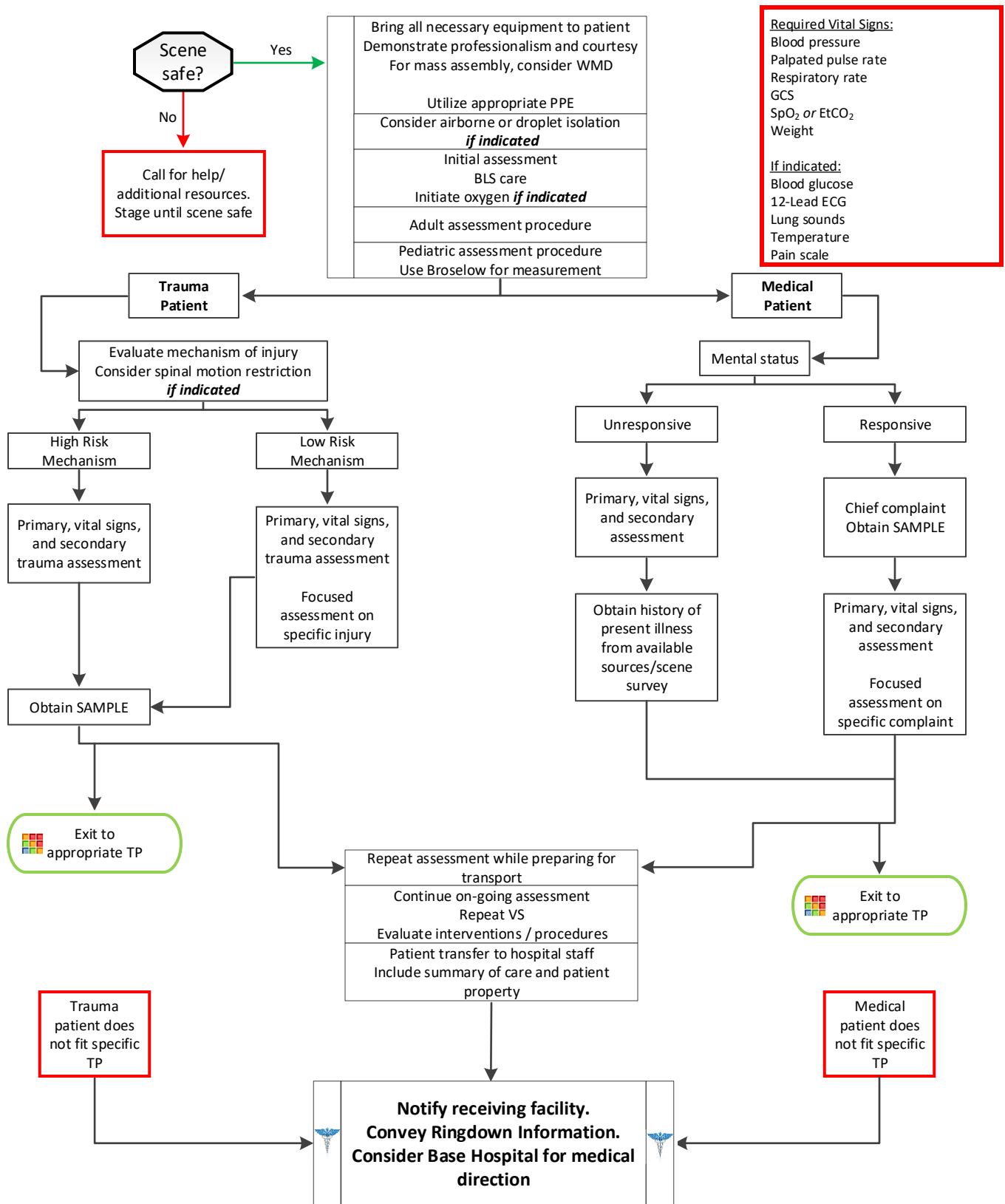
In March of 2019, San Mateo County, in partnership with the AHA hosted a comprehensive cardiac care conference with attendees from around the Bay Area participating.

Our quarterly SMC STEMI CQI meetings all feature case studies and literature review of cardiac topics: These have included best practices for dual anti-platelet agents, termination of resuscitation, staging versus culprit lesion percutaneous coronary intervention (PCI) as examples.

Annual Update

The San Mateo County EMS Agency will update the STEMI Critical Care Plan annually and provide it to the California Emergency Medical Services Authority (EMSA). Looking forward to 2020-2021, we plan to consider routing all post return of spontaneous circulation (ROSC) patients to cardiac receiving centers and introduce The Joint Commission (TJC) program for certification of hospitals as cardiac receiving centers to our system. We will evaluate how this program of TJC integrates with our current standards and continue to engage in a collaborative system improvement in conjunction with stakeholders.

Routine Medical Care



General Treatment Protocol

Routine Medical Care

Scene Safety Evaluation: Identify potential hazards to prehospital providers, patient, and public. Identify the number of patients and utilize triage protocol if indicated. Observe patient position and surroundings.

General: All patient care must be appropriate to the provider level of training and documented in the ePCR. The ePCR narrative should be considered a story of the circumstances, events, and care of the patient and should allow the reader to understand the complaint, assessment, treatment, why procedures were performed, and why indicated procedures were not performed as well as ongoing assessments and response to treatment and interventions.

Adult Patient: An adult should be suspected of being acutely hypotensive when systolic blood pressure is less than 90mmHg. Diabetic patients and women may have atypical presentations of cardiac-related problems such as MI. General weakness can be the symptom of a very serious underlying process. Beta blockers and other cardiac drugs may prevent a reflexive tachycardia in shock with low to normal pulse rates.

Geriatric Patient: Falls, car collisions, hip fractures, and dislocations have high mortality rates. Altered mental status is not always dementia. Always check BGL and assess for signs for stroke, trauma, etc. with any alteration in a patient's baseline mental status. Minor or moderate injury in the typical adult may be very serious in the elderly.

Pediatric Patient: A pediatric patient is defined by fitting a Length-based Resuscitation Tape, Age \leq 15 years, or weight \leq 49kg. Patients off the Broselow-Luten tape should have weight based medications until age \geq 16 or weight \geq 50kg. Special needs children may require continued use of Pediatric based protocols regardless of age and weight. Initial assessment should utilize the Pediatric Assessment Triangle which encompasses Appearance, Work of Breathing and Circulation to skin. The order of assessment may require alteration dependent on the developmental state of the pediatric patient. Generally the child or infant should not be separated from the caregiver unless absolutely necessary during assessment and treatment.

Special note on oxygen administration and utilization: Oxygen in prehospital patient care is probably over utilized. Oxygen is a pharmaceutical drug with indications, contraindications as well as untoward side effects. Utilize oxygen when indicated, not because it is available. A reasonable target oxygen saturation for most patients is \geq 94% regardless of delivery device.

Pearls

- Utilize body substance isolation for all patients.
 - All-hazards precautions** include standard PPE plus airborne and contact precautions. This level of precaution is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g., Ebola, MERS, SARS).
 - Airborne precautions** include standard PPE plus a N95 or P100 mask. This level of precaution is utilized for very small germs like tuberculosis, measles, and chicken pox.
 - Droplet precautions** include standard PPE plus a standard surgical mask for providers who accompany patients in the back of the ambulance and a surgical mask or NRB O₂ mask for the patient. This level of precaution should be utilized when influenza, meningitis, mumps, streptococcal pharyngitis and other illnesses spread via large particle droplets are suspected. A patient with a potentially infectious rash should be treated with droplet precautions.
 - Contact precautions** include standard PPE plus utilization of a gown, change of gloves after every patient contact and strict hand washing precautions. This level of precaution is utilized when multi-drug resistant organisms (e.g., MRSA and VRE), scabies, herpes zoster (shingles), or other illnesses spread by contact are suspected.
- Timing of transport should be based on the patient's condition and the destination policy.
- Never hesitate to contact the Base Hospital as a high risk refusal resource for any patient who refuses transport.
- SAMPLE: Signs/Symptoms; Allergies; Medications; PMH; Last oral intake; Events leading to injury/illness.

Routine Medical Care

TRAUMA RINGDOWNS

- Unit ID (i.e. M107, San Mateo Medic 42)
- Code 2/3 with **Trauma activation**
- Age
- Gender
- Mechanism of Injury: Blunt vs. penetrating
 - ◊ MVA
 - Restrained vs. unrestrained
 - Location in car
 - Speed
 - Type of MVA (e.g., head on/rear ended/t-bone/rollover)
 - Damage
 - Airbag deployment
 - ◊ FALL
 - Height
 - Surface
 - Taking blood thinners?
 - ◊ ASSAULT
 - Punched, kicked, struck by an object
 - ◊ GSW
 - Wound locations
 - Type of weapon (e.g., shotgun, handgun)
 - ◊ STABBING
 - Wound locations
 - Size of blade
 - Type of blade
- Chief complaint
- A&O status and GCS
- Physical findings
- Vital signs (BP/HR/RR/O₂ sat/BGL)
- Treatments
- ETA
- How do you copy?

STROKE/ALOC RINGDOWNS

- Unit ID (i.e. M107, San Mateo Medic 42)
- Code 2/3 with **STROKE alert**
- Age
- Gender
- Last known well time
- A&O status and GCS
- Chief complaint
- Physical findings
- Vital signs (BP/HR/RR/O₂ sat/BGL/Temp)
- Treatments
- Patient is positive/negative for blood thinners
- MR# or patient name and DOB
- ETA
- How do you copy?

STEMI/MEDICAL RINGDOWNS

- Unit ID (i.e. M107, San Mateo Medic 42)
- Code 2/3 with **STEMI alert**
- Age
- Gender
- Chief complaint
- Physical findings
- Vital signs (BP/HR/RR/O₂ sat/BGL/Temp)
- Treatments
- 12-Lead has been transmitted to your facility
- MR# or patient name and DOB
- ETA
- How do you copy?

*****Best Family Contact & Phone Number to be gathered on all patients to be reported at Patient Hand Off*****





POLICY NO:	FAC – 9
EFFECTIVE:	11/2019

STEMI SYSTEM RECEIVING CENTER STANDARDS AND DESIGNATION

I. Purpose

To define 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.; California Code of Regulations, Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System.

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. It 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.

Clinical Staff: Individuals that have specific training and experience in the treatment and management of ST-Elevation Myocardial Infarction (STEMI) patients. This includes, but is not limited to, physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.

Emergency Medical Services Authority [or “EMS Authority” / “EMSA”]: The department in California responsible for the coordination and integration of all state activities concerning EMS.

Immediately Available:

- A. Unencumbered by conflicting duties or responsibilities.
- B. Responding without delay upon receiving notification.

APPROVED:

Travis S. Kusman, MPH, Paramedic, EMS Director

Gregory H. Gilbert, MD, EMS Medical Director

- C. Being physically available to the specified area of the hospital when the patient is delivered in accordance with EMS Agency policies and procedures.

Implementation [or “implemented” / “has implemented”]: The development and activation of a STEMI Critical Care System Plan by the EMS Agency, including the prehospital and hospital care components in accordance with the plan.

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

Local Emergency Medical Services Agency [or “EMS Agency”]: the agency, department, or office having primary responsibility for administration of emergency medical services in a county or region and which is designated pursuant Health and Safety Code commencing with section 1797.200. The San Mateo County EMS Agency is the Local Emergency Medical Services Agency for San Mateo County.

PCR 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 the purposes of these regulations.

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 board-certified physician 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 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 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 STEMI Receiving Center (SRC), approved and designated by San Mateo County EMS Agency shall meet the following requirements:

A. STEMI Receiving Center Requirements

1. The hospital shall have established protocols for triage, diagnosis, and cath lab activation following field notification.
2. The hospital 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.
4. At a minimum, these written protocols shall be applicable in the intensive care unit/coronary care unit, cath lab and the emergency department.

5. 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.
 6. The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients.
 7. The hospital shall maintain STEMI team and Cardiac Catheterization Team call rosters.
 8. The Cardiac Catheterization Team, including appropriate staff determined by the EMS Agency, shall be immediately available.
 9. The hospital shall agree to accept all STEMI patients according to the local policy.
 10. STEMI receiving centers shall comply with the requirement for a minimum volume of procedures for designation required by the EMS Agency.
 11. The hospital shall have a STEMI program manager and a STEMI medical director.
 12. The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.
 13. The hospital shall participate in and comply with all aspects of the EMS Agency quality improvement processes related to a STEMI critical care system.
 14. 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.
 15. A STEMI receiving center shall have reviews by EMS Agency or other designated agency conducted at least every three years.
- B. STEMI Referring Hospital 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) 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 hospital 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 hospital shall have a program to track and improve treatment of STEMI patients.
7. The hospital must have a plan to work with a STEMI receiving center and the EMS Agency on quality improvement processes.
8. A STEMI referring hospital 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

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.
 - d. The SRC will submit a list of Cardiologists with active PCI privileges to the EMS 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 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. That an interventional cardiologist assumes care of the patient from the time the patient arrives at the SRC.
6. To accept all patients meeting STEMI patient triage criteria or upon transfer notification from a STEMI Referral Hospital, 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 Appendix B of this policy, also referred to as the STEMI data dictionary, shall be collected on an ongoing basis and provided to the EMS Agency.
9. Data will be entered into the EMS Agency approved collection systems and submitted monthly, by no later than the 15th calendar day of the following month. The EMS Agency specified data system at the present time is *Get with the Guidelines CAD*.
10. In consultation with the STEMI CQI Committee, EMS 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 EMS Agency.
2. Data will be entered into the EMS Agency approved collection system and submitted monthly, by no later than the 15th calendar day of the following month.
3. In consultation with the STEMI CQI Committee, EMS will update the data dictionary and/or identify another process to expedite data submission and reduce duplication.
 - a. The STEMI patient data elements:
 - i. EMS ePCR Number
 - ii. Facility
 - iii. Name: Last, First
 - iv. Date of Birth
 - v. Patient Age
 - vi. Patient Gender
 - vii. Patient Race
 - viii. Hospital Arrival Date
 - ix. Hospital Arrival Time
 - x. Dispatch Date
 - xi. Dispatch Time
 - xii. Field ECG Performed
 - xiii. 1st ECG Date
 - xiv. 1st ECG Time
 - xv. Did the patient suffer out-of-hospital cardiac arrest
 - xvi. Cath Lab Activated
 - xvii. Cath Lab Activation Date
 - xviii. Cath Lab Activation Time
 - xix. Did the patient go to the Cath Lab
 - xx. Cath Lab Arrival Date
 - xxi. Cath Lab Arrival Time
 - xxii. PCI Performed
 - xxiii. PCI Date.
 - xxiv. PCI Time
 - xxv. Fibrinolytic Infusion
 - xxvi. Fibrinolytic Infusion Date
 - xxvii. Fibrinolytic Infusion Time
 - xxviii. Transfer
 - xxix. SRH ED Arrival Date
 - xxx. SRH ED Arrival Time
 - xxxi. SRH ED Departure Date
 - xxxii. SRH ED Departure Time
 - xxxiii. Hospital Discharge Date
 - xxxiv. Patient Outcome
 - xxxv. Primary and Secondary Discharge Diagnosis

- b. The STEMI patient data elements:
 - i. Number of STEMIs treated.
 - ii. Number of STEMI patients transferred.
 - iii. Number and percent of emergency department STEMI patients arriving by private transport (non-EMS).
 - iv. The false positive rate of EMS diagnosis of STEMI, defined as the percentage of STEMI alerts by EMS which did not show STEMI on ECG reading by the emergency physician.

G. Quality Improvement and Evaluation Process

1. The Quality Improvement 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 EMS 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* and the San Mateo County EMS Agency STEMI Feedback Form (see Appendix A).
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 EMS 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 the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases.

V. **Procedure**

A. Designation

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

1. Application: Eligible hospitals shall submit a written letter of intent and request for SRC approval to the SMC-EMSA, as well as complete a formal application documenting the compliance of the hospital with EMS Agency SRC Standards.
2. Approval: SRC approval or denial shall be made in writing by the EMS 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. EMS 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 EMS Agency review in accordance to 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 EMS 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 EMS Agency prior to the discontinuation of SRC services.

Appendix A – San Mateo County EMS Agency STEMI Feedback Form

**San Mateo County EMS Agency
STEMI Feedback Form (EMS Field Providers & SRCs)**

Case Summary:	
Include pt. demographics, and any relevant case info in summary	
Measure	Time
EMS dispatch	
EMS at scene	
EMS w patient	
EMS 12-lead EKG	
EMS departs scene	
Code STEMI alert activated PTA	
ED arrival	
ED EKG	
ISTAT Troponin I	
Stick time	
Revascularization	
D2B	
E2B	

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

Prehospital Data Element	Hospital Data Element	Element Type	Code Text	Variable Name	Code Value or Format
n/a	Patient ID	Alphanumeric text		patientid	9 characters
Sex	Gender	Single Select	Male Female Unknown	gender	1 2 3
DOB	Date of Birth	Date		dob	MM/DD/YYYY (no future dates)
n/a	Zip Code	Numeric		zip	5
n/a	Payment Source	Single Select	Medicare Medicaid Private/Other Self-Pay/No Insurance	psource	1 2 3 4
Ethnicity	Race	Multi-select	American Indian or Alaska Native Black or African American White Asian Native Hawaiian or Pacific Islander UTD	1 2 3 4 5 6	
n/a	Asian	Multi-select	Asian Indian Chinese Filipino Japanese Korean Vietnamese Other Asian	asian	1 2 3 4 5 6 7
n/a	Native Hawaiian or Pacific Islander	Multi-select	Native Hawaiian Guamanian or Chamorro Samoan Other Pacific Islander	hawaiian	1 2 3 4
n/a	Hispanic Ethnicity	Single Select	Yes No/UTD	hisethni	1 2
n/a	Hispanic Ethnicity Specify	Multi-select	Mexican, Mexican American, Chicano/a	ethnicys	1

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

			Cuban Puerto Rican Another Hispanic, Latino or Spanish Origin		2 3 4
n/a	Attending Physician/Provider NPI:	Site List Drop Down		npi	Valid NPI
n/a	Arrival Date/Time	Date		arrdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Admission Date	Date		admdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Not admitted, transferred out to another acute care facility	Boolean	True False	notadm	1 Blank
n/a	Patient first evaluated	Single select	ED Cath Lab Other	pateval	1 2 3
n/a	Date/Time if ED discharge/transfer out	Date		edtrans	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	ED Physician	Site List Drop Down		ednpi	Valid NPI
n/a	Cardiac Diagnosis	Single Select	Confirmed AMI – STEMI Confirmed AMI – STEMI/non-STEMI unspecified Unstable Angina Confirmed AMI – non-STEMI Coronary Artery Disease Other	Cardiag	1 2 3 4 5 6
n/a	Means of transport to first facility	Single Select	Air Ambulance Walk-in	meanstrans	1 2 3
Unit	EMS Agency name/number	Site List Drop Down		emsnum	Valid AHA EMS ID

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

Case #	Run/Sequence Number	Alphanumeric text		runnum	25
Primary impression or Secondary impression	Cardiac arrest prior to arrival	Single Select	Yes No	capriorarr	1 2
Narrative	Was bystander CPR performed	Single Select	Yes No	bystndcpr	1 2
n/a	Was therapeutic hypothermia initiated during this episode of care	Single Select	Yes No	Hypothermia	1 2
At pt side time	EMS First Medical Contact	Date		emsfirst	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Non-EMS First Medical Contact	Date		nonemsfirst	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	EMS Non-System Reason for Delay	Boolean	True False	emssystdel	1 Blank
Dispatched time	EMS Dispatch	Date		emsdisp	MM/DD/YYYY HH:MM MM/DD/YYYY
At scene time	EMS arrive on scene	Date		emsarr	MM/DD/YYYY HH:MM MM/DD/YYYY
Transport time	EMS depart scene	Date		emsdepart	MM/DD/YYYY HH:MM MM/DD/YYYY
Facility activation	Destination pre-arrival alert or notification	Date		destinpre	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Method of 1 st notification	Single Select	ECG transmission Phone call Radio ND	methodnot	1 2 3 4
n/a	Transferred from other facility	Single Select	Yes No	transed	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Transferring facility	Site List Drop Down		transfac	Valid AHA ID
n/a	Arrival at first hospital	Date		outhosp	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Transport requested	Date		transreq	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Transport arrived Date/Time	Date		transarr	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Transfer out	Date		transout	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Facility the patient was transferred to	Site List Drop Down		faciltrans2	Valid AHA ID
n/a	Mode of transport from outside facility	Single Select	Air Ambulance	modetrans	1 2
n/a	Interfacility transport EMS agency name/number	Site List Drop Down		intertrans	Valid AHA EMS ID
EKG/ECG: 12-Lead	1 st ECG Date/Time	Date		firstecgdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	1 st ECG obtained	Single Select	Prior to hospital arrival After first hospital arrival	firstecgobt	1 2
n/a	1 st ECG non-system reason for delay	Boolean	True False	firstecgsystdel	1 Blank
n/a	STEMI or STEMI equivalent	Single Select	Yes No	stemi	1 2
n/a	If no, other ECG findings	Single select	New or presumed new ST depression Transient ST elevation <20 minutes	othecgfind	1 2
n/a	If yes, STEMI or STEMI equivalent first noted	Single select	First ECG Subsequent ECG	stemifirst	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	If subsequent ECG, date/time of positive ECG	Date		posecgdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Symptom onset date/time	Date		onsetdt	MM/DD/YYYY HH:MM MM/DD/YYYY
Vitals	Heart rate documented on first medical contact	Integer		hrfmc	0-300
n/a	Heart failure documented on first medical contact	Single select	Yes No	hffmc	1 2
n/a	Cardiogenic shock documented on first medical contact	Single select	Yes No	cardshockfmc	1 2
Medications	Patient current medications	Single select	Dabigatran Rivaroxaban Apixaban Warfarin None ND	ptcurmeds	1 2 3 4 5 6
n/a	Initial serum creatinine	Decimal		lnitscr	0.1 – 59.9
n/a	Aspirin within 24 hours of arrival?	Single select	Yes No Contraindicated	asp24h	1 2 3
n/a	Positive cardiac biomarkers in the first 24 hours?	Single select	Yes No	posbio24	1 2
n/a	History of smoking?	Single select	Yes No	smokinghist	1 2
n/a	History of peripheral artery disease	Single select	Yes No	hypad	1 2
n/a	Reperfusion candidate?	Single select	Yes No	repcand	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Primary reason not reperfusion candidate	Single select	No ST elevation/LBBB Chest pain resolved ST elevation resolved MI diagnosis unclear MI symptoms >12 hours No chest pain Other	noreprs	1 2 3 4 5 6 7
n/a	Thrombolytics?	Single select	Yes No	thromb	1 2
n/a	If yes, Thrombolytics dose start date/time	Date		dosest	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Documented non-system reason for delay thrombolytics?	Single select	Yes No	nsysreas	1 2
n/a	If yes, reason (check all that apply)	Multi-select	Cardiac arrest Intubation Patient refusal	reasday	1 2 3
n/a	Reason for not performing thrombolytic	Single select	Known bleeding diathesis Recent surgery/trauma Severe uncontrolled hypertension Ischemic stroke w/in 3 months except acute ischemic stroke w/in 3 hours Significant closed head or facial trauma w/in previous 3 months DNR at time of treatment decision Recent bleeding w/in 4 weeks Active peptic ulcer Traumatic CPR that precludes thrombolytics Any prior intracranial hemorrhage Pregnancy	nadmlytc	1 2 3 4 5 6 7 8 9 10 11 12 13

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

			Expected DTB <90 minutes Suspected aortic dissection Intracranial neoplasm, AV malformation, or aneurysm No reason documented Prior allergic reaction to thrombolytics Other Transferred for PCI		14 15 16 17 18
n/a	PCI?	Single select	Yes No	primarypci	1 2
n/a	Physician Interventionalist NPI	Site list – single select		intervnpi	Valid NPI
n/a	Reasons for not performing PCI	Single select	Non-compressible vascular puncture(s) Spontaneous reperfusion (documented by cath only) Other Active bleeding on arrival or w/in 24 hours Patient/family refusal Not performed Quality of life decision DNR at time of treatment decision No reason documented Anatomy not suitable to primary PCI Prior allergic reaction to IV contrast Thrombolytic administered	nperfpci	1 2 3 4 5 6 7 8 9 10 11 12
n/a	Cath Lab activation	Date		cathactv	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Patient arrival to Cath Lab	Date		ptarvcth	MM/DD/YYYY HH:MM

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

					MM/DD/YYYY
n/a	Attending arrival to Cath Lab	Date		atndarv	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Team arrival to Cath Lab	Date		teamarrv	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	First PCI date/time	Date		fstpci	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	PCI indication	Single select	Primary PCI for STEMI PCI for STEMI (unstable, >12 hr from sx onset) PCI for STEMI (stable, > 12 hr from sx onset_ PCI for STEMI (stable after successful fill-dose lytic) Rescue PCI for STEMI (after failed full-dose lytic) PCI for non-STEMI Other	pciind	1 2 3 4 5 6 7
n/a	Non-system reason for delay	Single select	Difficult vascular access Patient delays in providing consent Other Cardiac arrest and/or need for intubation Difficulty crossing the culprit lesion None	nsysrsn	1 2 3 4 5 6
n/a	LVF assessment	Integer		lvfasmt	0 – 99
n/a	LVF assessment obtained	Single select	This admission W/in the last year > 1 year ago Planned after discharge	lvfobtain	1 2 3 4

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	CABG during this admission	Single select	Yes No	cabg	1 2
n/a	LDL cholesterol value	Integer		ldl	0 – 999
n/a	LDL ND	Boolean	True False	ldlnd	1 Blank
n/a	Discharge date/time	Date		disdate	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	Discharge status	Single select	Home Hospice – home Hospice – healthcare facility Acute care facility Other healthcare facility Expired Left against medical advice/AMA Not documented or unable to determine (UTD)	dschstat	1 2 3 4 5 6 7 8
	Comfort measures only	Single select	Yes No	cmo	1 2
n/a	Patient referred to cardiac rehab?	Single select	Yes No referral documented No – medical reason No – patient reason/preference No – healthcare system reason	refehab	1 2 3 4 5
n/a	Smoking cessation counseling	Single select	Yes No	smkcncl	1 2
n/a	ACEI at discharge – prescribed	Single select	Yes No	presacei	1 2
n/a	ACEI at discharge – contraindicated	Single select	Yes No	contacei	1 2
n/a	ARB at discharge – prescribed	Single select	Yes No	presarb	1 2
n/a	ARB at discharge – contraindicated	Single select	Yes No	contarb	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	ASA at discharge – prescribed	Single select	Yes No	presasa	1 2
n/a	Done (ASA)	Single select	75 – 100mg > 100 mg Other Unknown	doseasa	1 2 3 4
n/a	Frequency (ASA)	Single select	Every day 2 times a day 3 times a day 4 times a day Other Unknown	freqasa	1 2 3 4 5 6
n/a	ASA at discharge – contraindicated	Single select	Yes No	contasa	1 2
n/a	Clopidogrel at discharge – prescribed	Single select	Yes No	presclop	1 2
n/a	Dose (Clopidogrel)	Single select	75mg Other Unknown	doseclop	1 2 3
n/a	Frequency (Clopidogrel)	Single select	Every day Other Unknown	freqclop	1 2 3
n/a	Clopidogrel at discharge – contraindicated	Single select	Yes No	contclop	1 2
n/a	Prasugrel at discharge – prescribed	Single select	Yes No	prespras	1 2
n/a	Dose (Prasugrel)	Single select	5mg 10mg Other Unknown	dosepras	1 2 3 4
n/a	Frequency (Prasugrel)	Single select	Every day Other Unknown	freqpras	1 2 3

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Prasugrel at discharge – contraindicated	Single select	Yes No	contpras	1 2
n/a	Ticagrelor at discharge – prescribed	Single select	Yes No	prestica	1 2
n/a	Dose (Ticagrelor)	Single select	90mg Other Unknown	dosetica	1 2 3
n/a	Frequency (Ticagrelor)	Single select	2 times a day Other Unknown	freqtica	1 2 3
n/a	Ticagrelor at discharge – contraindicated	Single select	Yes No	conttica	1 2
n/a	Ticlopidine at discharge – prescribed	Single select	Yes No	presticlo	1 2
n/a	Dose (Ticlopidine)	Single select	250mg Other Unknown	doseticlo	1 2 3
n/a	Frequency (Ticlopidine)	Single select	2 times a day Other Unknown	freqticlo	1 2 3
n/a	Ticlopidine at discharge – contraindicated	Single select	Yes No	contticlo	1 2
n/a	Anticoagulation at discharge – prescribed	Single select	Yes No	presanticoag	1 2
n/a	Class (Anticoagulation)	Single select	Warfarin Direct thrombin inhibitor Factor Xa inhibitor	classanticoag	1 2 3
n/a	Medication (Anticoagulation)	Single select	Coumadin (warfarin) Argatroban Dabigatran	medanticoag	1 2 3

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

			Desirudin Lupirudin Other direct thrombin inhibitor Apixaban Edoxaban Fondaparinox Rovaroxaban Other Factor Xa inhibitor		4 5 6 7 8 9 10 11
n/a	Dose (Anticoagulation)	Single select	No dosage listed 2.5mg 5mg 7.5mg 10mg 15mg 60mg 75mg 150mg Other Unknown	doseanticoag	1 2 3 4 5 6 7 8 9 10 11
n/a	Frequency (Anticoagulation)	Single select	No frequency listed Every day 2 times a day 3 times a day 4 times a day Other Unknown	freqanticoag	1 2 3 4 5 6 7
n/a	Anticoagulation at discharge – contraindicated	Single select	Yes No	contanticoag	1 2
n/a	Beta blocker at discharge – prescribed	Single select	Yes No	presbeta	1 2
n/a	Beta blocker at discharge – contraindicated	Single select	Yes No	contbeta	1 2

Appendix B – San Mateo County EMS Agency STEMI Data Dictionary

n/a	Statin at discharge – prescribed	Single select	Yes No	presstat	1 2
n/a	Statin at discharge – contraindicated	Single select	Yes No	contstat	1 2
n/a	Comments	Alphanumeric		comnt	500



POLICY NO:	FAC-4
DATE ISSUED:	5/2005
LAST REVIEW:	9/2017
NEXT REVIEW:	9/2020

ED PATIENT INTERFACILITY TRANSFERS

Purpose: To provide guidance for emergency departments on ground ambulance transport of patients that require interfacility transfer at the Basic (EMT), Advanced Life Support (ALS) (Paramedic), or Critical Care Transport (CCT) levels.

Compliance with law


- 1) All transfers shall comply with mandates contained in Federal and State law.
- 2) The sending ED physician determines the appropriate level of transportation required. Each ambulance service dispatch center should have call screening mechanisms assisting callers in selecting the most appropriate unit. The dispatch center will identify ALS calls and immediately transfer the call to Public Safety Communications (PSC) for a paramedic response.
- 3) The sending physician or designee should provide verbal report and transfer documents to arriving crews. These transfer documents must include the name of the sending and receiving physician. Once this has occurred, care for the patient is transferred to the ambulance crew until arrival at the destination and care has been transferred to the staff of the receiving facility.
- 4) The sending ED physician makes arrangements for the receipt of the patient by another physician at the receiving facility.


Description of Transport Options

CCT-RN Units

- 1) Type of patient:
 - a) Unstable patient or a stable patient that requires care outside of the paramedic scope of practice
 - b) Service can be scheduled or unscheduled and can be from any hospital department.
- 2) Staffing, equipment and authorization for care:
 - a) The CCT unit is staffed with at least one (1) Registered Nurse and one (1) additional crew member at no less than the EMT level.

APPROVED:



Nancy A. Lapolla, MPH, EMS Director

Gregory H. Gilbert, MD, EMS Medical Director

- b) The transferring physician, receiving physician, or CCT provider agency may suggest additional staff.
 - c) If specialized equipment is needed details should be discussed at the time the service is requested.
 - d) Care is provided by the registered nurse under standing orders and standardized procedures authorized by the provider's medical director. Additional orders are provided by the transferring physician.
- 3) Patient destination is determined by the transferring physician based on patient need.
- 4) Requesting a CCT Ambulance:
- a) Request CCT Ambulance through private ambulance provider.
 - b) Urgent service can be requested if needed.
 - c) Do not request a CCT through PSC.

BLS Ambulance

- 1) Type of patient:
- a) Stable patient unless the BLS ambulance staffing is supplemented by additional health care providers (MD, RN, RT)
- 2) Staffing:
- a) Basic Life Support ambulances are usually staffed with two (2) Emergency Medical Technicians.
 - b) Additional staff may accompany the BLS unit from the transferring hospital if needed and approved by the BLS provider.
 - c) Specialized units staffed by EMT providers may accompany teams for critical care transfer of specialized patients.
- 3) Care During Transports/Scope of Practice:
- a) The EMT will follow standard orders provided by the ambulance provider that are within the state scope of practice (see scope of practice table below).
 - b) The transferring facility may provide additional instructions within this scope of practice
 - c) If the patient's condition deteriorates during transport requiring treatment not included by the physician orders and EMT scope of practice, ambulance personnel will divert to the closest receiving hospital and notify the receiving hospital prior to arrival. The transferring physician will be notified as soon as possible.
- 4) Requesting a BLS ambulance:
- a) Service may be scheduled or unscheduled.
 - b) Urgent service can be requested if needed.
 - c) Do not request a BLS ambulance through PSC.

EMS/911 System Paramedic Ambulance/ALS Ambulance

- 1) Type of patient:
 - a) Unstable or potentially unstable patients from the emergency department transferred to another hospital for specialized or higher level of care. (Examples include: patients identified as major trauma victims by anatomic or physiologic criteria, patients with 3rd trimester obstetrical complications and patients in need of immediate surgical intervention for life threatening events. 911 ambulances may also transfer patients for acute STEMI or stroke care as defined by San Mateo County policy and protocols.)
- 2) Staffing:
 - a) The 911 ambulance is staffed by two health care providers. At least one is a paramedic. The second staff member may be an EMT or paramedic.
- 3) Care During Transport/Scope of Practice:
 - a) The paramedic will follow San Mateo County Emergency Medical Services Policies, Protocols, and Procedures. Any modification must be by a Base Hospital physician and must be within the San Mateo County Scope of Practice (see Scope of Practice chart below)
 - b) Patient destination is determined by the sending physician but must comply with San Mateo County policy and protocol.
- 4) Requesting a 911 system/paramedic ambulance:
 - a) Contact San Mateo County PSC by Microwave phone (344) or landline telephone at 650-364-1313.
 - b) PSC will ask five screening questions to determine patient condition
 - c) The patient should be ready for transfer within 15 minutes of the request to PSC. The ambulance will usually arrive at the hospital within 13 minutes of the request.

Special Considerations

Major Trauma Patient Transfer/Consult (see Trauma Transfer algorithm, next page):

TRAUMA TRANSFER PROCEDURE

STEP 1	Determine appropriate level of transfer using chart below. Contact receiving Trauma Center and confirm acceptance of the patient Stanford Trauma Center <ul style="list-style-type: none"> • 1-650-724-2243 (Emergency) • 1-650-723-4696 (Urgent – Adult) • 1-650-723-7342 (Urgent – Pediatric) Zuckerberg S.F. General Trauma Center: <ul style="list-style-type: none"> • 1-628-206-8111 **Request to speak to Attending in Charge (AIC) about Trauma Re-Triage Patient**
STEP 2	As soon as need for transfer is recognized, request CODE 3 TRAUMA TRANSFER using ED to County Communication microwave direct line (#344)
STEP 3	Prepare patient and paperwork for immediate transport before ambulance arrives.
STEP 4	For trauma consults on patients not meeting red or blue box criteria, contact the trauma center and request to speak to the Trauma Attending-In-Charge about Trauma Re-Triage Patient <ul style="list-style-type: none"> • Stanford Trauma Center: 1-650-723-4696 (Adult) or 1-650-723-7342 (Pediatric) • Zuckerberg SF General Trauma Center: 1-628-206-8111

TRAUMA TRANSPORTATION SELECTION CRITERIA**EMERGENCY TRANSFER PATIENTS: Call Trauma Center PRIOR to Transfer and state RED BOX TRAUMA TRANSFER****Stanford Trauma Center:**

- 1-650-724-2243

Zuckerberg S.F. General Trauma Center:

- 1-628-206-8111

****Request to speak to Attending in Charge (AIC) about Trauma Re-Triage Patient******ED physician determines patient requires immediate evaluation/resuscitation by a trauma center**

Some indicators:

Blood Pressure

- B/P of <90 or
- Decrease in B/P by 30mmHg following 2 liters of IV crystalloid

Head Injury with Blown Pupil

Penetrating Thoracic or Abdominal Trauma

URGENT TRANSFER PATIENTS: Call Trauma Center PRIOR to Transfer**Stanford Trauma Center:**

- 1-650-723-4696 (Adult)
- 1-650-723-7342 (Pediatric)

Zuckerberg S.F. General Trauma Center:

- 1-628-206-8111

****Request to speak to Attending in Charge (AIC) about Trauma Re-Triage Patient******ED physician determines that the patient requires urgent evaluation by a trauma center based on the following indicators:**

Anatomic area	Related Injuries
Central Nervous System	<ul style="list-style-type: none"> • GCS <14 with abnormal CT Scan • Spinal Cord or major vertebral injury
Chest	<ul style="list-style-type: none"> • Major chest wall injury with >3 rib fractures and/or pulmonary contusion • Cardiac Injury
Pelvis/Abdomen	<ul style="list-style-type: none"> • Pelvic ring disruption • Solid organ injury confirmed by CT Scan or ultrasound demonstrating abdominal fluid
Major extremity injuries	<ul style="list-style-type: none"> • Fracture/dislocation with loss of distal pulses and/or ischemia • Open long bone fractures • Two or more long bone fractures • Amputations that require reimplantation
Co-morbid factors	<ul style="list-style-type: none"> • Adults > 65 y/o • Pediatric < 6 y/o Transfer to Stanford (Pediatric Trauma Center) • Pregnancy - >22 weeks gestation • Insulin dependent diabetes • Morbid obesity • Cardiac or Respiratory disease • Immunosuppression • Antiplatelet or anticoagulation agents
Multiple-System Injury	<ul style="list-style-type: none"> • Trauma with associated burns Transfer to closest Trauma Center • Major injury to more than two body regions • Signs of hypoperfusion – Lactate >4 or Base Deficit >4

TRAUMA LEVEL OF TRANSPORTATION

CATEGORY	TYPE/STAFF	DESCRIPTION	CAPABILITIES	TYPICAL ETA	PROVIDERS
Emergent ALS	Advanced Life Support	Standard Paramedic transport	Consider for cases meeting emergency and urgent criteria above, paramedic scope of practice	Approx. 10 min	9-1-1 System
CCT-RN	Critical Care Transport Ground: 1 RN	Critical Care RN Transport	Mechanical ventilation and most medications	60-120 min ETA can be extended	Facility Choice
Air Ambulance	Critical Care Transport Air: 2 RNs	Critical Care RN Transport	Advanced practice RN / expanded scope of practice	ETA can be extended	CALSTAR/REACH; LifeFlight

- 1) Pediatric Critical Care Center Transfer:
 - a) San Mateo County recognizes three Pediatric Critical Care Centers (PCCC).
 - b) To contact these centers call their 24 hour consultation line to make transfer and transportation arrangements:
 - i) Stanford Health Care Lucile Packard Children’s Hospital Dispatch 650-723-7342
 - ii) California Pacific Medical Center 888-637-2762 (Transfer Center) or 415-600-0720 (PICU)
 - iii) UCSF Benioff Children’s Hospital– 877-822-4453 (Transfer Center) or 415-353-1352 (PICU)
 - c) If the intended PCCC cannot immediately accept the patient, that PCCC will take responsibility for:
 - i) locating an alternate PCCC able to immediately accept the patient, and
 - ii) keeping the sending hospital informed as to the success or failure of securing a PCCC able to immediately accept the patient.
 - iii) Inform EMS Agency, if PCCC did not assist in finding an alternate PCCC.
- 2) Scope of Practice Chart – (CCT-RN Scope of Practice is determined by provider’s medical director):

Skills/Medication/Procedure	BLS	911 – Paramedic
Vital signs stable	X	X
Unstable vital signs		X
Oxygen by mask or cannula	X	X
Level of consciousness-stable	X	X
Level of consciousness-unstable		X
Peripheral IV established (no additives) 5 or 10% Dextrose, Saline, Ringer’s Lactate or combined solutions	X	X
Peripheral IV established with Lidocaine, Dopamine, or potassium chloride (20 mEq/mL)		X
Mechanical respiratory assistance (patient’s vent accompanied by a trained attendant who will do suctioning)	X	X
Intubated patient with BVM ventilation		X
NG, gastric tubes, Foley catheter	X	X
Saline lock, indwelling vascular access device (not infusing fluids or medication)	X	X
Central IV line in place (non-infusing)	X	X
Cardiac monitor		X
Temporary pacemaker in place		X

Standby or anticipated transcutaneous pacing		X
Medication administration in progress or anticipated. IV drips cannot be maintained on a mechanical pump and are only approved as noted. Adenosine Albuterol Atropine Calcium Chloride Dopamine-IV Drip Dextrose Diphenhydramine Midazolam Morphine Sulfate Narcan Nitroglycerine spray or paste Ondansetron Sodium Bicarbonate		X



RECEIVING HOSPITALS

APPROVED:

A handwritten signature in black ink, appearing to be "G.T.", written over a horizontal line.

EMS Medical Director

A handwritten signature in black ink, appearing to be "D. J. [unclear]", written over a horizontal line.

Interim EMS Administrator

1. Purpose: To provide paramedics and EMT-1's with information and guidance about the capability of the receiving facilities in San Mateo County.
2. Definitions:
 - 2.1 Appropriate Receiving Hospital: The receiving hospital that has the capability of treating the anticipated needs of the patient and has no restriction to receiving the patient with the presenting symptoms or complaint.
 - 2.2 Requested hospital: The hospital that the patient, the patient's family or the designated decision maker for the patient requests.
 - 2.3 San Mateo County Receiving Hospital /SMC Receiving Hospitals: Receiving hospitals that participate in the San Mateo County Quality Improvement Program and function as Base Hospitals for physician consultation.
 - 2.4 Basic Emergency Department: An emergency department that is designated by the State Department of Health Services as providing "basic emergency medical service."
 - 2.5 Standby Emergency Department: An emergency department that is designated by the California Department of Public Health as providing "standby emergency medical service."
 - 2.6 Labor and Delivery Patient/Obstetrical patient: Any patient who is suspected of being in labor with a fetus of greater than 20 weeks gestation or who has a known or suspected complication of pregnancy such as placenta abruptio, placenta previa or toxemia of pregnancy.
 - 2.7 Acute Stroke Patient: A patient with the onset of symptoms of a stroke up to 8 hours prior to paramedic contact. Symptoms of a stroke include abrupt changes in mental status, altered speech, gait, behavior, sudden onset of confusion and focal neurological findings.
 - 2.8 Major Burn Patient: Any patient who meets the American Burn Association criteria for a major burn and does not meet the San Mateo County criteria for a major trauma victim.

Issue Date: September 1, 2008
Effective Date: March 2014
Review Date: March 2016

- 2.9 Major Trauma Patient: Any patient who meets the Trauma Triage Criteria of San Mateo County
 - 2.10 STEMI Patient: A patient with a documented ST Segment Myocardial Infarction noted on the 12-lead EKG.
3. SMC Receiving Hospitals: The following hospitals routinely receive patients from the SMC emergency medical services system.
 - 3.1 Kaiser Redwood City
 - 3.2 Kaiser South San Francisco
 - 3.3 Palo Alto Veterans Affairs Hospital
 - 3.4 Peninsula Medical Center
 - 3.5 San Francisco General Hospital for trauma
 - 3.6 San Mateo Medical Center
 - 3.7 Sequoia Hospital
 - 3.8 Seton Coastside
 - 3.9 Seton Medical Center
 - 3.10 Stanford Hospital
 - 3.11 Dominican Hospital of Santa Cruz may be utilized as a receiving facility from the southwest coastside of the County
 - 3.11.1 A San Mateo County Base Hospital should be contacted for physician consultation as needed for patients being transported to Dominican Hospital. Stanford Hospital is the usual base hospital for these situations
 4. Receiving Hospitals for labor and delivery or obstetrical patients as defined above:
 - 4.1 Kaiser Redwood City
 - 4.2 Peninsula Medical Center
 - 4.3 San Francisco General Hospital
 - 4.3 Sequoia Hospital
 - 4.4 Seton Medical Center
 - 4.5 Stanford Hospital
 - 4.6 Dominican Hospital Santa Cruz (contact a San Mateo County Base Hospital if physician consult is needed)
 5. For destination requests for emergency departments not listed in 3. or 4. above:
 - 5.1 The on-duty AMR supervisor should be contacted for authorization. At request of the transporting crew or other on scene personnel, Public Safety Communications will page the AMR on-duty supervisor the unit designation, destination request and system levels.
 - 5.1.1 In general, if the request is due to a clinical need or for continued care it will be granted.

- 5.1.2 The AMR supervisor may approve or deny the request based upon the number of available in-County ambulances (as an example: 2 or less available ambulances) or the number of active calls.
 - 5.1.3 If the hospital request is denied by the ALS supervisor an incident report will be generated by the ALS supervisor and sent to the AMR Operations Manager or SSFFD EMS Captain. The involved agency will forward the copy of the report to the San Mateo County EMS Clinical Services Manager.
 - 5.2 Patient's facility of preference is defined as the hospital requested by a patient, his/her family, his or her designated medical decision maker or the patient's private physician
 - 5.3 All patients, except those requiring transport to the closest appropriate receiving hospital, will be transported to the hospital of their preference; as long as it is a San Mateo County receiving hospital,
 - 5.4 In addition to the San Mateo County Receiving Hospitals paramedics will routinely transport patients to the following facilities if they are capable of receiving the patient.
 - 5.5 The hospital must be contacted prior to transport to ensure they can receive the patient:
 - 5.5.1 Santa Clara County Hospitals.
 - 5.5.1.1 El Camino Hospital-Mountain View
 - 5.5.2 San Francisco County Hospitals
 - 5.5.2.1 University of California San Francisco Medical Center
 - 5.5.2.2 California Pacific Medical Center
 - 5.5.2.2.1 Pacific Campus of CPMC
 - 5.5.2.2.2 Davies Campus of CPMC
 - 5.5.2.2.3 St. Luke's Campus of CPMC
 - 5.5.2.3 San Francisco General Medical Center for medical complaints
 - 5.5.2.4 Kaiser San Francisco
 - 5.6 The above facilities are not to be contacted as a base hospital for physician consultation
 - 5.7 A patient who does not specify a facility of preference will be transported to the closest appropriate San Mateo County receiving hospital.
 - 5.8 Within the jurisdiction of the South San Francisco Fire Department the paramedic will determine if the request can be granted
6. Sexual Assault.
- 6.1 San Mateo Medical Center is the designated hospital victims of sexual assault regardless of gender or age. San Mateo Medical Center will not divert suspected sexual assault victims.
 - 6.2 If the victim of sexual assault is a major trauma victim or other specialty hospital care transport will be to the appropriate specialty care center.

7. Major Trauma Receiving Hospitals (Refer to Operations 22)
 - 7.1 The following Hospitals are designated to receive major trauma patients:
 - 7.1.1 San Francisco General Hospital
 - 7.1.2 Stanford Hospital

- 8 Stroke Centers (Refer to Operation 29)
 - 8.1 Primary Stroke Centers
 - 8.1.2 Any hospital recognized by San Mateo County EMS that has been designated as an accredited Primary Stroke Center by the Joint Commission.
 - 8.1.2.1 Seton Medical Center (Daly City)
 - 8.1.2.2 Kaiser South San Francisco Hospital
 - 8.1.2.3 Mills-Peninsula Hospital (Peninsula Campus)
 - 8.1.2.4 Sequoia Hospital
 - 8.1.2.5 Kaiser Redwood City Hospital
 - 8.1.2.6 Stanford Hospital and Clinics
 - 8.2 Primary Stroke Centers with interventional stroke care capability
 - 8.2.2 Kaiser Redwood City Hospital
 - 8.3 Comprehensive Stroke Center
 - 8.3.2 A Comprehensive Stroke Center is a hospital that has successfully completed and maintains Joint Commission Accreditation as a Comprehensive Stroke Center and enters into an MOU with San Mateo County relative to being a stroke center
 - 8.3.2.1 Stanford Hospital and Clinics

- 9 Major Burn Receiving Hospitals
 - 9.1 St. Francis Hospital (The Bothin Burn Center) San Francisco (415-353-6300)
 - 9.2 Santa Clara Valley Medical Center, San Jose (408-885-3228)

- 10 STEMI Centers Designated by San Mateo County
 - 10.1 Seton Medical Center
 - 10.2 Peninsula Medical Center
 - 10.3 Sequoia Hospital
 - 10.4 Kaiser Redwood City
 - 10.5 Stanford Hospital

- 11 5150 Receiving Hospitals: Two hospitals are designated by the Health Services Agency to receive patients under Section 5150 of the Welfare and Institutions Code:
 - 11.1 Peninsula Medical Center: Emergency Department
 - 11.2 San Mateo Medical Center: Emergency Department or Psychiatric Emergency Services (PES)
 - 11.3 Patients on a 5150 hold who are determined to have a potentially life threatening emergency shall be transported to the closest hospital including

Issue Date: September 1, 2008
Effective Date: March 2014
Review Date: March 2016

those not designated as a 5150 receiving hospital. See Policy Facilities - 5 for definitions of potentially life threatening emergencies.

12. Standby Emergency department in San Mateo County are:
 - 12.2 Seton Coastside
 - 12.3 Patients whom the paramedic reasonably believes will be discharged from the emergency department may be transported to this facility.
 - 12.4 Patients that require emergent stabilization at an emergency department may be transported to a standby emergency department if a basic emergency facility is not within a reasonable distance. These would include patients:
 - 12.4.1 in cardiac arrest with no return of spontaneous circulation (ROSC) in the field
 - 12.4.2 with uncontrolled bleeding from an extremity
 - 12.4.3 with an uncontrolled airway

13. Patients who may require admission to an acute care hospital should not be transported to a standby emergency department. Examples of these patients would include, but are not limited to, patients with:
 - 13.1 Sustained abnormal vitals signs
 - 13.2 A history of head trauma with an abnormal level of consciousness.
 - 13.3 Recent onset (less than 12 hours) of neurological deficit due to suspected stroke.
 - 13.4 Adult patients with seizure of new onset, multiple seizures within a 24-hour period, or sustained alteration in level of consciousness.
 - 13.5 Chest pain or discomfort of known or suspected cardiac origin
 - 13.6 Sustained respiratory distress not responsive to field treatment (adult or pediatric patients)
 - 13.7 Suspected pulmonary edema who are not responsive to field interventions.
 - 13.8 Potentially significant cardiac arrhythmias
 - 13.9 New onset hypertension with diastolic blood pressure >120 Hbg or symptoms of headache, photophobia, or altered mental status.
 - 13.10 Post-Cardiac Arrest patients
 - 13.11 Orthopedic emergencies having deformity, open fractures, or alterations of distal neuro-vascular status.
 - 13.12 Suspected spinal cord injury of new onset.
 - 13.13 Toxic exposure or overdose. If there is a question as to the potential for hospital admission the poison control center or a base hospital physician should be contacted for consultation.
 - 13.14 Major burns as defined in the burn protocol
 - 13.15 Near drowning or suspected barotrauma with any history of loss of consciousness, unstable vital signs, or respiratory problems

Issue Date: September 1, 2008
Effective Date: March 2014
Review Date: March 2016

- 13.16 In addition to the preceding, pediatric patients who present with any of the following conditions or should be transported to a facility with a basic emergency department.
 - 13.16.1 Children with symptomatic dehydration
 - 13.16.2 Children requiring endotracheal intubation and/or ventilator support
 - 13.16.3 Children with a serious medical condition having exacerbation of the condition or clinical deterioration
 - 13.16.4 Children with long bone fractures or fractures involving the joints
 - 13.16.5 Pediatric seizure patients who do not present with fever or who continue to seize longer than 10 minutes.

14. South San Francisco Fire Department Hospital Destination
 - 14.1 South San Francisco Fire Department ambulances will transport patients from their City to the following receiving facilities only:
 - 14.1.1 Kaiser South San Francisco
 - 14.1.2 Peninsula Medical Center
 - 14.1.3 San Francisco General Hospital
 - 14.1.4 Seton Medical Center
 - 14.1.5 San Mateo Medical Center (5150, in-custody, sexual assault victims only)
 - 14.1.6 Kaiser Redwood City for patients with onset of stroke symptoms from 3.5-8 hours prior to paramedic arrival
 - 14.1.7 Stanford Hospital for patients with major trauma or onset of stroke symptoms from 2.5-8 hours prior to paramedic arrival
 - 14.1.8 St. Francis Hospital (Bothin Burn Center) for major burns
 - 14.1.9 STEMI Centers as identified in section 10 above.

15. Jail Inmates
 - 15.1 Jail inmates being transported code 3 shall be taken to the closest appropriate facility
 - 15.2 Jail inmates being transported code 2:
 - 15.2.1 San Mateo County inmates will be transported to San Mateo Medical Center
 - 15.2.2 San Bruno Jail inmates will be transported to San Francisco General Hospital (even if it is on ambulance diversion).

16. Cordilleras Center/Canyon Oaks/Hillcrest Juvenile Facility
 - 16.1 Patients at these facilities being transported code 3 shall be taken to the closest appropriate facility
 - 16.2 Patients at these facilities being transported Code 2 will be transported to San Mateo Medical Center

17. Burn Patients

- 17.1 Patients who meet the American Burn Association criteria for major burns shall be transported to the closest Burn Receiving Hospital
- 17.2 Patients who meet the criteria for a Major Trauma Victim shall be transported to the appropriate San Mateo County Trauma Center
- 17.2 Patients who present with signs of symptoms of acute respiratory distress from smoke inhalation (sore throat, wheezing, coughing, hoarse voice, or stridor) shall be transported to the closest receiving hospital. All other patients with suspected respiratory involvement shall be transported to the closest trauma center.
- 17.3 Air medical transportation may be considered for those patients with burn injuries who have field transport times exceeding 30 minutes from the burn or trauma center who have extensive body surface area burns, respiratory symptoms, or electrical injuries.



February 25, 2020

Farid Nasr, MD
Specialty Care Systems
California EMS Authority

Via Electronic Mail

Dr. Nasr,

I write in response to your request for supplemental information in relation to the most recent STEMI Critical Care System Plan submitted by the San Mateo County Emergency Medical Services Agency. Please find responses to your inquiry immediately below. Referenced documents have also been attached.

§ 100270.121. STEMI Critical Care System Plan.

(c) A STEMI Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all of the following components:

(2) The list of STEMI designated facilities with the agreement expiration dates.

Facility	Agreement Expiration Date
Kaiser Redwood City	10/31/2022
Mills-Peninsula	10/31/2022
Sequoia	10/31/2022
Seton	10/31/2022
Stanford	10/31/2022

(3) A description or a copy of the local EMS agency's STEMI patient identification and destination policies.

Please see the attached Facilities - 1 which is our destination policy and Treatment Protocol A06: Chest Pain: STEMI which guides patient identification. Our Facilities - 9 policy, STEMI System Receiving Center Standards and Designation was included in the initial submission and describes the criteria for designation. Also provided in the initial submission was our STEMI validation tool detailing the requirements of the STEMI Referral Hospitals (SRHs).



(4) A description or a copy of the method of field communication to the receiving hospital specific to STEMI patient, designed to expedite time-sensitive treatment on arrival.

The Routine Medical Care field treatment protocol (g01) outlines the information to be provided in the “ring down” which is the communication provided to the receiving facility by prehospital personnel designed to expedite time-sensitive treatment on arrival. This information can be found immediately below:

STEMI/MEDICAL RINGDOWNS

- Unit ID (i.e. M107, San Mateo Medic 42)
 - Code 2/3 with **STEMI alert**
 - Age
 - Gender
 - Chief complaint
 - Physical findings
 - Vital signs (BP/HR/RR/O₂ sat/BGL/Temp)
 - Treatments
 - 12-Lead has been transmitted to your facility
 - MR# or patient name and DOB
 - ETA
 - How do you copy?
-

5) A description or a copy of the policy that facilitates the inter-facility transfer of a STEMI patient.

Facilities - 4 is our Inter-facility transfer policy. Although much of this is designed for trauma, this policy outlines the procedure for a non-specialty care hospital to transport the patient to another hospital for any higher level of care or specialty service not available at the initial receiving hospital. Page 3 of 6 outlines the procedure to utilize the 911 system if Critical Care Transport (CCT) is not readily available. We have two STEMI Referral Hospitals (SRHs) in our system: Kaiser South San Francisco and San Mateo Medical Center. Both facilities access the 911 system to effect emergent transfer of patients requiring percutaneous coronary intervention (PCI) to a STEMI Receiving Center (SRC).

(7) A policy or description of how the local EMS agency integrates a receiving center in a neighboring jurisdiction.

Facilities -1 is our Destination policy (referred to earlier) and includes out-of-County hospitals as receiving centers for patients originating in San Mateo County. Stanford Health Care is in a neighboring jurisdiction, Santa Clara County. Stanford is fully integrated into San Mateo County's STEMI system. San Mateo County has a written STEMI agreement with Stanford. A re-designation site visit was conducted by the EMS Agency Medical Director and the EMS Agency Clinical Service Manager on December 2, 2019. The past chair of the STEMI CQI Committee was Dr. David Lee, the STEMI Program Director at Stanford Health Care.

Please do not hesitate to contact me should the Authority require any additional clarification or information.

Sincerely,



Travis Kusman, MPH, Paramedic
Director

Cc: Linda Allington, Clinical Services Manager