EMERGENCY MEDICAL SERVICES AUTHORITY
11120 INTERNATIONAL DR., SUITE 200
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875

January 16, 2026

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

Dear Travis Kusman,

This letter is in response to San Mateo Emergency Medical Service (EMS) Agency's 2024 EMS, Trauma, St-Elevation Myocardial Infarction (STEMI), Stroke, EMS for Children (EMSC), and Quality Improvement (QI) plan submissions to Emergency Medical Service Authority (EMSA) on November 17, 2025.

EMSA has reviewed the EMS plan based on compliance with statutes, regulations, and case law. It has been determined that the plan meets all EMS system components identified in Health and Safety Code (HSC) § 1797.103 and is approved for implementation pursuant to HSC § 1797.105(b). Based on the transportation documentation provided, please find the enclosed EMS area/subarea status, compiled by EMSA.

EMSA has also reviewed the Trauma, STEMI, Stroke, EMSC, and QI plans based on compliance with Chapters 6.1, 6.2, 6.3, 6.4, and 10 of the California Code of Regulations, Title 22, Division 9, and has been approved for implementation.

Per HSC § 1797.254, local EMS agencies must annually submit EMS plans to EMSA. San Mateo EMS Agency will only be considered current if an EMS plan is submitted each year.

Your 2025 EMS plan will be due on or before January 16, 2027. Concurrently with the EMS plan, please submit an annual Trauma, STEMI, Stroke, EMSC, and QI plan.

If you have any questions regarding the EMS plan review, please contact Roxanna Delao, EMS Plans Coordinator, at (916) 903-3260 or roxanna.delao@emsa.ca.gov.

Sincerely,

Angela Wise, Branch Chief
EMS Quality and Planning
On behalf of Elizabeth Basnett, Director

Enclosure: AW: rd

EMERGENCY MEDICAL SERVICES AUTHORITY
11120 INTERNATIONAL DR., SUITE 200
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875

San Mateo 2024 EMS Plan Areas and Subareas	Non-Exclusive	Exclusive	Method to Achieve Exclusivity	Emergency Ambulance	ALS	LALS	All Emergency Ambulance Services	9-1-1 Emergency Response	7-digit Emergency Response	ALS Ambulance	All CCT Ambulance Services	BLS Non-Emergency and IFT	Standby Service with Transport
Area/Subarea Name	**EXCLUSIVITY**			**TYPE**			**LEVEL**						
San Mateo County, except the City of South San Francisco		X	Competitive	X				X	X	X			
City of South San Francisco		X	Non-Competitive	X				X	X	X			

2024

EMS SYSTEM PLAN UPDATE

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

San Mateo County EMS Agency

801 Gateway Boulevard, Second Floor
South San Francisco, California 94080

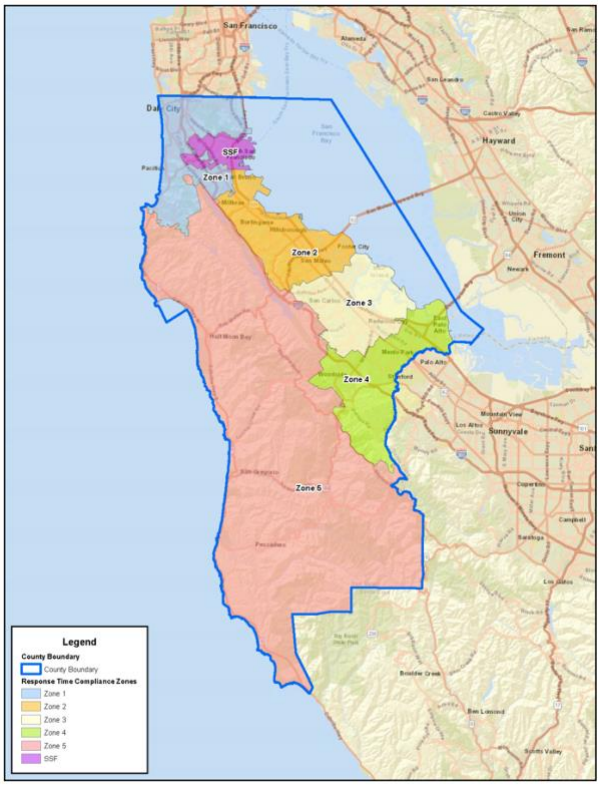
October 2025

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

San Mateo County 2024 EMS Plan Executive Summary

The San Mateo County EMS Agency submits its 2024 EMS System Plan Update in accordance with California Health and Safety Code Section 1797.254. Although there are no EMS System Plan changes for 2024, updated data and statistics are provided to demonstrate the framework for the ongoing planning, implementation, and evaluation of EMS in San Mateo County.

San Mateo County and EMS System Demographics



Population 742,893 residing in 744 Sq. Miles

- 1 Joint Powers Authority (JPA) ALS first responder comprised of 11 fire departments
- 23 law enforcement agencies
- 2 emergency ALS ambulance providers
- 1 EMS PSAP
- 6 ambulance response zones
- 706 EMTs; 566 accreditated paramedics
- Mobile Stroke Unit program
- 6 in-county emergency departments
    - 5 STEMI Receiving Centers
    - 5 Primary Stroke Centers
    - 1 Thrombectomy Capable Stroke Center*
    - 2 Comprehensive Stroke Centers*
- 1 standby emergency department
- 3 EMT Training Programs
- 12 EMS Continuing Education Providers

*TSC and CSC are also designated as Primary Stroke Centers

San Mateo County 9-1-1 Responses (CY)							
2024	2023	2022	2021	2020	2019	2018	2017
66,769	65,177	64,425	56,449	52,220	57,550	45,491	46,989

The San Mateo County EMS Agency continues our mission to plan, coordinate, and oversee our EMS system to ensure we deliver the highest quality prehospital and emergency medical care in response to individual needs and community crisis. Mutual cooperation, patient advocacy, advanced medical technology, electronic documentation, and evidence-based data are major strengths. The EMS system remains committed to efficiency, effectiveness, and adherence to the EMS plan standards. All policies, protocols, and field procedures are publicly available on the San Mateo County EMS website.

Emergency Medical Dispatch

The San Mateo County EMS system utilizes San Mateo County Public Safety Communications ("PSC") as the single point of EMS communication and emergency medical dispatch ("EMD") for all fire department and

911 emergency ambulance activity countywide. PSC is a public safety agency and provides EMD services through utilization of the Medical Priority Dispatch System, approved by the San Mateo County EMS Agency, in compliance with Health and Safety Codes §§ 1797.223 and 1798.8 and California Code of Regulations ("CCR") § 100170.

Additionally, PSC dispatches EMS aircraft, which utilize countywide frequencies and standard hospital communication capabilities, in compliance with local EMS policies and procedures and CCR § 100306.

Disaster Medical Response

The EMS Agency continued development of the San Mateo County Operational Area Medical Health Emergency Operations Plan (EOP), which provides general guidance for preparation, response, and recovery to all-hazard events which pose risk to the healthcare system and/or result in illness or injury amongst the population within San Mateo County.

EMS Director Travis Kusman, MPH, Paramedic continues to serve as the County's Medical Health Operational Area Coordinator (MHOAC). The EMS Agency staffs an on-call EMS Duty Officer 24-hours a day who also serves as the MHOAC's designee when the EMS Director is unavailable. The EMS Duty Officer and EMS Director / MHOAC maintain 24/7 immediate field emergency response capability via mobile command vehicles outfitted with requisite specialized equipment and communications capabilites. Director Kusman continues to serve as the State appointed Regional Disaster Medical Health Coordinator for the Coastal Mutual Aid Region.

The MHOAC, in cooperation with the with the San Mateo County Department of Emergency Management, County Health, including environmental health and behavioral health, local fire departments, the regional disaster and medical health coordinator (RDMHC), and the regional office of the Office of Emergency Services, is responsible for ensuring the development of a medical and health disaster plan for the operational area following SEMS and NIMS. The County's plan includes preparedness, response, recovery, and mitigation functions consistent with the State Emergency Plan and has procedures that include the 17 MHOAC functions. In the event of a local, state, or federal declaration of emergency, the MHOAC assists the agency operational area coordinator in the coordination of medical and health disaster resources within the operational area and is the point of contact in the operational area, for coordination with the RDMHC, the agency, the regional office of the agency, the State Department of Public Health, and the authority.

Public Information and Education

The EMS Agency continues its effort to provide community education and training. Highlights for the past reporting period include:

- Hands-Only CPR training for the public across San Mateo County;
- Stop the Bleed training for the public across San Mateo County;
- Ongoing partnership with County Family Health Services in a child passenger safety seat distribution and education program; and
- Community stroke awareness education delivered at community public transportation platforms across the county.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

Date: 2024

EMS PLAN
AMBULANCE ZONE SUMMARY FORM

To evaluate the nature of each area or subarea, the following information should be compiled for each zone individually. Please include a separate form for each exclusive and/or nonexclusive ambulance zone.

Local EMS Agency or County Name: San Mateo County
Area or Subarea (Zone) Name or Title: San Mateo County, except the City of South San Francisco
Name of Current Provider(s): American Medical Response – West (AMR) Include company name(s) and length of operation (uninterrupted) in specified area or subarea. AMR has provided service under this name since January 1999. The company was the selected proposer per a Request for Proposal ("RFP") competitive process conducted in 1997/98, 2007/2008, and again in 2018. This provider had been the contract holder since 1990 under the names of Baystar, Medtrans/ Laidlaw, and AMR. Therefore, AMR has provided uninterrupted emergency ambulance since January 1990.
Area or Subarea (Zone) Geographic Description: San Mateo County, except the City of South San Francisco
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Competitive Process – Section 1797.224. Emergency ambulance service – all emergencies. Until 1989, exclusivity language contained in the plan was "advanced life support." Language in the plan was amended to "emergency ambulance service" in 1989 with the approval of the EMS Authority. The San Mateo County Board of Supervisors approved both the RFP and the contract in 1998 and granted a five-year contract extension in 2003. Contract included emergency ambulance service and paramedic first response (fire service was a subcontractor to the contractor). A subsequent five-year contract was awarded through an RFP competitive process in 2008 and went into effect in July 2009, was extended in June 2014 and expired June 2019. Current contract was awarded through an RFP competitive process in 2018 and went into effect in July 2019. The contract was extended an additional 5-years in March 2023 with service delivery to continue through June 30, 2029. Current contract does not include paramedic first response. There is a separate contract with the San Mateo County Pre-Hospital Emergency Medical Services Group ("JPA") for paramedic fire first response services that went into effect July 2019. The EMS Agency plans to conduct future ambulance RFPs at periodic intervals to ensure the most appropriate level of ambulance service is available to meet the needs of San Mateo County.
Type of Exclusivity ("Emergency Ambulance," "ALS," or "LALS" [HS 1797.85]): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (e.g., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.).

Type of Exclusivity = Emergency Ambulance. Levels of Exclusivity = Limited Ambulance Services. Emergency Response: 1) 9-1-1 Emergency Response and 2) 7-Digit Emergency Response. ALS Ambulance.
Method to achieve exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. If competitively determined, method of competition, intervals, and selection process. Attach copy/ draft of last competitive process used to select provider or providers. The emergency ALS ambulance transport services competitive process was approved by and is on file with EMSA. The EMS Agency concluded an RFP competitive process for ALS emergency ambulance services and negotiated a new contract prior to the expiration of the June 2019 contract. The current contract began July 1, 2019.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

Local EMS Agency or County Name: San Mateo County
Area or Subarea (Zone) Name or Title: City of South San Francisco
Name of Current Provider(s): City of South San Francisco Fire Department Include company name(s) and length of operation (uninterrupted) in specified area or subarea.
Area or Subarea (Zone) Geographic Description: City of South San Francisco
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. The City of South San Francisco qualifies for exclusivity within its jurisdiction.
Type of Exclusivity ("Emergency Ambulance," "ALS," or "LALS" [HS 1797.85]): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (e.g., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Emergency ambulance. Emergency Response = 911 Emergency Response, 7-Digit Emergency Response. Transport Services = ALS Ambulance Services.
Method to achieve exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. If competitively determined, method of competition, intervals, and selection process. Attach copy/ draft of last competitive process used to select provider or providers. Non-Competitive (grandfathering). The EMS Agency believes South San Francisco Fire meets the criteria for "grandfathering" in Section 1797.224, and as such qualifies for exclusivity within its jurisdiction. On March 4, 1975, the San Mateo County Board of Supervisors approved Resolution No. 34702 authorizing an agreement with City of South San Francisco to establish a paramedic response and transport unit in cooperation with the County, and its effort to establish a comprehensive emergency medical system. Since that time South San Francisco Fire Department has provided continuous paramedic transport services within the County for the City of South San Francisco. This has been documented in EMS Plans, internal documents, and various media publications going back to 1974.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

A. SYSTEM ORGANIZATION AND MANAGEMENT

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Agency Administration:					
1.01 LEMSA Structure		X			
1.02 LEMSA Mission		X			
1.03 Public Input		X			
1.04 Medical Director		X	X		
Planning Activities:					
1.05 System Plan		X			
1.06 Annual Plan Update		X			
1.07 Trauma Planning*		X	X		
1.08 ALS Planning*		X			
1.09 Inventory of Resources		X			
1.10 Special Populations		X	X		
1.11 System Participants		X			
Regulatory Activities:					
1.12 Review & Monitoring		X			
1.13 Coordination		X			
1.14 Policy & Procedures Manual		X			
1.15 Compliance w/Policies		X			
System Finances:					
1.16 Funding Mechanism		X			
Medical Direction:					
1.17 Medical Direction*		X			
1.18 QA/QI		X	X		

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

A. SYSTEM ORGANIZATION AND MANAGEMENT (continued)

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
1.19 Policies, Procedures, Protocols		X	X		
1.20 DNR Policy		X			
1.21 Determination of Death		X			
1.22 Reporting of Abuse		X			
1.23 Interfacility Transfer		X			
Enhanced Level: Advanced Life Support					
1.24 ALS Systems		X	X		
1.25 On-Line Medical Direction		X	X		
Enhanced Level: Trauma Care System:					
1.26 Trauma System Plan		X			
Enhanced Level: Pediatric Emergency Medical and Critical Care System:					
1.27 Pediatric System Plan		X			
Enhanced Level: Exclusive Operating Areas:					
1.28 EOA Plan		X			

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

B. STAFFING/TRAINING

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Local EMS Agency:					
2.01 Assessment of Needs		X			
2.02 Approval of Training		X			
2.03 Personnel		X			
Dispatchers:					
2.04 Dispatch Training		X	X		
First Responders (non-transporting):					
2.05 First Responder Training		X	X		
2.06 Response		X			
2.07 Medical Control		X			
Transporting Personnel:					
2.08 EMT-I Training		X	X		
Hospital:					
2.09 CPR Training		X			
2.10 Advanced Life Support		X			
Enhanced Level: Advanced Life Support:					
2.11 Accreditation Process		X			
2.12 Early Defibrillation		X			
2.13 Base Hospital Personnel		X			

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

C. COMMUNICATIONS

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Communications Equipment:					
3.01 Communication Plan*		X	X		
3.02 Radios		X	X		
3.03 Interfacility Transfer*		X			
3.04 Dispatch Center		X			
3.05 Hospitals		X	X		
3.06 MCI/Disasters		X			
Public Access:					
3.07 9-1-1 Planning/ Coordination		X	X		
3.08 9-1-1 Public Education		X			
Resource Management:					
3.09 Dispatch Triage		X	X		
3.10 Integrated Dispatch		X	X		

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

D. RESPONSE/TRANSPORTATION

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
4.01 Service Area Boundaries*		X	X		
4.02 Monitoring		X	X		
4.03 Classifying Medical Requests		X			
4.04 Prescheduled Responses		X			
4.05 Response Time*		X			
4.06 Staffing		X			
4.07 First Responder Agencies		X			
4.08 Medical & Rescue Aircraft*		X			
4.09 Air Dispatch Center		X			
4.10 Aircraft Availability*		X			
4.11 Specialty Vehicles*		X	X		
4.12 Disaster Response		X			
4.13 Intercounty Response*		X			
4.14 Incident Command System		X			
4.15 MCI Plans		X			
Enhanced Level: Advanced Life Support:					
4.16 ALS Staffing		X	X		
4.17 ALS Equipment		X			

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

Enhanced Level: Ambulance Regulation:						
4.18	Compliance		X			
Enhanced Level: Exclusive Operating Permits:						
4.19	Transportation Plan		X			
4.20	"Grandfathering"		X			
4.21	Compliance		X			
4.22	Evaluation		X			

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

E. FACILITIES/CRITICAL CARE

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
5.01 Assessment of Capabilities		X	X		
5.02 Triage & Transfer Protocols*		X			
5.03 Transfer Guidelines*		X			
5.04 Specialty Care Facilities*		X			
5.05 Mass Casualty Management		X	X		
5.06 Hospital Evacuation*		X			
Enhanced Level: Advanced Life Support:					
5.07 Base Hospital Designation*		X			
Enhanced Level: Trauma Care System:					
5.08 Trauma System Design		X			
5.09 Public Input		X			
Enhanced Level: Pediatric Emergency Medical and Critical Care System:					
5.10 Pediatric System Design		X			
5.11 Emergency Departments		X	X		
5.12 Public Input		X			
Enhanced Level: Other Specialty Care Systems:					
5.13 Specialty System Design		X			
5.14 Public Input		X			

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

F. DATA COLLECTION/SYSTEM EVALUATION

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
6.01 QA/QI Program		X	X		
6.02 Prehospital Records		X			
6.03 Prehospital Care Audits		X			
6.04 Medical Dispatch		X			
6.05 Data Management System*		X			
6.06 System Design Evaluation		X			
6.07 Provider Participation		X			
6.08 Reporting		X			
Enhanced Level: Advanced Life Support:					
6.09 ALS Audit		X	X		
Enhanced Level: Trauma Care System:					
6.10 Trauma System Evaluation		X			
6.11 Trauma Center Data		X	X		

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

G. PUBLIC INFORMATION AND EDUCATION

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
7.01 Public Information Materials		X	X		
7.02 Injury Control		X	X		
7.03 Disaster Preparedness		X	X		
7.04 First Aid & CPR Training		X	X		

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

H. DISASTER MEDICAL RESPONSE

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
8.01 Disaster Medical Planning*		X			
8.02 Response Plans		X	X		
8.03 HazMat Training		X			
8.04 Incident Command System		X	X		
8.05 Distribution of Casualties*		X			
8.06 Needs Assessment		X	X		
8.07 Disaster Communications*		X			
8.08 Inventory of Resources		X	X		
8.09 DMAT Teams		X	X		
8.10 Mutual Aid Agreements*		X			
8.11 CCP Designation*		X			
8.12 Establishment of CCPs		X			
8.13 Disaster Medical Training		X	X		
8.14 Hospital Plans		X	X		
8.15 Interhospital Communications		X			
8.16 Prehospital Agency Plans		X	X		
Enhanced Level: Advanced Life Support:					
8.17 ALS Policies		X			
Enhanced Level: Specialty Care Systems:					

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

8.18 Specialty Center Roles		X			
Enhanced Level: Exclusive Operating Areas/Ambulance Regulations:					
8.19 Waiving Exclusivity		X			

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 2: SYSTEM ORGANIZATION AND MANAGEMENT

Reporting Year: 2024

NOTE: Number (1) below is to be completed for each county. The balance of Table 2 refers to each agency.

1. Percentage of population served by each level of care by county:
(Identify for the maximum level of service offered; the total of a, b, and c should equal 100%.)

County: San Mateo County

A. Basic Life Support (BLS)	0%
B. Limited Advanced Life Support (LALS)	0%
C. Advanced Life Support (ALS)	100%

2. Type of agency:
   - ☐ Public Health Department
   - ☒ County Health Services Agency
   - ☐ Other (non-health) County Department
   - ☐ Joint Powers Agency
   - ☐ Private Non-Profit Entity
   - ☐ Other: _____

3. The person responsible for day-to-day activities of the EMS agency reports to:
   - ☐ Public Health Officer
   - ☒ Health Services Agency Director/ Administrator
   - ☐ Board of Directors
   - ☐ Other: _____

4. Indicate the non-required functions which are performed by the agency:
   - ☒ Implementation of exclusive operating areas (ambulance franchising)
   - ☒ Designation of trauma centers/trauma care system planning
   - ☒ Designation/approval of pediatric facilities
   - ☒ Designation of other critical care centers
   - ☐ Development of transfer agreements
   - ☐ Enforcement of local ambulance ordinance
   - ☒ Enforcement of ambulance service contracts
   - ☐ Operation of ambulance service
   - ☒ Continuing education
   - ☒ Personnel training
   - ☒ Operation of oversight of EMS dispatch center

- ☒ Non-medical disaster planning
- ☐ Administration of critical incident stress debriefing team (CISD)
- ☐ Administration of disaster medical assistance team (DMAT)
- ☒ Administration of EMS Fund [Senate Bill (SB) 12/612]
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

5. EXPENSES

Salaries and benefits (All but contract personnel)	$ 1,640,677
Contract Services (e.g., medical director)	$ 6,482,878
Operations (e.g., copying,postage, facilities)	$ 247,546
Travel	$ 13,457
Fixed assets	$ 52,545
Indirect expenses (overhead)	$ 178,339
Ambulance subsidy	$ 0
EMS Fund payments to physicians/hospital	$ 797,802
Dispatch center operations (non-staff)	$ 0
Training program operations	$ 0
Other: Fees to EMSA (EMT)	$ 35,056
TOTAL EXPENSES	**$ 9,448,300**

6. SOURCES OF REVENUE

Special project grant(s) [from EMSA]	$ 0
Preventive Health and Health Services (PHHS) Block Grant	$ 0
Office of Traffic Safety (OTS)	$ 0
State general fund (Maddy, Richie)	$ 1,046,064.62
County general fund	$ 0
Other local tax funds (Measure K)	$ 99,201.00
County contracts (e.g., multi-county agencies)	$ 1,309,755
Certification fees	$ 50,091
Training program approval fees	$ 0
Training program tuition/Average daily attendance funds (ADA)	$ 0
Job Training Partnership ACT (JTPA) funds/other payments	$ 0
Base hospital application fees	$ 0

Trauma center application fees	$ 0
Trauma center designation fees	$ 75,000
Pediatric facility approval fees	$ 0
Pediatric facility designation fees	$ 0
Other critical care center application fees	$ 0
STEMI facility designation fees	$ 148,239.20
Stroke receiving center designation fees	$ 195,675.79
Thrombectomy Capable Stroke Center application fee	$ 0
Ambulance service/vehicle fees	$ 0
Contributions	$ 0
EMS Fund (SB 12/612)	$ 306,455.34
Other: AMR pass-through for ALS Fire Service First Response	$ 5,710,777.68
Other: AMR pass-through for FirstWatch services	$ 41,771.37
Other: Medi-Cal admin activities (MAA)	$ 350,674
Other: Inter-department transfers (Health Admin Support: Staffing)	$ 114,595
TOTAL REVENUE	**$ 9,448,300**

TOTAL REVENUE SHOULD EQUAL TOTAL EXPENSES.
IF THEY DON'T, PLEASE EXPLAIN.

7. Fee structure

☐ We do not charge any fees

☒ Our fee structure is:

First responder certification	$ N/A
EMS dispatcher certification	$ N/A
EMT-I certification	$ 125
EMT-I recertification	$ 87
EMT-defibrillation certification	$ N/A
EMT-defibrillation recertification	$ N/A
AEMT certification	$ N/A
AEMT recertification	$ N/A
EMT-P accreditation	$ 50
Mobile Intensive Care Nurse/Authorized Registered Nurse certification	$ N/A
MICN/ARN recertification	$ N/A
EMT-I training program approval	$ N/A
AEMT training program approval	$ N/A
EMT-P training program approval	$ N/A
MICN/ARN training program approval	$ N/A
Base hospital application	$ N/A
Base hospital designation	$ N/A
Trauma center application	$ N/A
Trauma center designation (Adult)	$ 50,000
Trauma center designation (Pediatric)	$ 25,000
Pediatric facility approval	$ N/A
Pediatric facility designation	$ N/A
Other critical care center application	
Type: STEMI	$ N/A
Type: Thrombectomy Capable Stroke Center	$ 7,500
Other critical care center designation	
Type: STEMI	$ 29,647.84
Type: Primary Stroke Center	$ 29,647.84
Type: Thrombectomy Capable Stroke Center	$ 41,506.99

Type: Comprehensive Stroke Center	$ 47,436.56
Ambulance service licence	$ N/A
Ambulance vehicle permits	$ N/A
Other:	$ N/A
Other:	$ N/A
Other:	$ N/A

TABLE 2: SYSTEM ORGANIZATION AND MANAGEMENT (cont.)

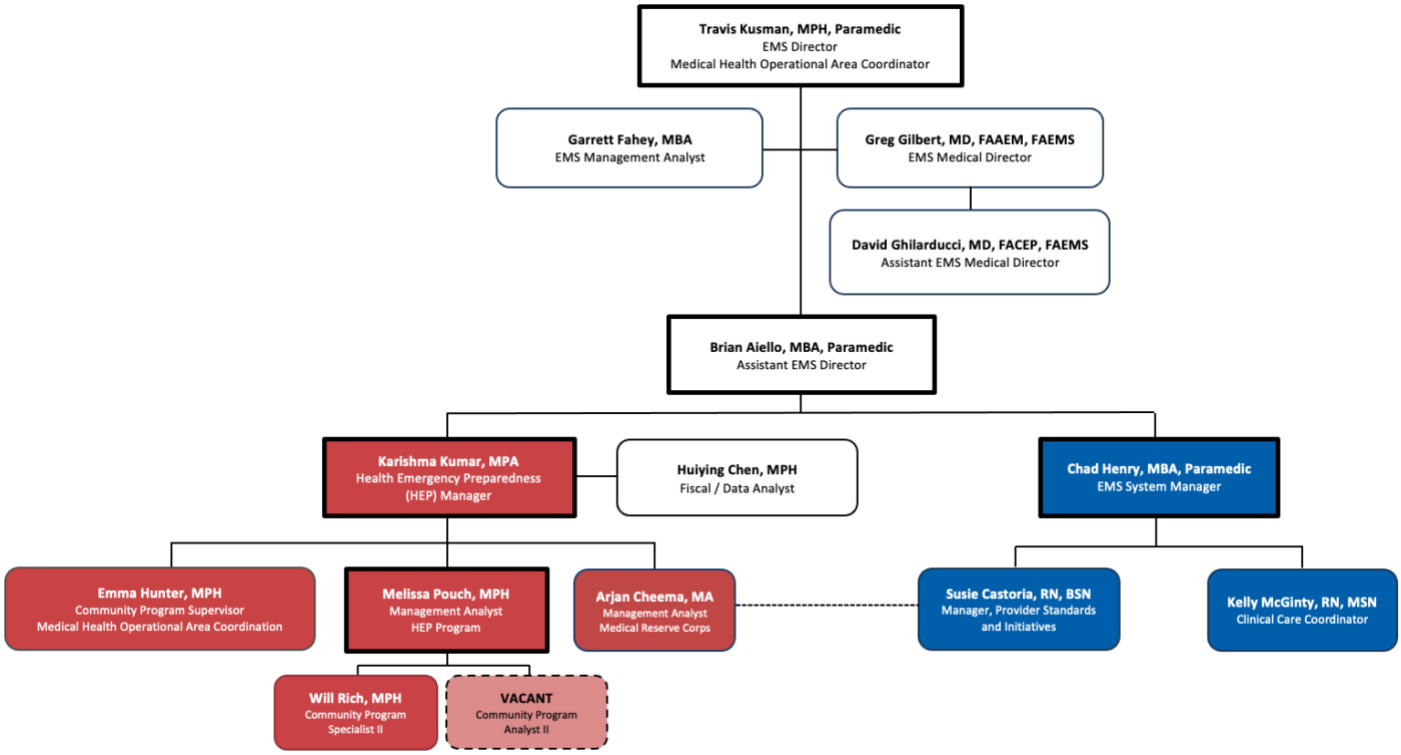
Category	Actual Title	FTE Positions (EMS only)	Top Salary by hourly equivalent	Benefits (% of salary)	Comments
EMS Admin./Coord. /Director	EMS Director	1.0	$113.11	40%	
Asst. Admin. or Admin. Asst. or Admin. Mgr.	Assistant EMS Director	1.0	$97.69	40%	
Asst. Admin. or Admin. Asst. or Admin. Mgr.	EMS System Manager	1.0	$88.64	40%	
ALS Coord. /Field Coord. /Training Coordinator	Clinical Nurse	1.0	$93.34	40%	
Program Coordinator/Field Liaison (Non-clinical)	EMS Management Analyst	1.0	$69.42	40%	
Program Coordinator/Field Liaison (Non-clinical)	Manager, Provider Standards and Initiatives	1.0	$69.42	40%	
Trauma Coordinator	*See Clinical Nurse above*				
Medical Director	EMS Medical Director	0.33	$200.00	0%	Contracted position
Other MD/Medical Consult/Training Medical Director	Assistant EMS Medical Director	0.33	$200.00	0%	Contracted position
Disaster Medical Planner	Health Emergency Preparedness Program Manager	1.0	$80.36	40%	
Dispatch Supervisor					
Medical Planner					

Data Evaluator/Analyst					
QA/QI Coordinator	*See EMS System Manager above*				
Public Info. & Education Coordinator	*See Clinical Nurse*				
Executive Secretary	*See EMS Management Analyst*				
Other Clerical					
Data Entry Clerk					
Other	Community Program Supervisor, Medical Health Operational Area Coordination	1.0	$66.35	40%	
Other	Health Emergency Preparedness Management Analyst	1.0	$69.42	40%	
Other	Community Program Specialist II	1.0	$51.37	40%	
Other	Community Program Analyst II				Vacant
Other	Health Emergency Preparedness Fiscal Analyst (Community Program Analyst II)	1.0	$60.29	40%	
Other	Management Analyst/ Medical Reserve Corps Coordinator	1.0	$69.42	40%	

Include an organizational chart of the local EMS agency and a county organization chart(s) indicating how the LEMSA fits within the county/multi-county structure.

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

San Mateo County EMS Agency

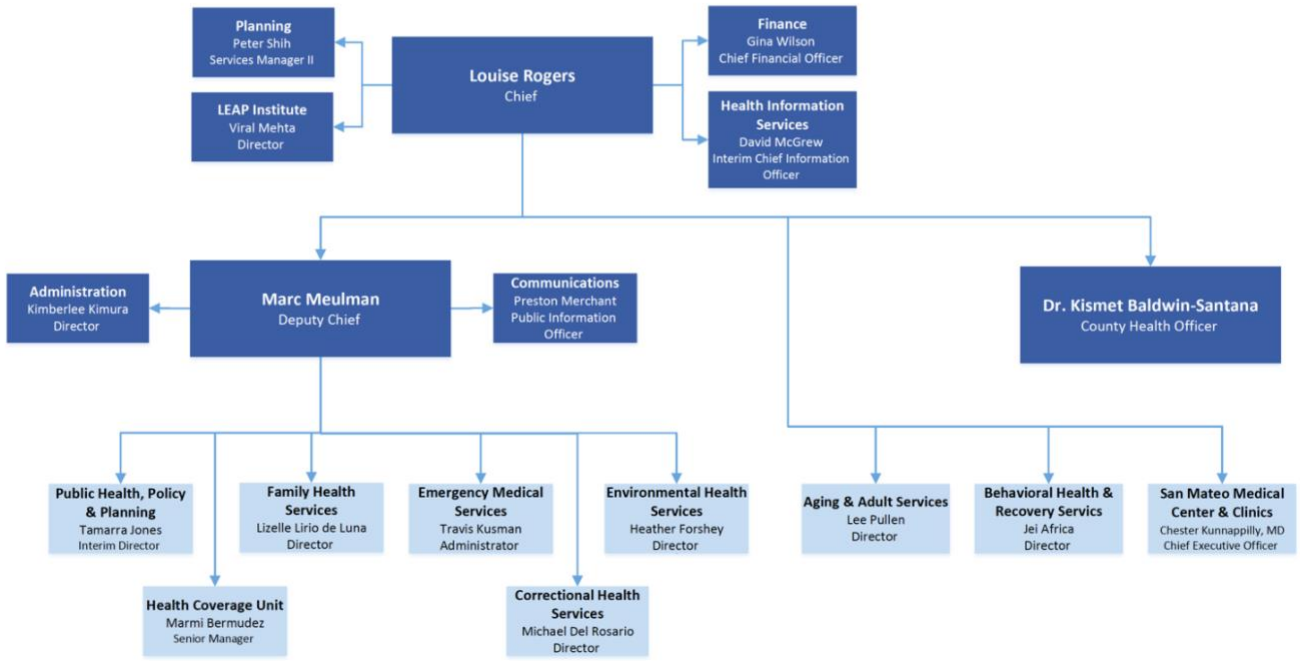


FY 2024-25

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

San Mateo County Health

SAN MATEO
COUNTY HEALTH



FY 2024-25

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 3: SYSTEM RESOURCES AND OPERATIONS - Personnel/Training

EMS System: San Mateo County

Reporting Year: 2024

NOTE: Table 3 is to be reported by agency.

	EMT - Is	EMT - IIs	EMT - Ps	MICN
Total Certified	706	N/A		N/A
Number newly certified this year	139	N/A		N/A
Number recertified this year	380	N/A		N/A
Total number of accredited personnel on July 1 of the reporting year			566	N/A
Number of certification reviews resulting in:				
a) formal investigations	160	N/A		N/A
b) probation	2	N/A	N/A	N/A
c) suspensions	1	N/A	0	N/A
d) revocations	7	N/A		N/A
e) denials	0	N/A		N/A
f) denials of renewal	0	N/A		N/A
g) surrenders	6	N/A	N/A	N/A
h) no action taken	144	N/A	0	N/A

1. Number of EMS dispatch agencies utilizing EMD Guidelines: 1

2. Early defibrillation:
   a) Number of EMT=I (defib) certified N/A

   b) Number of public safety (defib) certified (non-EMT-I) N/A

3. Do you have a first responder training program ☐ yes ☒ no

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 4: COMMUNICATIONS

Note: Table 4 is to be answered for each county.

County: San Mateo

Reporting Year: 2024

1. Number of primary Public Service Answering Points (PSAP) 14
2. Number of secondary PSAPs 1
3. Number of dispatch centers directly dispatching ambulances 1
4. Number of EMS dispatch agencies utilizing EMD guidelines 1
5. Number of designated dispatch centers for EMS Aircraft 1
6. Who is your primary dispatch agency for day-to-day emergencies?
   San Mateo County Public Safety Communications
7. Who is your primary dispatch agency for a disaster?
   San Mateo County Public Safety Communications
8. Do you have an operational area disaster communication system? ☒ Yes ☐ No

   a. Radio primary frequency 700MHz trunked

   b. Other methods Microwave (21.8 – 22.4 GHz; 23.0 – 23.6 GHz); Fire VHF radio channels

   c. Can all medical response units communicate on the same disaster communications system? ☒ Yes ☐ No

   d. Do you participate in the Operational Area Satellite Information System (OASIS)? ☒ Yes ☐ No

   e. Do you have a plan to utilize the Radio Amateur Civil Emergency Services (RACES) as a back-up communication system? ☒ Yes ☐ No

      1) Within the operational area? ☒ Yes ☐ No

      2) Between operation area and the region and/or state? ☒ Yes ☐ No

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 5: RESPONSE/TRANSPORTATION

Reporting Year: 2024

Note: Table 5 is to be reported by agency.

Early Defibrillation Providers

1. Number of EMT-Defibrillation providers 0

SYSTEM STANDARD RESPONSE TIMES (90TH PERCENTILE)

Enter the response times in the appropriate boxes:

	METRO/URBAN	SUBURBAN/ RURAL	WILDERNESS	SYSTEMWIDE
BLS and CPR capable first responder	n/a	n/a	n/a	n/a
Early defibrillation responder	6:59 minutes	11:59 minutes	21:59 minutes	6:59 – 21:59 minutes
Advanced life support responder	6:59 minutes	11:59 minutes	21:59 minutes	6:59 – 21:59 minutes
Transport Ambulance	12:59 minutes	19:59 minutes	39:59 minutes	12:59 – 39:59 minutes

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 6: FACILITIES/CRITICAL CARE

Reporting Year: CY 2024

NOTE: Table 6 is to be reported by agency.

Trauma

Trauma patients:

1. Number of patients meeting trauma triage criteria	1,922
2. Number of major trauma victims transported directly to a trauma center by ambulance	1,922
3. Number of major trauma patients transferred to a trauma center	209
4. Number of patients meeting triage criteria who weren't treated at a trauma center	N/A – Non-trauma centers do not submit data to LEMSA

Emergency Departments

Total number of emergency departments	12 (include 6 out of county)
1. Number of referral emergency services	0
2. Number of standby emergency services	1
3. Number of basic emergency services	12 (includes 6 out of county)
4. Number of comprehensive emergency services	0

Receiving Hospitals

1. Number of receiving hospitals with written agreements	9
2. Number of base hospitals with written agreements	1

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 7: DISASTER MEDICAL

Reporting Year: 2024

County: San Mateo

NOTE: Table 7 is to be answered for each county.

SYSTEM RESOURCES

1. Casualty Collections Points (CCP)
   a. Where are your CCPs located? CCPs are located adjacent to each hospital. Alternate sites designated as needed.
   b. How are they staffed? Staffed by hospital and volunteer healthcare personnel.
   c. Do you have a supply system for supporting them for 72 hours? ☐ Yes ☒ No

2. CISD
   Do you have a CISD provider with 24-hour capability? ☒ Yes ☐ No

3. Medical Response Team
   a. Do you have any team medical response capability? ☒ Yes ☐ No
   b. For each team, are they incorporated into your local response plan? ☒ Yes ☐ No
   c. Are they available for statewide response? ☒ Yes ☐ No
   d. Are they part of a formal out-of-state response system? ☒ Yes ☐ No

4. Hazardous Materials
   a. Do you have any HazMat trained medical response teams? ☒ Yes ☐ No
   b. At what HazMat level are they trained? First Responder, Technician, and Specialist depending on the fire agency.
   c. Do you have the ability to do decontamination in an emergency room? ☒ Yes ☐ No
   d. Do you have the ability to do decontamination in the field? ☒ Yes ☐ No

OPERATIONS

1. Are you using a Standardized Emergency Management System (SEMS) that incorporates a form of Incident Command System (ICS) structure? ☒ Yes ☐ No

2. What is the maximum number of local jurisdiction EOCs you will need to interact with in a disaster? 20

3. Have you tested your MCI Plan this year in a:
   a. real event? ☒ Yes ☐ No
   b. exercise? ☒ Yes ☐ No

4. List all counties with which you have a written medical mutual aid agreement:
   All counties that have entered into the California Mutual Aid Region II and / or Statewide–Cooperative Agreement for Emergency Medical and Health Disaster Assistance agreement(s)

5. Do you have formal agreements with hospitals in your operational area to participate in disaster planning and response? ☒ Yes ☐ No

6. Do you have a formal agreement(s) with community clinics in your operational areas to participate in disaster planning and response? ☒ Yes ☐ No

7. Are you part of a multi-county EMS system for disaster response? ☒ Yes ☐ No

8. Are you a separate department or agency? ☐ Yes ☒ No

9. If not, to whom do you report? County Health Department Deputy Chief

8. If your agency is not in the Health Department, do you have a plan to coordinate public health and environmental health issues with the Health Department? N/A

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

Table 8: Resource Directory

Reporting Year: 2024

Response/Transportation/Providers

Note: *Table 8 is to be completed for each provider by county.* Make copies as needed.

County: San Mateo

Provider: American Medical Response

Response Zone: All except City of South San Francisco

Address: 1510 Rollins Road
Burlingame, California 94041

Number of Ambulance Vehicles in Fleet: 32

Phone Number: (650) 235-1333

Average Number of Ambulances on Duty At 12:00 p.m. (noon) on Any Given Day: 24

Written Contract:	Medical Director:	System Available 24 Hours:	Level of Service:
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Transport ☐ Non-Transport ☒ ALS ☒ BLS ☐ LALS ☒ 9-1-1 ☒ 7-Digit ☐ CCT ☐ IFT ☒ Ground ☐ Air ☐ Water

Ownership:	If Public:	If Public:	If Air:	Air Classification:
☐ Public ☒ Private	☐ Fire ☐ Law ☐ Other Explain:	☐ City ☐ County ☐ State ☐ District ☐ Federal	☐ Rotary ☐ Fixed Wing	☐ Auxiliary Rescue ☐ Air Ambulance ☐ ALS Rescue ☐ BLS Rescue

Transporting Agencies

60, 327	Total number of responses	41,268	Total number of transports
46.028	Number of emergency responses	3,528	Number of emergency transports
14, 299	Number of non-emergency responses	37,740	Number of non-emergency transports

Air Ambulance Services

0	Total number of responses	0	Total number of transports
0	Number of emergency responses	0	Number of emergency transports
0	Number of non-emergency responses	0	Number of non-emergency transports

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

Table 8: Resource Directory

Reporting Year: 2024

Response/Transportation/Providers

Note: *Table 8 is to be completed for each provider by county.* Make copies as needed.

County: San Mateo

Provider: South San Francisco Fire Department

Response Zone: City of South San Francisco

Address: 480 North Canal Street
South San Francisco, California 94080

Number of Ambulance Vehicles in Fleet: 6

Phone Number: (650) 829-3950

Average Number of Ambulances on Duty At 12:00 p.m. (noon) on Any Given Day: 3

Written Contract:	Medical Director:	System Available 24 Hours:	Level of Service:
☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Transport ☐ Non-Transport ☒ ALS ☒ BLS ☐ LALS ☒ 9-1-1 ☐ 7-Digit ☐ CCT ☐ IFT ☒ Ground ☐ Air ☐ Water

Ownership:	If Public:	If Public:	If Air:	Air Classification:
☒ Public ☐ Private	☒ Fire ☐ Law ☐ Other Explain:	☒ City ☐ County ☐ State ☐ District ☐ Federal	☐ Rotary ☐ Fixed Wing	☐ Auxiliary Rescue ☐ Air Ambulance ☐ ALS Rescue ☐ BLS Rescue

Transporting Agencies

6,442	Total number of responses	4,686	Total number of transports
5,356	Number of emergency responses	347	Number of emergency transports
1,087	Number of non-emergency responses	4,339	Number of non-emergency transports

Air Ambulance Services

0	Total number of responses	0	Total number of transports
0	Number of emergency responses	0	Number of emergency transports
0	Number of non-emergency responses	0	Number of non-emergency transports

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

Table 8: Resource Directory

Reporting Year: 2024

Response/Transportation/Providers

Note: *Table 8 is to be completed for each provider by county.* Make copies as needed.

County: San Mateo

Provider: San Mateo County Pre-Hospital Emergency Medical Services Group (Fire JPA)

Response Zone: All of county except City of South San Francisco

Address: 1510 Rollins Road
Burlingame, California 94041

Number of Ambulance Vehicles in Fleet: n/a

Phone Number: (650) 235-1255

Average Number of Ambulances on Duty At 12:00 p.m. (noon) on Any Given Day: n/a

Written Contract:	Medical Director:	System Available 24 Hours:	Level of Service:
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Transport ☒ Non-Transport ☒ ALS ☒ BLS ☐ LALS ☒ 9-1-1 ☐ 7-Digit ☐ CCT ☐ IFT ☒ Ground ☐ Air ☐ Water

Ownership:	If Public:	If Public:	If Air:	Air Classification:
☒ Public ☐ Private	☒ Fire ☐ Law ☐ Other Explain:	☒ City ☒ County ☐ State ☒ District ☐ Federal	☐ Rotary ☐ Fixed Wing	☐ Auxiliary Rescue ☐ Air Ambulance ☐ ALS Rescue ☐ BLS Rescue

Transporting Agencies

53,008	Total number of responses	0	Total number of transports
40,917	Number of emergency responses	0	Number of emergency transports
12,091	Number of non-emergency responses	0	Number of non-emergency transports

Air Ambulance Services

0	Total number of responses	0	Total number of transports
0	Number of emergency responses	0	Number of emergency transports
0	Number of non-emergency responses	0	Number of non-emergency transports

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Seton Hospital
Address: 1900 Sullivan Avenue
Daly City, California 94015

Telephone Number: (650) 992-4000

Written Contract:	Service:	Base Hospital:	Burn Center:
☒ Yes ☐ No	☐ Referral Emergency ☐ Standby Emergency ☒ Basic Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	If Trauma Center what level:
Pediatric Critical Care Center[1]	☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level II ☐ Level III ☐ Level IV
EDAP[2]	☒ Yes ☐ No		
PICU[3]	☐ Yes ☒ No		

STEMI Center:	Stroke Center:
☒ Yes ☐ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Kaiser Permanente Medical Center - South San Francisco

Telephone Number: (650) 742-2200

Address: 1200 El Camino Real
South San Francisco, California 94080

Written Contract:	**Service:**		**Base Hospital:**	**Burn Center:**
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**	
Pediatric Critical Care Center[1]	☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I	☐ Level II
EDAP[2]	☒ Yes ☐ No		☐ Level III	☐ Level IV
PICU[3]	☐ Yes ☒ No			

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☒ Yes ☐ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Mills-Peninsula Medical Center
Address: 1501 Trousdale Drive
Burlingame, California 94010

Telephone Number: (650) 695-5400

Written Contract:	Service:	Base Hospital:	Burn Center:
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency ☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	If Trauma Center what level:
Pediatric Critical Care Center[1]	☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level II ☐ Level III ☐ Level IV
EDAP[2]	☒ Yes ☐ No		
PICU[3]	☐ Yes ☒ No		

STEMI Center:	Stroke Center:
☒ Yes ☐ No	☒ Yes ☐ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: San Mateo Medical Center
Address: 222 West 39th Street
San Mateo, California 94403

Telephone Number: (650) 573-2222

Written Contract:	**Service:**		**Base Hospital:**	**Burn Center:**
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**	
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☒ Yes ☐ No ☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level III	☐ Level II ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Sequoia Hospital
Address: 170 Alameda de las Pulgas
Redwood City, California 94062

Telephone Number: (650) 367-5561

Written Contract:	**Service:**	**Base Hospital:**	**Burn Center:**
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency ☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**
Pediatric Critical Care Center[1]	☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level II ☐ Level III ☐ Level IV
EDAP[2]	☒ Yes ☐ No		
PICU[3]	☐ Yes ☒ No		

STEMI Center:	**Stroke Center:**
☒ Yes ☐ No	☒ Yes ☐ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Kaiser Permanente Medical Center - Redwood City

Telephone Number: (650) 742-2200

Address: 1200 El Camino Real
South San Francisco, California 94080

Written Contract:	Service:		Base Hospital:	Burn Center:
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	If Trauma Center what level:	
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☒ Yes ☐ No ☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level III	☐ Level II ☐ Level IV

STEMI Center:	Stroke Center:
☒ Yes ☐ No	☒ Yes ☐ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Stanford Hospital*
Address: 300 Pasteur Drive
Stanford, California 94305

Telephone Number: (650) 723-4000

*Santa Clara County hospital that serves as an authorized receiving facility, Base Hospital, pediatric Base Hospital, PCCC, and trauma center (designated by San Mateo County LEMSA)

Written Contract:	Service:		Base Hospital:	Burn Center:
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☒ Yes ☐ No	☐ Yes ☒ No

		Trauma Center:	If Trauma Center what level:	
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No	☒ Yes ☐ No	☒ Level I ☐ Level III	☐ Level II ☐ Level IV

STEMI Center:	Stroke Center:
☒ Yes ☐ No	☒ Yes ☐ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Seton - Coastside
Address: 600 Marine Boulevard
Moss Beach, California 94038

Telephone Number: (650) 723-3921

Written Contract:	**Service:**	**Base Hospital:**	**Burn Center:**
☒ Yes ☐ No	☐ Referral Emergency ☒ Standby Emergency ☐ Basic Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level II ☐ Level III ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Palo Alto VA Hospital*
Address: 3801 Miranda Avenue
Palo Alto, California 94304

Telephone Number: (650) 493-5000

**Santa Clara County facility that serves San Mateo County as a receiving hospital*

Written Contract:	**Service:**		**Base Hospital:**	**Burn Center:**
☐ Yes ☒ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**	
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level III	☐ Level II ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Dominican Hospital*
Address: 1555 Soquel Drive
Santa Cruz, California 95065

Telephone Number: (831) 462-7700

**Santa Cruz County facility that serves San Mateo County as a receiving hospital*

Written Contract:	**Service:**		**Base Hospital:**	**Burn Center:**
☐ Yes ☒ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☒ Yes ☐ No ☐ Yes ☒ No	**Trauma Center:** ☐ Yes ☒ No	**If Trauma Center what level:** ☐ Level I ☐ Level II ☐ Level III ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: University of California San Francisco Medical Center*

Address: 1975 4th Street
San Francisco, California 94158

Telephone Number: (415) 353-1611

**San Francisco County facility that serves San Mateo County as a designated PCCC only*

Written Contract:	**Service:**	**Base Hospital:**	**Burn Center:**
☐ Yes ☒ No	☐ Referral Emergency ☒ Basic Emergency ☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No	☐ Yes ☒ No	☐ Level I ☐ Level II ☐ Level III ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: California Pacific Medical Center – Davies Campus*

Address: Castro and Duboce Avenue
San Francisco, California 94114

Telephone Number: (415) 600-6464

**San Francisco County facility that serves San Mateo County as a designated PCCC only*

Written Contract:	**Service:**	**Base Hospital:**	**Burn Center:**
☐ Yes ☒ No	☐ Referral Emergency ☒ Basic Emergency ☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☐ Yes ☒ No

		Trauma Center:	**If Trauma Center what level:**
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No	☐ Yes ☒ No	☐ Level I ☐ Level II ☐ Level III ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Zuckerberg San Francisco General Hospital*
Address: 1001 Portrero Avenue
San Francisco, California 94110

Telephone Number: (628) 206-8000

**San Francisco County facility that serves San Mateo County as a trauma center designated by San Francisco LEMSA*

Written Contract:	Service:		Base Hospital:	Burn Center:
☒ Yes ☐ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☒ Yes ☐ No	☐ Yes ☒ No

		Trauma Center:	If Trauma Center what level:	
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No	☒ Yes ☐ No	☒ Level I ☐ Level III	☐ Level II ☐ Level IV

STEMI Center:	Stroke Center:
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: St. Francis Hospital*
Address: 900 Hyde Street
San Francisco, California 94109

Telephone Number: (415) 353-6300

**San Francisco County facility that serves San Mateo County as a burn center only*

Written Contract:	**Service:**		**Base Hospital:**	**Burn Center:**
☐ Yes ☒ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☒ Yes ☐ No

		Trauma Center:	**If Trauma Center what level:**	
Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No	☐ Yes ☒ No	☐ Level I ☐ Level III	☐ Level II ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

COUNTY OF SAN MATEO
EMERGENCY
MEDICAL SERVICES

TABLE 9: FACILITIES

County: San Mateo

Note: *Complete information for each facility by county.* Make copies as needed.

Facility: Santa Clara Valley Medical Center*
Address: 751 South Bascom Avenue
San Jose, California 95128

Telephone Number: (408) 885-3228

**Santa Clara County facility that serves San Mateo County as a burn center only*

Written Contract:	**Service:**		**Base Hospital:**	**Burn Center:**
☐ Yes ☒ No	☐ Referral Emergency ☒ Basic Emergency	☐ Standby Emergency ☐ Comprehensive Emergency	☐ Yes ☒ No	☒ Yes ☐ No

Pediatric Critical Care Center[1] **EDAP**[2] **PICU**[3]	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No	**Trauma Center:** ☐ Yes ☒ No	**If Trauma Center what level:** ☒ Level I ☐ Level II ☐ Level III ☐ Level IV

STEMI Center:	**Stroke Center:**
☐ Yes ☒ No	☐ Yes ☒ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 10: APPROVED TRAINING PROGRAMS

County: San Mateo **Reporting Year:** 2024

NOTE: Table 10 is to be completed by county. Make copies to add pages as needed.

Training Institution: College of San Mateo Telephone Number: (650) 574-6347
Address: 1700 West Hillsdale Boulevard
San Mateo, California 94402

Student Eligibility*: Open to general public

Cost of Program:
Basic: $523
Refresher: $92

**Program Level EMT-I

Number of students completing training per year:

Initial training	49
Refresher:	1
Continuing Education:	n/a
Expiration Date:	5/31/2027

Number of courses:

Initial training:	2
Refresher:	1
Continuing Education:	n/a

*Open to general public or restricted to certain personnel only.
** Indicate whether EMT-I, AEMT, EMT-P, MICN, or EMR; if there is a training program that offers more than one level complete all information for each level.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

Training Institution: Skyline College
Telephone Number: (650) 738-4284
Address: 3300 College Drive
San Bruno, California 94066

Student Eligibility*: Open to general public

Cost of Program:

Basic: $450

Refresher: $91

**Program Level EMT-I

Number of students completing training per year:

Initial training	40
Refresher:	7
Continuing Education:	76
Expiration Date:	9/30/2029

Number of courses:

Initial training:	2
Refresher:	7
Continuing Education:	7

*Open to general public or restricted to certain personnel only.
** Indicate whether EMT-I, AEMT, EMT-P, MICN, or EMR; if there is a training program that offers more than one level complete all information for each level.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

Training Institution: American Health Education
Address: 370 Hatch Drive
Foster City, California 94404

Telephone Number: (800) 483-3615

Student Eligibility*: Restricted to employees only

Cost of Program:

Basic: $2,950

Refresher: n/a

**Program Level EMT-I

Number of students completing training per year:

Initial training	12
Refresher:	0
Continuing Education:	0
Expiration Date:	5/31/2027

Number of courses:

Initial training:	2
Refresher:	0
Continuing Education:	n/a

*Open to general public or restricted to certain personnel only.
** Indicate whether EMT-I, AEMT, EMT-P, MICN, or EMR; if there is a training program that offers more than one level complete all information for each level.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

TABLE 11: DISPATCH AGENCY

County: San Mateo **Reporting Year:** 2024

NOTE: Make copies to add pages as needed. Complete information for each provider by county.

Name: San Mateo County Public Safety Communications

Primary Contact: Elise Sisneros, EMS Dispatch Manager

Address: 501 Winslow Street
Redwood City, California 94063

Telephone Number: (650) 363-4900

Written Contract:
☒ Yes ☐ No

Medical Director:
☒ Yes ☐ No

☒ Day-to-Day
☒ Disaster

Number of Personnel Providing Services:

30	EMD Training	0	EMT-D	0	ALS
0	BLS	0	LALS	n/a	Other

Ownership:
☒ Public ☐ Private

If Public:
☒ Fire
☒ Law
☐ Other
Explain: _____

If Public: ☐ City ☒ County ☐ State ☐ Fire District ☐ Federal

COUNTY OF SAN MATEO

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

2024 Trauma System Plan

Table of Contents

Introduction 3
San Mateo County Integration 3
Summary of Changes 6
Structure and Organizational Description 7
LEMSA Personnel and Their Role in the Trauma Program 7
Designated Trauma Centers for San Mateo County of San Mateo 7
Trauma Triage and Transport 8
Policy 603 – Hospital Emergent Interfacility Transfers 9
Trauma Treatment Protocols 10
Data Collection – Calendar Year 2024 11
Activation Levels 11
Admission Rates 11
Mechanism of Injury 11
Trauma Care – Point of Injury Kits Added to Apparatus 12
2024 Objectives 13
2025 Objectives 13
Trauma Quality Improvement 13
Injury Prevention Public Education 14
Training and Education 14
Action to Improve 15
Annual Update 16
Appendix A – EMS Policies 17
Appendix B – Trauma Protocols 18

Introduction

San Mateo County (SMC) has a stable trauma system that utilizes American College of Surgeons Committee on Trauma (ACS-COT) verified Level One Centers: Zuckerberg San Francisco General Hospital (ZSFG) for the Northern region of the County for adult patients, and Stanford Health Care (SHC) for the Southern region of San Mateo County for both adults and pediatrics.

San Mateo County Integration

The San Mateo County Emergency Medical Services Agency ("EMS Agency") is the local EMS agency (LEMSA) responsible for planning, implementing, evaluating, and regulating the County's comprehensive emergency medical services system. The EMS Agency appreciates that the delivery of definitive, high quality trauma care requires a highly collaborative and integrated system which is keenly focused on patient needs and the corresponding optimal processes to attain desired outcomes.

While none of the receiving hospitals physically located within San Mateo County are designated trauma centers at any level, the LEMSA supports and ensures that all have the ability to quickly identify, re-triage, and transport patients to designated receiving trauma centers when indicated. Accordingly, trauma patients originating within the San Mateo County EMS System are seamlessly destined to receiving trauma centers located outside of, yet proximate to, our County's jurisdictional boundaries.

The EMS Agency has developed and maintains processes, systems and infrastructure that assure that our EMS system's trauma patients receive timely, comprehensive, and high-quality care and supportive services. The EMS Agency appreciates the expertise of the many partners and provider agencies within our system and leverages our continuous quality improvement structure and collaborative relationships with Stanford Health Care (SHC), Zuckerberg San Francisco General (ZSFG), as well as the Santa Clara and San Francisco County LEMSAs as vital components enabling our integrated system of care.

Key personnel and components of the EMS Agency's infrastructure committed to enabling and overseeing the care of trauma patients arising within San Mateo County include:

- EMS Director and EMS Medical Director responsible for strategic leadership and direction of the County's trauma system consistent with State statute, regulation, and local requirements. The EMS Director serves as the County's Medical Health Operational Area Coordinator (MHOAC) and the Regional Disaster Medical Health Coordinator (RDMHC) for the Coastal Region.
- EMS Clinical Nurse serves as the primary liaison between the two trauma centers and the County and is responsible for coordinating continuous quality improvement activities.
- EMS System Manager dedicated to overseeing system operations, equipment and readiness, local prehospital provider certification and accreditation, educational programs and coordinating EMS system policies, procedures, and protocols.
- Management Analyst supports procurement, contracting, data analysis and compliance activities.
- EMS Agency maintains 24/7 on-call EMS/MHOAC Duty Officer coverage including field response capability.
- Policy, procedure, and protocol development, implementation, and enforcement to govern the delivery of care within the County's trauma system including coordination and integration with neighboring jurisdictions and San Mateo County designated trauma receiving centers. Both SHC and ZSFG are consulted and provide input in trauma field triage, treatment, and destination protocols.
- Continuous trauma system evaluation including review and response to local hospital interest(s) in pursuing a trauma center designation at any level.
- Development, implementation, and oversight of trauma receiving center agreements.
- Active participation in San Francisco County, Santa Clara County, and State trauma committees as well as attendance at corresponding meetings.
- Provision of a countywide radio communications system for Advanced Life Support including capability of direct routine and disaster communication with SHC and ZSFG.
- Establishment, coordination, and oversight of the County's Base Hospital system providing on-line medical control services to prehospital personnel.
- Coordination and oversight of full-spectrum 9-1-1 system Emergency Medical Dispatch services including pre-arrival instructions, call prioritization and associated quality assurance activities via San Mateo County Public Safety Communications, an International Academies of Emergency Dispatch Accredited Center of Excellence.
- Maintenance of a Countywide prehospital electronic patient care record (EHR) system,

which is interfaced with SHC's electronic medical record system, enabling real time bi-directional information sharing and all functionality specified by the +EMS SAFR standards promulgated by the California Emergency Medical Services Authority.

- Development, implementation, coordination and oversight of mutual aid and assistance agreements with neighboring jurisdictions to facilitate response to and disposition of patients during surge and/or multi-casualty incidents.
- Comprehensive trauma care and system continuous quality improvement activities, including integration of SHC and ZSFG into San Mateo County medical advisory committees.
- Coordination and oversight of care provided to trauma patients by air ambulance providers.
- Oversight of interfacility "Red Box and Blue Box" trauma re-triage transports including the assurance of availability of 9-1-1 system ambulance responses to expedite transfer.
- Liaise with Medical Examiners offices in multiple counties relative to decedents.
- Development and oversight of trauma training requirements for prehospital personnel.
- Administration of Maddy and Richie funds in accordance with State law including policies, procedures, and administrative tool development, implementation and oversight.
- Annual and ad hoc reporting and interface with the California Emergency Medical Services Authority regarding the San Mateo County trauma system.

Summary of Changes

There have been no major changes to the trauma delivery system since our last submission. Rather, this report provides updates since our last submission. Both the adult and pediatric facilities designated as trauma receiving centers by the EMS Agency have been re-verified as Level One Centers by the American College of Surgeons (ACS). The EMS Agency participates in the ACS site visits and reviews the reports of the findings.

We added IV Acetaminophen to our extremity and multi system trauma protocols for pain relief in April 2024. We also removed epinephrine from our traumatic arrest protocol. In addition, we updated trauma triage criteria in our electronic health record system (ImageTrend) to align with Santa Clara County.

Effective March 1, 2021, Stanford Health Care became the County EMS system's sole base station for base hospital consult and medical direction. The exception to this is for trauma patients in the Northern part of the County who are destined for ZSFG, in which case, to retain continuity of care and streamline communications, ZSFG is the base hospital.

ZSFG has a new trauma medical director, Dr. Timothy Browder, who was appointed in November 2024. Dr. Browder is also the Chief of Trauma of the UCSF-East Bay Surgery Program at Highland Hospital in Oakland, CA, and the Northern California State Vice Chair for the American College of Surgeons Committee on Trauma.

Our Trauma treatment protocols are designed as an algorithmic style for ease of use and congruency with our overall treatment protocol redesign now available through both Android and iOS applications. The ease of accessing these as well as the algorithmic style is appreciated by our system's caregivers and stakeholders.

Structure and Organizational Description

The EMS Medical Director and Clinical Nurse serve as the primary liaisons with the SMC trauma receiving centers. This role includes attending the Bay Area Regional Trauma Care Committee (RTTC) meetings, trauma center site meetings, following up on CQI issues and relaying information back to key stakeholders. The EMS Agency Medical Director provides overall medical control of the EMS system and works closely with the trauma medical community.

The EMS Agency Director provides administrative oversight and schedule permitting, attends local and regional trauma meetings. The EMS System Manager monitors overall system performance, including response time performance and time on scene and facilitates overall data aggregation and analysis as well as treatment protocol, procedure, and policy development. The EMS Agency Clinical Nurse drives continuous quality improvement and education activities, and the EMS Agency Management Analyst provides administrative support including coordination of Maddy and Richie fund activities.

LEMSA Personnel and Their Role in the Trauma Program

- Travis Kusman, MPH, Paramedic, EMS Director: Administration and Strategic Leadership
- Gregory H. Gilbert, MD, FAAEMS, EMS Medical Director: Medical Control of the local EMS system
- Brian Aiello, MBA, Paramedic, Assistant EMS Director: Administration and Leadership
- Kelly McGinty, RN, MSN, EMS Clinical Nurse: Education and CQI
- Chad Henry, MBA, Paramedic, EMS System Manager: Performance management, CQI, Policy, Protocol and Procedure committee coordinator and facilitator.
- Garrett Fahey, MBA, EMS Management Analyst: Administrative coordination, and support

Designated Trauma Centers for San Mateo County of San Mateo

- Zuckerberg San Francisco General Hospital - Level One Adult
  1001 Potrero Avenue San Francisco, CA 94110
- Stanford Health Care - Level One Adult and Pediatrics
  300 Pasteur Drive Stanford, CA 94305

Trauma Triage and Transport

The SMC trauma treatment protocols were revised and became effective April 1, 2024. The treatment protocols align with the standards promulgated by the American College of Surgeons as well as the California Emergency Medical Services Authority list of primary impressions and reduces variability. Information that was previously found in policy has been integrated into the treatment protocol, streamlining access to this critical information for Paramedics and EMTs.

Policy 603 – Hospital Emergent Interfacility Transfers

The purpose of Policy 603 – Hospital Emergent Interfacility Transfers, is to provide guidance for emergency department initiated interfacility transfer of patients to higher-level care at a trauma center. As Critical Care Transport (CCT) resources have become increasingly limited, Facilities 603 outlines staffing and resource requirements and capabilities for Basic Life Support (BLS) and Advanced Life Support (ALS) ambulances.

The “Red Box/ Blue Box” criteria displayed within the policy are provided as a reference to all basic emergency department receiving centers to assist in expeditiously transferring patients in need to a higher-level of care. These criteria were developed in collaboration with the Regional Trauma Care Committee (RTCC) to assist non-trauma hospitals with both recognition of acuity and the need for transfer to a trauma center. The 9-1-1 system is utilized to emergently facilitate a trauma transport if time is of the essence due to patient condition. The EMS Agency reviews 9-1-1 system facilitated emergent interfacility transports (referred to as “MEDER”) on a weekly basis. This report includes both trauma and medical patients and serves as a starting point for further follow up and quality review if indicated. The trauma centers have reported that the “Red Box/ Blue Box” has helped non-trauma receiving hospitals in the transfer decision-making process and facilitated the rapid movement of patients when required.

Trauma Treatment Protocols

Our Trauma Treatment Protocols include:

- T01 – Trauma Triage
- T02 – Extremity Trauma
- T03 – Head Trauma
- T04 – Multi-System Trauma
- T05 – Traumatic Arrest
- T06 – Burns

Data Collection – Calendar Year 2024

Stanford received 1,421 patients from San Mateo County during this twelve-month period. Based on data provided by Stanford, this number represents over 40% of all trauma patients that the hospital received via 9-1-1 system-initiated transports and the largest number of patients that Stanford received from any County.

During the same period, 501 trauma patients were transported by the SMC EMS system to ZSFG, representing approximately 15% of all trauma patients that the hospital received via 9-1-1 system-initiated transport.

Stanford	**Zuckerberg (ZSFG)**	**Total**
Total n from SMC = 1,421	Total n from SMC = 501	1,922
Blunt trauma = 1,378 (97%)	Blunt trauma = 464 (92.6%)	
Penetrating trauma = 42 (3.0%)	Penetrating trauma = 27 (5.4%)	

Activation Levels

Major Trauma activations of all trauma patients:

- Stanford: 108 or 7.6%
- ZSFG: 101 or 20.2%

Admission Rates

Of the 1,421 trauma patients originating in San Mateo County, transported from SMC to Stanford, 69.5%% were admitted. ZSFG admitted 69% of the trauma patients originating from San Mateo County.

Mechanism of Injury

The top three mechanisms of injuries for trauma patients treated at Stanford consisted of falls, motor vehicle crashes, and bicycle accidents. Falls accounted for 47.4% of the trauma volume, followed by MVCs at 22.1% and bicycle accidents at 9.0%.

ZSFG is located within the urban area of San Francisco. At this facility, falls represented the largest mechanism of injury category at 36.7%, followed by motorcycle crashes 14.5% and pedestrian related injuries at 11.8%.

Trauma Care – Point of Injury Kits Added to Apparatus

The National EMS Practice model reports control of hemorrhage as one of the preventable causes of death related to trauma. To standardize rapid triage and early intervention to control hemorrhage, the EMS Agency secured grant funding and purchased point-of-injury (POI) care kits. Standardized training was developed and implemented across all ALS agencies and these kits are now part of the required inventory on all front-line 9-1-1 EMS system response apparatus County-wide. These packs can be utilized at single-patient and mass-casualty incidents, promoting a standardized approach. The County Sheriff subsequently adopted and implemented a scaled-down version of the POW kit across its apparatus containing like supplies.

Response Pack Inventory:

- Roll up stretcher
- Set of Triage Tape (Green, Yellow, Red, Black & White stripe)
- Trauma shears
- Fox 40 whistle
- 2 hemostatic z-fold packing gauze or similar dressings
- 2 windlass style tourniquets
- Emergency compression bandage
- Mouth-to-Mask device
- 2 Russell chest seals
- 8” x 10” abdominal pads 1” roll cloth tape

2024 Objectives

The following proposed objectives were submitted with the last trauma plan submission:

1. Continue to evaluate the care provided to trauma patients originating in San Mateo County across the continuum via the various quality care committees.
2. Continue to promote public awareness involving injury prevention.
3. Evaluate trauma care policies, procedures, and trauma volume to ensure processes are current and reflect the needs of San Mateo County.
4. Continue to review and update work on the County's Multi-casualty Incident (MCI) Plan.

2025 Objectives

1. Expand the Trauma QI process through chart review, data collection, and participation and collaboration in trauma committee meetings.
2. Increase our work in Emergency Preparedness through full scale exercises and tabletop exercises and finalize an updated County MCI Plan.
3. Evaluate trauma care policies and procedures to ensure alignment with the ACS guidelines and our local trauma center recommendations.
4. Expand trauma education for paramedics by implementing the PHTLS requirement.

Trauma Quality Improvement

Trauma consistently remains one of the top primary impressions in 2024 county wide. The trauma treatment protocols prioritize early recognition of the critical trauma patient as well as activation and notification to facilitate the trauma team being ready when the patient arrives at the trauma center.

EMS provider education has focused on limiting scene time to less than 10 minutes, collaboration with partnering agencies to ensure optimal patient care on scene and during transport and utilizing the Base Hospital if there are any questions about transport destination determination. Consulting with the Base Hospital for patients over the age of 65 who are on blood thinners can be helpful, as this can be a vulnerable population with a wide array of presentations and outcomes.

Limiting scene time to <10 minutes or documenting why doing so is not possible due to staging, extrication etc., is taught in the trauma curriculum. There has been an ongoing effort to decrease trauma scene time. Although this was removed from the Core Measure as it did not contemplate several considerations such as staging, trauma scene time is still monitored.

Beginning in 2025, the LEMSA will require all paramedic providers to hold a current certification in Prehospital Trauma Life Support (PHTLS).

Injury Prevention Public Education

While the LEMSA does not directly participate in public education related to trauma, the ambulance provider and the first responder agencies host and support events throughout the year, including Hands Only CPR and Stop the Bleed trainings around the county.

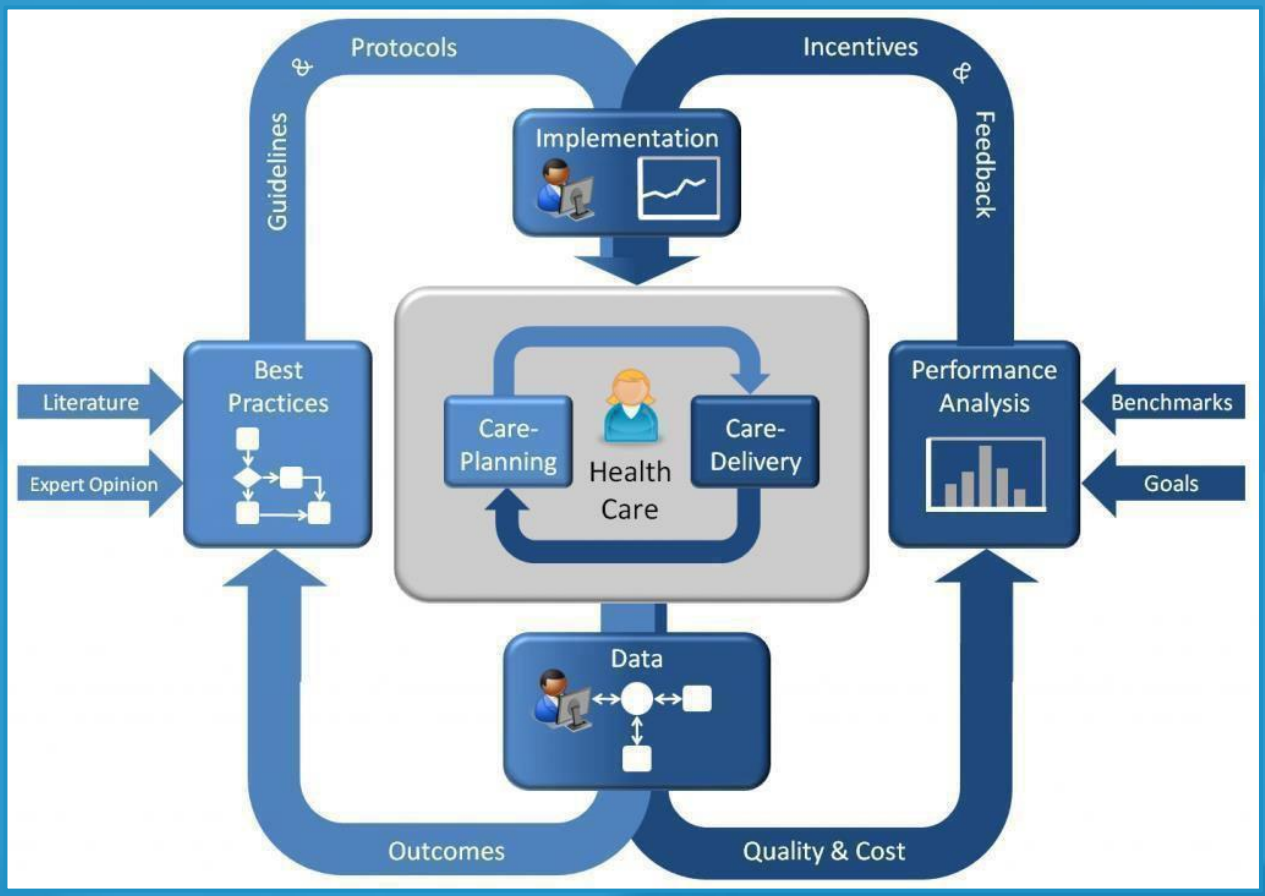
In addition, the 9-1-1 ambulance service agreement with American Medical Response requires the provision of a Community Outreach Coordinator. This position collaborates with the first responder agencies to support outreach and injury prevention activities in the County.

Training and Education

All field crews are trained utilizing a standardized trauma curriculum that is evaluated and approved by the EMS Medical Director as part of the annual training calendar for each 9-1-1 system provider agency.

Action to Improve

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



Striving to create best practices, the EMS Agency focuses on clinical research, trauma continuous quality improvement, and recommendations by the American College of Surgeons. Best practices in trauma care and current literature studies are discussed with key stakeholders at our quality meetings. Recommendations for practice change are discussed with our trauma centers and with our San Mateo County Medical Advisory Committee. Any sentinel events or concern over patient care as well as discussion regarding best practices are discussed weekly by the leadership team during an operational meeting.

Annual Update

The EMS Agency updates the trauma system status plan and submits it annually to the California Emergency Medical Services Authority (EMSA). The updates include system changes and other information specified by EMSA.

Appendix A – EMS Policies

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

EMS POLICY	603
Effective:	**April 2024**
Approval: EMS Director **Travis Kusman, MPH**	Signed:
Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

HOSPITAL EMERGENT INTERFACILITY TRANSFERS

I. PURPOSE

This policy provides guidance for hospital emergency or other departments (ICU) for ground ambulance transport of emergency patients that require interfacility transfer at the Basic (EMT), Advanced Life Support (Paramedic), or Critical Care Transport (CCT) levels.

II. AUTHORITY

California Code of Regulations, Title 22, Division 9, §100128 and §100170

III. DEFINITIONS

Advanced Life Support ("ALS"): Special services designed to provide definitive prehospital emergency medical care, including, but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs and other medicinal preparations, and other specified techniques and procedures administered by authorized personnel under the direct supervision of a base hospital as part of a local EMS system at the scene of an emergency, during transport to an acute care hospital and while in the emergency department of an acute care hospital until responsibility is assumed by the emergency or other medical staff of that hospital.

Air ambulance: Any aircraft specifically constructed, modified, or equipped and staffed for the primary purpose of responding to emergency medical calls and transporting critically ill or injured patients. Air ambulance aircraft shall be ALS capable.

Basic Life Support ("BLS"): Emergency first aid and cardiopulmonary resuscitation procedures which, as a minimum, include recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life without invasive techniques until the victim may be transported or until advanced life support is available.

Critical Care Transport: Special services designed to provide definitive critical care such that the failure to assess/ recognize resuscitation needs and urgently initiate and maintain acute medical diagnostics and/ or interventions, pharmacological interventions, or technologies would likely result in sudden, clinically significant, or life-threatening deterioration in the patient's condition. These capabilities exceed those of an Advanced Life Support EMS unit.

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

IV. POLICY

A. All transfers shall comply with State and Federal laws.

B. Paramedic/ 9-1-1 system personnel may be used to transport patients ONLY as a last resort when alternative forms of transportation are unavailable, or when the delay in obtaining alterative transport would pose an imminent threat to the patient's health. Hospital personnel accessing the EMS system for transfers shall note that by accessing the EMS system, they may deplete the EMS resources of their local community.

C. Interfacility transfers utilizing Paramedic/ 9-1-1 system personnel remain under San Mateo County LEMSA medical direction and control.

D. Paramedic/ 9-1-1 system units are staffed with two personnel: Typically, one paramedic, and one EMT.

E. Unstable patients shall be transferred only when the reason for the transfer is to medically facilitate the patient's care. The transport of the patient must have the concurrence of both the transferring and receiving physicians that the transfer is appropriate.

F. The sending physician is responsible for determining the appropriate level of transport required.

G. The sending physician is responsible for making arrangements for the receipt of the patient by another physician at the receiving facility.

H. The sending physician or designee shall contact the appropriate dispatch center to arrange for transport.

I. The sending physician or designee shall provide a verbal report and transfer documents to the arriving ambulance crew. Transfer documents must include the names of the sending and receiving physician.

J. For patients requiring emergency transfer, specifically those needing immediate care or intervention at a higher level of care receiving hospital (e.g., critical trauma, STEMI, or stroke):

   1. Ensure the indication for use is appropriate. Emergency ambulance transport utilizes 9-1-1 resources and is reserved for truly emergent cases;

   2. Activate 9-1-1 to request Interfacility Emergency Response;

   3. Arrange transfer of the patient with the receiving physician;

   4. Assess patient needs prior to the transport to determine if the patient needs exceed the paramedic scope of practice. If the care required during transport is beyond the paramedic scope of practice, hospital staff and/or equipment shall be provided by the

transferring hospital and accompany the patient (e.g., if IV pump needed, blood transfusion in progress, management of paralytic agents for intubated patient);

5. Prepare transfer records for the arriving ambulance crew. The ambulance will generally arrive within thirteen (13) minutes of request and patient, paperwork, staff and equipment should be ready for transport by the time the ambulance arrives. Records which are not time sensitive or critical to immediate ongoing treatment of the patient may be faxed, emailed, or alternatively delivered to the receiving facility. If the transfer is delayed once the ambulance arrives on scene, the 9-1-1 ambulance may be reassigned to other emergency needs.
6. The 9-1-1 ambulance crew will arrive at the Emergency Department (ED). If the patient is being transferred from a location other than the ED, a hospital representative shall meet the responding ambulance crew immediately upon arrival, escort prehospital personnel to the patient's location, remain with the crew, and escort the crew back to the ED.

V. LEVELS OF CARE FOR AMBULANCE TRANSPORT

Type of Transport	Patient Needs	Scope of Practice	Contact
9-1-1 Advanced Life Support (Paramedic) Interfacility Emergency Transfer	Emergency intervention or evaluation not available at the sending hospital (e.g., critical trauma, STEMI, stroke, obstetric care for active labor where birth is not imminent). May include neuro and vascular patients transported directly to an OR/intervention lab.	1. Advanced airway (ETT and King); 2. Administer and adjust IV fluids including: Glucose, isotonic saline, lactated ringers, and those containing potassium; 3. ECG monitoring; 4. Defibrillation and synchronized cardioversion; 5. Monitoring of water-sealed chest tube; 6. Administration of ACLS medications	**9-1-1**

Type of Transport	Patient Needs	Scope of Practice	Contact
Critical Care Transport with RN	Advanced care for patients with complex medical care needs as determined by the transferring physician and the ambulance agency. May include pediatric and obstetric patients.	Critical Care RN	**Contact ambulance service directly**
Air Ambulance	RN/Paramedic level of care for patients with complex medical care needs when the receiving hospital is distant and time is a critical factor. May include pediatric and obstetric patients.	Critical Care RN/Paramedic	**Contact air ambulance service directly**

Type of Transport	Patient Needs	Scope of Practice	Contact
Non-emergency Advanced Life Support (Paramedic)	Scheduled transport of patients who require an advanced level of care. Patient does not require emergency intervention at the receiving facility.	1. Advanced airway (ETT and i-gel); 2. Administer and adjust IV fluids including: Glucose, isotonic saline, lactated ringers, and those containing potassium; 3. ECG monitoring; 4. Defibrillation and synchronized cardioversion; 5. Monitoring of water-sealed chest tube; 6. Administration of ACLS medications	**Contact County-contracted emergency ALS ambulance provider**
Non-emergency Basic Life Support (EMT)	Scheduled transport of patients who require a basic level of care.	EMT	**Contact ambulance service directly**

VI. TRAUMA TRANSFER PROCEDURE

TRAUMA TRANSFER PROCEDURE		
STEP 1	Determine appropriate level of transfer using chart below. Contact receiving Trauma Center and confirm acceptance of patient.	
	Stanford Trauma Center (650) 724-2243 (EMERGENCY) (650) 723-4696 (Urgent adults) (650) 723-7342 (Urgent pediatrics **≤ 6 years**)	**Zuckerberg S.F. General Trauma Center** (628) 206-8111 – request to speak with Attending in Charge ("AIC") about trauma re-triage patient **Adults and Pediatrics > 6 years only**
STEP 2	**As soon as need for transfer is recognized, request CODE 3 TRAUMA TRANSFER using ED to Public Safety Communications microwave direct line #344.**	
STEP 3	Prepare patient and paperwork for immediate transport before ambulance arrives.	
STEP 4	For trauma consults for patients not meeting red or blue box criteria, contact the Trauma Center and request to speak to the Trauma AIC about trauma re-triage patient.	

RED BOX EMERGENCY TRANSFER PROCEDURE

Call Trauma Center PRIOR to transfer and state "RED BOX TRAUMA TRANSFER."

ED physician determines patient requires immediate evaluation/ resuscitation by a trauma center.
Some indicators:

- Blood pressure < 90 or decrease in blood pressure by 30 mmHg following 2L IV crystalloid
- Head injury with blown pupil
- Penetrating thoracic or abdominal trauma

BLUE BOX URGENT TRANSFER PROCEDURE

Call Trauma Center PRIOR to transfer.

ED physician determines patient requires urgent evaluation by a trauma center based on the following indicators:

ANATOMIC AREAS	FINDINGS/ RELATED INJURIES
Central Nervous System	• GCS < 14 with abnormal CT scan • Spinal cord or major vertebral injury
Chest	• Major chest wall injury with > 3 rib fractures and/ or pulmonary contusion • Cardiac injury
Pelvis/ Abdomen	• Pelvic ring disruption • Solid organ injury confirmed by CT scan or ultrasound demonstrating abdominal fluid
Major Extremity Injuries	• Fracture/ dislocation with loss of distal pulses and/ or ischemia • Open long bone fractures • Two or more long bone fractures • Amputations that require reimplantation
Multi-System Injury	• Trauma with associated burns – **transfer to closest trauma center** • Major trauma to more than two body regions • Signs of hypoperfusion – Lactate > 4 or Base Deficit > 4
Co-morbid Factors	• Adults > 65 years of age • Pediatric < 6 years of age – transfer to Stanford Pediatric Trauma Center • Pregnancy > 22 weeks gestation • Insulin dependent diabetes • Morbid obesity • Cardiac or respiratory disease • Immunosuppression • Antiplatelet or anticoagulation agents

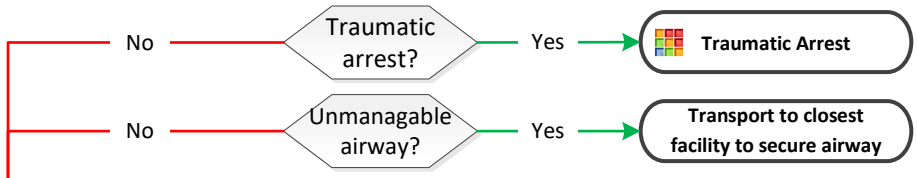
Appendix B – Trauma Protocols

San Mateo County Emergency Medical Services

Trauma Triage

Scene time goal is < 10 minutes

ACTIVATION



1

Injury Patterns

- Penetrating injuries to the head, neck, torso, and proximal extremities
- Skull deformity or suspected skull fracture
- Suspected spinal injury with new motor or sensory loss
- Chest wall instability, deformity, or suspected flail chest
- Suspected pelvic fracture
- Suspected fracture of two or more proximal long bones
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Active bleeding requiring a tourniquet or wound packing with continuous pressure

→ **Trauma Center transport with early notification**

2

Mental Status and Vital Signs

All Patients

- Unable to follow commands
- RR < 10 or > 29 breaths/ min
- Respiratory distress or in need of respiratory support
- Room air SpO_2 < 90%

Age 0 – 9 years

- SBP < 70 mmHg + 2x age in years

Age 10 – 64 years

- SBP < 90 mmHg or
- HR > SBP

Age 65 years or older

- SBP < 110 mmHg or
- HR > SBP

→ **Trauma Center transport with early notification**

3

Mechanism of Injury

- High risk auto crash
  - Partial or complete ejection
  - Significant intrusion into passenger compartment/vehicle cabin (including roof)
    - > 12 inches at occupant site OR
    - > 18 inches at any site OR
    - Need for extrication for entrapped patient
  - Death in passenger compartment
  - Child (0 – 9 years) unrestrained or in unsecured child safety seat
  - Vehicle telemetry data consistent with severe injury
- Rider separated from transport vehicle with severe impact (e.g., motorcycle, ATV, horse, etc.)
- Pedestrian/ bicycle rider thrown, run over, or with significant impact
- Fall from height > 10 feet (all ages)

→ **Trauma Center transport with early notification**

4

EMS Judgement

Consider risk factors, including:

- Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head injury
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy > 20 weeks
- Burns in conjunction with trauma

If concerned, contact Trauma Base Hospital

→ **Contact Trauma Base Hospital for destination**

Adult and Pediatric Trauma Treatment Protocols

Trauma Triage

Scene time goal is < 10 minutes

Pearls

- When assessing motor GCS, if unable to follow commands, patient meets activation criteria.
- Do *not* let alcohol confuse the clinical picture. Persons using alcohol may have unrecognized injuries, particularly head bleeds.
- A complete hands on head-to-toe assessment is required for all trauma patients.
- Transport should be initiated within 10 minutes of ambulance arrival unless patient requires extrication.

Age Categories

Adult Patient – Trauma patients 15 years of age and older.
Pediatric Patients – Trauma patients under the age of 15 years.

Trauma Receiving Facilities

Adult Trauma Center catchment areas:

- Stanford Hospital – Any area south of and including Devil's Slide; City of Millbrae south of Trousdale Drive between I-280 and El Camino Real; and south of Millbrae Avenue between El Camino Real and the San Francisco Bay.
- Zuckerberg San Francisco General Hospital – Any area north of Devil's Slide; City of Millbrae north of Trousdale Drive between I-280 and El Camino Real; and north of Millbrae Avenue between El Camino Real and the San Francisco Bay. Includes San Francisco International Airport.
- Eden Medical Center – Eastbound on the San Mateo or Dumbarton Bridges.

Pediatric Trauma Center catchment areas:

- Stanford Hospital – ***All patients ≤ 6 years*** or any area south of and including Devil's Slide; City of Millbrae south of Trousdale Drive between I-280 and El Camino Real; and south of Millbrae Avenue between El Camino Real and the San Francisco Bay.
- Zuckerberg San Francisco General Hospital – All patients > 6 years and any area north of Devil's Slide; City of Millbrae north of Trousdale Drive between I-280 and El Camino Real; and north of Millbrae Avenue between El Camino Real and the San Francisco Bay. Includes San Francisco International Airport.

Receiving Facilities – Local hospitals that are not trauma receiving facilities are destinations for patients who are triaged by the Base Hospital at the time of report as not requiring trauma center care. A trauma receiving facility may also serve as the receiving facility when it is the patient's facility of choice.

Low Energy Mechanism Trauma

Low energy mechanism trauma may not obviously reveal significant trauma. Examples include, but are not limited to ground level or short falls, blunt assault without a weapon (e.g., closed fist), low speed motor vehicle crash, or other blunt trauma (e.g., sports injury). Symptoms or concern may include:

- Symptoms in the presence of head injury such as headache, vomiting, loss of consciousness, repetitive questioning, abnormal, or combative behavior or new onset of confusion
- Pain level greater than 5/10 related to head, neck, or torso injury
- Any concerns due to hypotension, tachycardia, or tachypnea
- Systolic BP < 110mmHg in patients 65 years of age or older
- Torso injury with tenderness of abdomen, chest/ribs or back/flank
- Suspected hip dislocation or pelvis injury

Other Definitions

Unmanageable Airway – A patient whose airway is unable to be adequately maintained with BLS or ALS maneuvers. All trauma patients are candidates for immediate redirection to the trauma center following airway stabilization at a non-trauma receiving facility.

San Mateo County Emergency Medical Services

Extremity Trauma

For any traumatic injury (-ies) to the extremities that does not involve the head

History
- Type and time of injury
- Mechanism (crush, penetrating, blunt, or amputation)
- Open vs. closed wound/fracture
- Past medical history
- Medications

Signs and Symptoms
- Evidence of trauma
- Pain, swelling, deformity, or bleeding
- Altered sensation or motor function
- Diminished pulse or capillary refill
- Decreased extremity temperature

Differential
- Abrasion
- Contusion
- Laceration
- Sprain
- Dislocation
- Fracture
- Amputation

Crush injury?

No

E

Control hemorrhaging
Apply tourniquet for uncontrolled hemorrhage
If wound is in a critical vascular area not accessible for a tourniquet,
Wound packing with hemostatic gauze

Place splints and cold packs to stabilize fractures as necessary

P

Establish IV/IO

Cardiac monitor

If SBP < 80 in adults
Normal Saline bolus 500ml IV/IO
May repeat as long as criteria above exists.
Maximum 1L

If poor perfusion or shock in peds
Normal Saline bolus IV/IO
Use pediatric tape and refer to dosing guide
Repeat to age dependent goal SBP
May repeat as long as criteria above exists

In the absence of head trauma, age-specific hypotension, poor perfusion or AMS
Consider, **Acetaminophen** or **Fentanyl** for pain control

Notify receiving facility. Contact Base Hospital for medical direction

Exit to Airway protocols
if indicated

Tourniquet use should not be delayed until a patient is in shock or is clearly exsanguinating. It should be applied early and can be used safely without risk of patient injury. Do not wait; apply often and tighten if needed.

Yes

E

Early transport after release
Limit scene time to 10 minutes

Control hemorrhaging
Apply tourniquet for uncontrolled hemorrhage

Secure airway and support respiratory rate

Place splints and cold packs to stabilize fractures as necessary

P

Establish IV/IO

Cardiac monitor

$EtCO_2$ monitoring

If SBP < 80 in adults
Normal Saline bolus 500ml IV/IO
May repeat as long as criteria above exists.
Maximum 1L

If poor perfusion or shock in peds
Normal Saline bolus IV/IO
Use pediatric tape and refer to dosing guide
Repeat to age dependent goal SBP
May repeat as long as criteria above exists

In the absence of head trauma, age-specific hypotension, poor perfusion or AMS
Consider, **Acetaminophen** or **Fentanyl** for pain control

Prior to release from entanglement
Albuterol or Albuterol MDI with spacer
or
Levalbuterol

For suspected hyperkalemia:
- Peaked T-waves; or
- QRS > 0.12 seconds; or
- Loss of P-waves

Albuterol/Levalbuterol
Calcium Chloride
Sodium Bicarbonate

Do NOT administer Sodium Bicarbonate and Calcium Chloride in the same IV.

Adult and Pediatric Trauma Treatment Protocols

Extremity Trauma

For any traumatic injury (-ies) to the extremities that does not involve the head

Pearls

- For partial amputations, splint affected extremity in anatomic location and elevate extremity.
- For complete amputations, place amputated part in a dry container or bag and place on ice. Seal or tie off bag and place in second container or bag. DO NOT place amputated extremity directly on ice or in water. Elevate extremity and dress with dry gauze.
- Penetrating trauma to an extremity may hide significant vascular injury and hemorrhage. Early application of a tourniquet should be considered.
- Hypotension is age dependent. This is not always reliable and should be interpreted in context with the patient's typical BP, if known. Shock may be present with a seemingly normal blood pressure initially.
    - Neonate: < 60mmHg or weak pulses
    - Infant: < 70mmHg or weak pulses
    - 1-10 years: < 70mmHg + (age in years x2)
    - Over 10 years: <90mmHg
    - Over 65 years: <110mmHg
- If vigorous hemorrhage is not controlled with direct pressure and elevation on wound, apply a tourniquet. Tourniquets may be used in pediatric patients. Tourniquets may also be appropriate for hemorrhage control in multi-casualty incidents.
- Crush Injury Syndrome is caused by muscle crush injury and cell death. Most patients have an extensive area of involvement such as a large muscle mass in a lower extremity or the pelvis. May develop after one (1) hour in the presence of a severe crush, but usually requires at least four (4) hours of compression. Hypovolemia and hyperkalemia may occur, particularly in extended entrapments.
- An important item to monitor and document is a change in the level of consciousness by repeat examination.
- Do not overlook the possibility of associated domestic violence or abuse.

San Mateo County Emergency Medical Services

Head Trauma

For any traumatic injury that involves the head; includes multi-system trauma that involves the head

History
- Time of injury
- Mechanism (blunt vs. penetrating)
- Loss of consciousness
- Bleeding
- Past medical history
- Medications (anticoagulants)

Signs and Symptoms
- Evidence of trauma
- Pain, swelling, or bleeding
- AMS
- Unconscious
- Respiratory distress or failure
- Vomiting
- Seizure

Differential
- Skull fracture
- Spinal injury
- Abuse

E

Early transport
Limit scene time to 10 minutes

Control hemorrhaging
Apply tourniquet for uncontrolled hemorrhage
If wound is in a critical vascular area not accessible for a tourniquet,
Wound packing with hemostatic gauze

Spinal Motion Restriction
if indicated

Secure airway
and support respiratory rate

Elevate head 30 degrees unless contraindicated. Position patient on left side if needed for vomiting

P

Establish IV/IO

Cardiac monitor

$EtCO_2$ monitoring

If SBP < 110 in adults
Normal Saline bolus 500ml IV/IO
May repeat as long as criteria above exists.
Maximum 2L

If poor perfusion or shock in peds
Normal Saline bolus IV/IO
Use pediatric tape and refer to dosing guide
Repeat to age dependent goal SBP
May repeat as long as criteria above exists

For nausea in adults, *consider*
Ondansetron

For peds patients ≥ 4 years, *consider*
Ondansetron
Use pediatric tape and refer to dosing guide

Notify receiving facility. Contact Base Hospital for medical direction

Respiratory Arrest/Failure

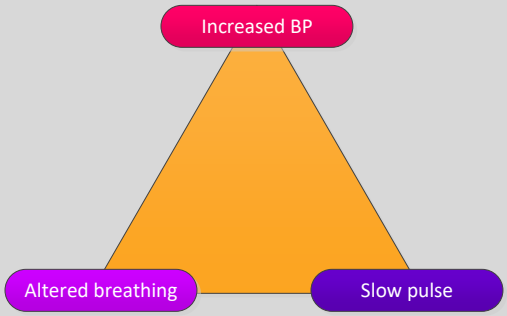
Tourniquet use should not be delayed until a patient is in shock or is clearly exsanguinating. It should be applied early and can be used safely without risk of patient injury. Do not wait; apply often and tighten if needed.

Head Trauma

For any traumatic injury that involves the head; includes multi-system trauma that involves the head

Increased Intracranial Pressure

Changes in LOC
Impaired eye movement
↓ sensory/motor function



Headache
Pupillary changes
Vomiting
Changes in vital signs
- ↑ Blood pressure
- ↓ Pulse
- Changes in respiratory pattern

Infants

Bulging fontanels
Cranial suture separation
↑ head circumfrance
High-pitched cry

Pearls

- ALS procedures in the field do not significantly improve patient outcome in critical trauma patients.
- Basic airway management is preferred unless unable to effectively manage with BLS maneuvers. Utilize modified jaw thrust technique to open the airway.
- Intubation of head injury patients is best addressed at the hospital.
- Hypotension is age dependent and is not always a reliable sign. It should be interpreted in context with the patient's typical BP, if known. Shock may be present with a seemingly normal blood pressure initially.
  - Neonate: < 60mmHg or weak pulses
  - Infant: < 70mmHg or weak pulses
  - 1-10 years: < 70mmHg + (age in years x2)
  - Over 10 years: <90mmHg
  - Over 65 years: <110mmHg
- Avoid hyperventilation. Maintain an $EtCO_2$ of 35 or greater, which may be unreliable if the patient was subject to multisystem trauma or poor perfusion.
- In patients with a dilated pupil on one side or posturing, which indicates brainstem herniation, modest hyperventilation is appropriate. Keep $EtCO_2$ of 30 or greater.
- Scalp hemorrhage can be life threatening. Treat with direct pressure and pressure dressing.
- Increased intracranial pressure may cause hypertension and bradycardia.
- Hypotension usually indicates injury or shock unrelated to the head injury and should be treated aggressively.
- An important item to monitor and document is a change in the level of consciousness by repeat examination.
- Limit IV fluids unless the patient is hypotensive.
- Concussions are traumatic brain injuries involving any number of symptoms including confusion, LOC, vomiting, or headache. Any prolonged confusion or mental status abnormality which does not return to the patient's baseline within 15 minutes of injury or any documented LOC should be evaluated by a physician.
- Do not overlook the possibility of associated domestic violence or abuse.

San Mateo County Emergency Medical Services

Multi-System Trauma

For any traumatic injuries that involve multiple systems or isolated chest or abdominal injuries. For injuries involving the head, use Head Trauma protocol

History
- Time of injury
- Mechanism (blunt vs. penetrating)
- Damage to structure or vehicle
- Location of patient in structure or vehicle
- Restraints or protective equipment use
- Past medical history
- Medications

Signs and Symptoms
- Evidence of trauma
- Pain, swelling, deformity, lesions, or bleeding
- AMS
- Unconscious
- Respiratory distress or failure
- Hypotension or shock
- Arrest

Differential
- Chest:
  - Tension pneumothorax
  - Flail chest
  - Pericardial tamponade
  - Open chest wound
  - Hemothorax
- Intra-abdominal bleeding
- Pelvis or femur fracture
- Spinal injury
- Head injury
- Hypothermia

E

Early transport
Limit scene time to 10 minutes

Control hemorrhaging
Apply tourniquet for uncontrolled hemorrhage

If wound is in a critical vascular area not accessible for a tourniquet,
Wound packing with hemostatic gauze

Secure airway
and support respiratory rate

Spinal Motion Restriction
if indicated

Place splints and cold packs to stabilize fractures as necessary

P

Consider,
Needle decompression

For open wounds to chest/abdomen, apply occlusive dressing

Respiratory Arrest/Failure

Suspected head injury?

No

Yes

Trauma – Head Trauma

P

Establish IV/IO

Cardiac monitor

$EtCO_2$ monitoring

If SBP < 80 in adults
Normal Saline bolus 500ml IV/IO
May repeat as long as criteria above exists.
Maximum 1L

If poor perfusion or shock in peds
Normal Saline bolus IV/IO
Use pediatric tape and refer to dosing guide
Repeat to age dependent goal SBP
May repeat as long as criteria above exists

For Adults, *consider*
Ondansetron

For peds patients ≥ 4 years, *consider*
Ondansetron
Use pediatric tape and refer to dosing guide

In the absence of head trauma, age-specific hypotension, poor perfusion or AMS
Consider, **Acetaminophen** or **Fentanyl** for pain control

Notify receiving facility. Contact Base Hospital for medical direction

Tourniquet use should not be delayed until a patient is in shock or is clearly exsanguinating. It should be applied early and can be used safely without risk of patient injury. Do not wait; apply often and tighten if needed.

Adult and Pediatric Trauma Treatment Protocols

Multi-System Trauma

For any traumatic injuries that involve multiple systems or isolated chest or abdominal injuries. For injuries involving the head, use Head Trauma protocol

Pearls

- Prevention and reversal of hypothermia associated with shock from severe traumatic injury is critical. Apply blankets early and consider activation of heater in the patient compartment of the ambulance.
- ALS procedures in the field do not significantly improve patient outcome in critical trauma patients.
- Basic airway management is preferred unless unable to effectively manage with BLS maneuvers. Utilize modified jaw thrust technique to open the airway.
- Intubation of head injury patients is best addressed at the hospital.
- Hypotension is age dependent and is not always a reliable sign. It should be interpreted in context with the patient's typical BP, if known. Shock may be present with a seemingly normal blood pressure initially.
    - Neonate: < 60mmHg or weak pulses
    - Infant: < 70mmHg or weak pulses
    - 1-10 years: < 70mmHg + (age in years x2)
    - Over 10 years: <80mmHg
    - Over 65 years: <110mmHg
- Stabilize flail segments with bulky dressing.
- Cover eviscerated bowel with dry sterile dressing.
- Stabilize impaled object(s) with bulky dressing. Do not remove.
- Avoid hyperventilation. Maintain an $EtCO_2$ of 35 or greater, which may be unreliable if the patient was subject to multisystem trauma or poor perfusion.
- An important item to monitor and document is a change in the level of consciousness by repeat examination.
- Do not overlook the possibility of associated domestic violence or abuse.

San Mateo County Emergency Medical Services

Traumatic Arrest

For cardiac arrest with penetrating or blunt traumatic mechanism. NOT for trauma sustained after cardiac arrest, use primary impression Cardiac Arrest – Non- traumatic

History
- Evidence of trauma or blood loss
- Events leading to arrest
- Estimated downtime

Signs and Symptoms
- Unresponsive
- Apneic
- Pulseless

Differential
- Tension pneumothorax
- Cardiac tamponade
- Hypovolemic shock
- Spinal shock
- Traumatic brain injury

E — **Has a paramedic, EMT, designated first responder, or public safety officer found injuries incompatible with life, including one or more of the following conditions:**
- **Decapitation**
- **Incineration**
- **Rigor Mortis**
- **Decomposition**
- **Apnea with destruction and/or separation of the body from the heart, brain, liver, or lungs**
- **Multi-casualty incidents (MCIs) where triage principles preclude the initiation or continuation of resuscitation**

Yes → Do not begin resuscitation

No → Does the patient meet all of the following criteria?

- Pulseless
- Apneic
- No other signs of life, including purposeful movement or pupillary response
- Asystole or PEA < 40bpm
- Physical signs of trauma or blood loss

Yes → Do not begin resuscitation

No → First medical contact to trauma center time < 20 min.?

AT ANY TIME

Return of spontaneous circulation

Multi-System Trauma

Tourniquet use should not be delayed until a patient is in shock or is clearly exsanguinating. It should be applied early and can be used safely without risk of patient injury. Do not wait; apply often and tighten if needed.

The use of epinephrine in traumatic arrest is not indicated (see pearls).

Yes →

E	Control hemorrhaging **Apply tourniquet for uncontrolled hemorrhage**
E	**Begin continuous chest compressions** **Push hard (> 2 inches) and fast (110/min)** ***Use metronome to ensure proper rate*** **Change compressors every 2 minutes** **(Limit changes/pulse checks to < 5 seconds)**
E	High flow oxygen via BVM
E	Immediate transport to trauma center
P	If suspected thoracic trauma, bilateral pleural decompression
P	If shockable rhythm, defibrillate

→ **Notify receiving facility. Consider Base Hospital for medical direction**

No →

E	Control hemorrhaging **Apply tourniquet for uncontrolled hemorrhage**
E	**Begin continuous chest compressions** **Push hard (> 2 inches) and fast (110/min)** ***Use metronome to ensure proper rate*** **Change compressors every 2 minutes** **(Limit changes/pulse checks to < 5 seconds)**
E	High flow oxygen via BVM
P	If suspected thoracic trauma, bilateral pleural decompression
P	If shockable rhythm, defibrillate

→ Asystole or PEA < 40bpm *and* $EtCO_2$ < 20 after 15 min.?

Yes → Terminate resuscitation

No → **Notify receiving facility. Consider Base Hospital for medical direction**

Adult and Pediatric Trauma Treatment Protocols

Traumatic Arrest

For cardiac arrest with penetrating or blunt traumatic mechanism. NOT for trauma sustained after cardiac arrest, use primary impression Cardiac Arrest – Non- traumatic

Pearls

- Prevention and reversal of hypothermia associated with shock from severe traumatic injury is critical. Apply blankets early and consider activation of heater in the patient compartment of the ambulance.
- Traumatic arrest due to hypovolemia does not occur immediately after traumatic events. Traumatic arrest patients will experience maximal catecholamine release and vasoconstriction for a short period after the onset of cardiac arrest. Thus, epinephrine administration may worsen tissue perfusion. The use of epinephrine in traumatic arrest has not been associated with 1-month survival.
- Patients who do not qualify for field determination of death but have or develop cardiopulmonary arrest should be transported to the closest trauma center.

San Mateo County Emergency Medical Services

Burns

For any burn injury to skin. For inhalation injury, use primary impression Inhalation Injury. Use with primary impression Traumatic Injury if other trauma present

History
- Type of exposure (heat, gas or chemical)
- Inhalation injury
- Time of injury
- Other trauma
- Past medical history
- Medications

Signs and Symptoms
- Burns, pain, or swelling
- Dizziness
- Loss of consciousness
- Hypotension/shock
- Airway compromise or distress could be presented as hoarseness or wheezing

Differential
- Superficial – red and painful (do ***not*** include in TBSA)
- Partial thickness – blistering
- Full thickness – painless with charred or leathery skin
- Chemical injury
- Thermal injury
- Radiation injury
- Blast injury

Assess burn injury severity

Approved Burn Receiving Centers

St. Francis – San Francisco
Valley Med. Center – San Jose
UC Davis – Sacramento

Minor

< 20% TBSA partial or full thickness burns
No inhalation injury
GCS > 13

E	Remove rings, bracelets, and constricting items
	Apply clean dressing to burn area
P	*Consider,* IV
	Cardiac monitor
	Normal Saline bolus ≤ 5 years – 125ml 6-13 years – 250ml ≥ 14 years – 500ml
	For pain *consider*, **Fentanyl**

Trauma Triage *if indicated*

Transport to facility of choice.
Consider transporting to Burn Center for burns to the face, hands, perineum, or feet and circumferential burns

Major

≥ 20% TBSA partial or full thickness burns, burns with suspected inhalation injury or high voltage electrical burns

Inhalation Injury *if indicated*

E	Remove rings, bracelets, and constricting items
	Apply clean dressing to burn area
	Maintain airway
P	Establish IV/IO *Consider,* one large bore IV in each AC
	Cardiac monitor
	$EtCO_2$ monitoring
	Normal Saline bolus ≤ 5 years – 125ml 6-13 years – 250ml ≥ 14 years – 500ml
	For pain *consider*, **Fentanyl**

Trauma Triage *if indicated*

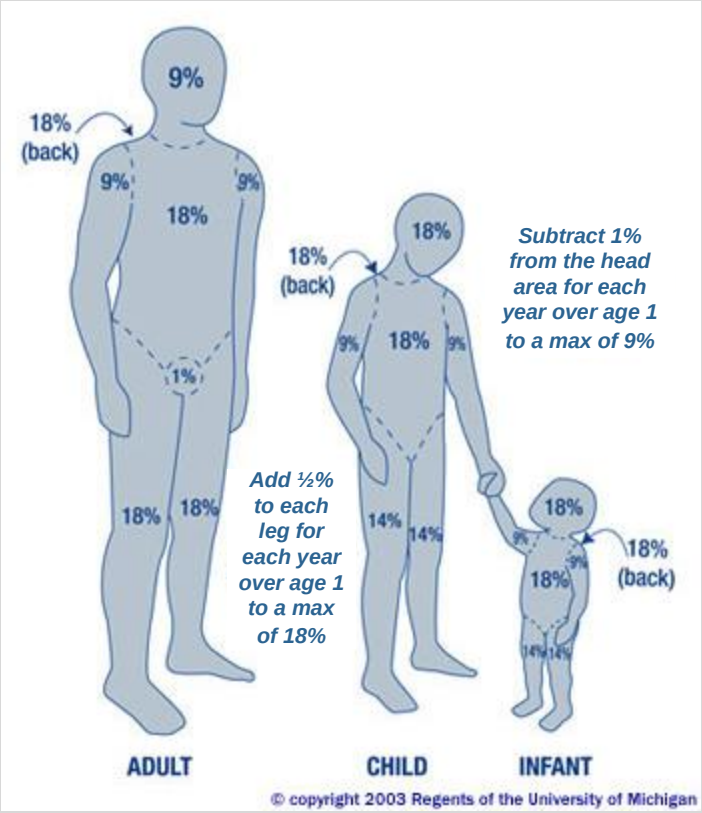
Transport to appropriate facility
Burns with trauma to Trauma Center
Burns only to Burn Center

Notify receiving facility. Contact Base Hospital for medical direction

Adult and Pediatric Trauma Treatment Protocols

Burns

For any burn injury to skin. For inhalation injury, use primary impression Inhalation Injury. Use with primary impression Traumatic Injury if other trauma present



Rule of Nines

- Seldom will you find a complete isolated body part that is injured as described in the Rule of Nines. More likely, it will be portions of one area, portions of another, and an approximation will be needed.
- For the purpose of determining the extent of serious injury, differentiate the area with minimal (superficial) burn from those of partial or full thickness burns.
- When calculating TBSA of burns, include only partial and full thickness burns; do not include superficial burns in the calculation.

Burn Assessment Terminology	
Approved Terminology	Old Terminology
Superficial	1st degree
Partial thickness	2nd degree
Full thickness	3rd degree
Burn assessment should be documented and reported using only approved terminology	

Pearls

- Airway burns may lead to rapid compromise of the airway and can be identified by soot around the nares or mouth or visible burns or edematous mucosa in the mouth.
- Early intubation is required when the patient experiences significant inhalation injuries. If the patient requires advanced airway management that cannot be quickly achieved in the field, transport to the nearest facility for stabilization prior to transfer to the Burn Center. Do not wait for a helicopter if airway patency is a critical concern.
- Contact Burn Center prior to transport to confirm bed availability.
- For major burns, do not apply wet dressings, liquids or gels to burns unless it is to remove whatever caused the burn (i.e. dry chemical agent, etc.). Cooling large burns may lead to hypothermia.
- Burn patients are often trauma patients. If burns are evident in the presence of trauma, follow trauma triage guidelines and transport to trauma center if activation criteria is met.
- Circumferential burns to extremities are dangerous due to potential vascular compromise secondary to soft tissue swelling.
- Never administer IM pain medication into a burned area.
- IV/IOs may be placed through burns as a last resort.

COUNTY OF SAN MATEO

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

2024 STEMI Critical Care System Plan

Table of Contents

Introduction 3
LEMSA Personnel and Their Roles in the STEMI Critical Care System 3
STEMI QI Committee – Organizational Description, Structure, and Members 4
STEMI QI Committee – Mission, Purpose, and Goals 5
STEMI Receiving Centers (SRC) and STEMI Referral Hospitals (SRH) 6
SRC Re-designation Visit Evaluation Agenda 13
SRC Designation Validation Tool 8
San Mateo County Sample STEMI Feedback Form (EMS Field Providers and SRCs) 13
Quality Improvement Activities 15
Action to Improve 16
ECMO Alert Hospital Designation Validation Tool 16
STEMI Center Agreements 21
Training and Education 21
Public Education & Health Promotion 21
Clinical Protocols and Policies 21
Annual Update 22
Appendix A – STEMI Agreement 23
Appendix B – EMS Policies 24
Appendix C – EMS Protocols 25

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 (EMS Agency), Emergency Medical Dispatch (EMD) services performed by our County Public Safety Communications (PSC) center, our fire first responders, our 9-1-1 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 9-1-1 and walk- in patients.

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
- Brian Aiello, MBA, Paramedic, EMS Assistant Director
- Kelly McGinty, RN, MSN, EMS Clinical Nurse
- Chad Henry, MBA, Paramedic, EMS System Manager
- Garrett Fahey, MBA, EMS Management Analyst

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 EMS Agency.

The San Mateo County EMS Agency STEMI Continuous Quality Improvement Committee (SMC STEMI CQI) meets quarterly.

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.
- Promote 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.

Incorporating the EMSA regulations into practice, the committee reviews cases, and evaluates data for walk- in, ambulance transport, and patients transferred from a STEMI Referral Hospital (of which we have two in our County) to a STEMI Receiving Center (SRC). Recent discussions have included reperfusion delays and outcomes amount STEMI patients with cardiogenic shock and vector change defibrillation for refractory ventricular fibrillation.

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 American Heart Association members also participate in these meetings.

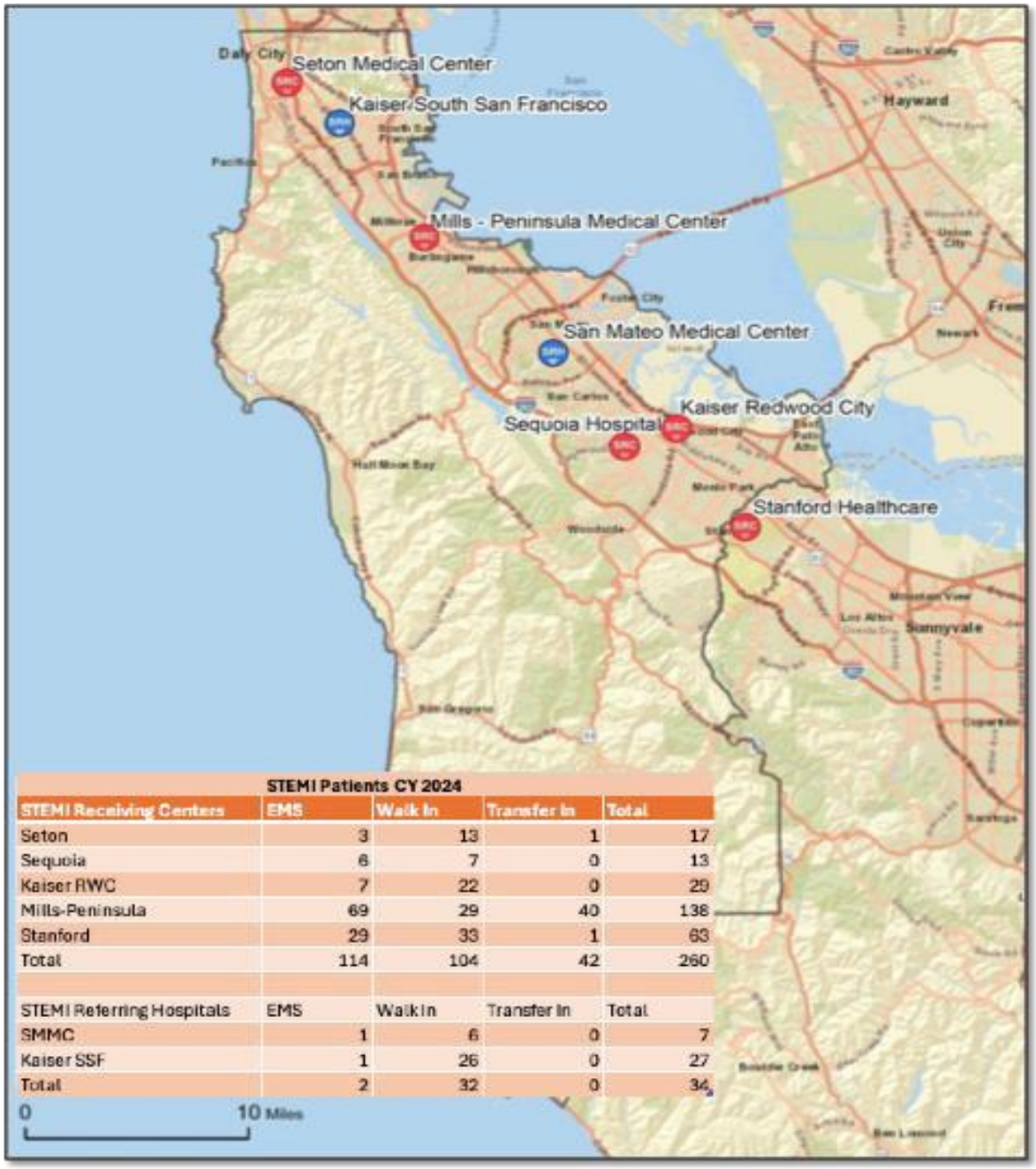
STEMI QI Committee – Mission, Purpose, and Goals

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

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

Goals	Objectives	Responsible Parties	Target Date	Evaluation/ Outcome
1. Improve the quality and service delivered to STEMI patients.	A. Identify best practices through evidence-based data that can be implemented as needed. B. 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 vector change defibrillation Ongoing
2. Use data collection to identify clinical excellence and identify opportunities for improvement.	A. Collect and analyze data regularly on STEMI patients from the EMS system and hospitals to evaluate the continuum of care. B. Recognize excellence in the provision of care. C. 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 – all SRCs now on AHA Get with the Guidelines • STEMI site visits completed in 2022
3. Provide education to identify clinical excellence.	A. Deliver up-to-date and relevant education to health care professionals. B. Raise public awareness regarding the signs and symptoms of heart attack, the importance of activation of the 9-1-1 system, and provide education to identified target groups.	• Designated STEMI Centers • STEMI Referral Hospitals • EMS Provider Agencies • EMS Agency	Quarterly	Ongoing throughout the year

STEMI Receiving Centers (SRC) and STEMI Referral Hospitals (SRH)



STEMI Patients CY 2024				
STEMI Receiving Centers	EMS	Walk In	Transfer In	Total
Seton	3	13	1	17
Sequoia	6	7	0	13
Kaiser RWC	7	22	0	29
Mills-Peninsula	69	29	40	138
Stanford	29	33	1	63
Total	114	104	42	260
STEMI Referring Hospitals	EMS	Walk In	Transfer In	Total
SMMC	1	6	0	7
Kaiser SSF	1	26	0	27
Total	2	32	0	34

SRC Designation Validation Tool

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. Immediate notification to the EMS Duty Officer if the SRC is unable to perform PCI.	▪ On call schedule ▪ On call policy and procedures document		As above. EMS Duty Officer is found under System Contacts in ReddiNet- ED Charge nurse will be familiar.
Permit for Cardiovascular Surgery or plan for transfer as below:	▪ Copy of permit		As above.
Alternate criteria for cardiovascular surgical capability: ▪ 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 cardiovascularsurgery	▪ 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		Have there been any changes since the last site visit? If so, please provide an update.
Protocols for triage, diagnosis, and Cardiac Catheterization Laboratory activation ▪ 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.
30-minute door-to-patient arrival in the CCL. *Strive for 20 minutes. Number of emergent PCI over the past 12 months (July 1, 2021-June 30, 2022) and the number of times the cardiologist or the interventionalist response time to the CCL was > 30 minutes.	▪ 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 cardiologist or interventionalist response 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.	▪ Copy of policy ▪ Record of performance		Provide documentation of any internaldisasters, equipment failure, or scheduled maintenance that precluded the SRC from accepting a patient over the past year (July 1, 2021-June 30, 2022). If none, please indicate this.
Ability to receive electronic transmission of the EMS 12- lead EKG to one or more sites	▪ Copy of policy ▪ Copy of contract with vendor		Please report any problems with receiving prehospital 12-lead transmissions.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Participation in EMS education including providing feedback to the EMS providers.	▪ Participation at County Level ▪ Implementation of a system to provide feedback to EMS providers.		Please list any EMS educational activities the SRC has completed since the last site visit. Discuss & demonstrate system that will be used or is in use to provide feedback to EMS providers.
Collaborates with San Mateo County STEMI Referral Hospitals (SRH) in receiving acute STEMI patients in transfer	▪ 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: ▪ 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	▪ 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 ▪ Current RN License, or Other qualified experience ▪ STEMI program experience ▪ Participates in SMC STEMI QI Program	▪ Copy of license and resume or CV ▪ Documentation of participation in hospitals QI process for STEMI		Provide information for any new staff members.
Cardiac Cath Lab Manager ▪ May by same individual as the program manager	Job description		As above.

Standard	Evidence of Standard	Meets Standard	Comments & Recommendations
Interventional Cardiologists ▪ Currently Board Certified in Cardiovascular Disease ▪ Currently Board Certified in Interventional Cardiology. ▪ Active credentialed member of medical staff with privileges for Primary PCI ▪ Actively taking call ▪ Proficient in radial approach as monitored by the Program Medical Director	▪ Copy of current board certification in internal medicine (ABIM) with current ABIM subspecialty certification in cardiovascular disease, and Interventional Cardiology for each practitioner ▪ Copy of medical staff privileges ▪ 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. Reference: 2021 ACC/AHA Executive Summary
Alternate plan for cardiovascular surgery capability: ▪ 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.	▪ Copy of transfer agreement with at least one facility for cardiovascular surgery ▪ Policy that facilitates rapid transfer of STEMI patients requiring cardiovascular surgery		Please provide any update since the last site visit. If none, please indicate so.
Clinical Capabilities			
A plan for triage and treatment of simultaneous presentation of STEMI patients without diversion of a STEMI patient to an alternate facility. EMS Duty Officer is notified if unable to accept at STEMI patient.	▪ Copy of policy ▪ Verbalization of how to contact EMS Duty Officer.		Did this occur over the last year (July 1, 2021-June 30, 2022)? If so, what was the frequency and how was this managed?
STEMI Receiving Center will have at least one available and functional EMS Agency approved mechanical CPR device with radiolucent back plate for use in the CCL.	Machine shown		Device is readily available for immediate use. How many times has this been used in the last year (July 1, 2021-June 30, 2022)?

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).	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: ▪ Deaths ▪ Complications ▪ 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 in October 2022.
Proportion of eligible patients receiving reperfusion therapy	Provides Data to SMC EMS Agency		Provide the actual number over the past 12 months (July 1, 2021-June 30, 2022).
Number of patients who either underwent CABG within 24 hours of hospital arrival or were transferred for CABG within 24 hours of hospital arrival for failed PCI (urgent/emergent)	Provides Data to SMC EMS Agency		Provide the actual number over the past 12 months (July 1, 2021-June 30, 2022).

SRC Re-designation Visit Evaluation Agenda

1. Welcome, review schedule.
2. Hospital to 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 Agency Staff meet and confer.
6. EMS, STEMI Team, and Hospital Administration wrap- up, finding, and recommendations.

San Mateo County Sample STEMI Feedback Form (EMS Field Providers and 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	

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 2024.

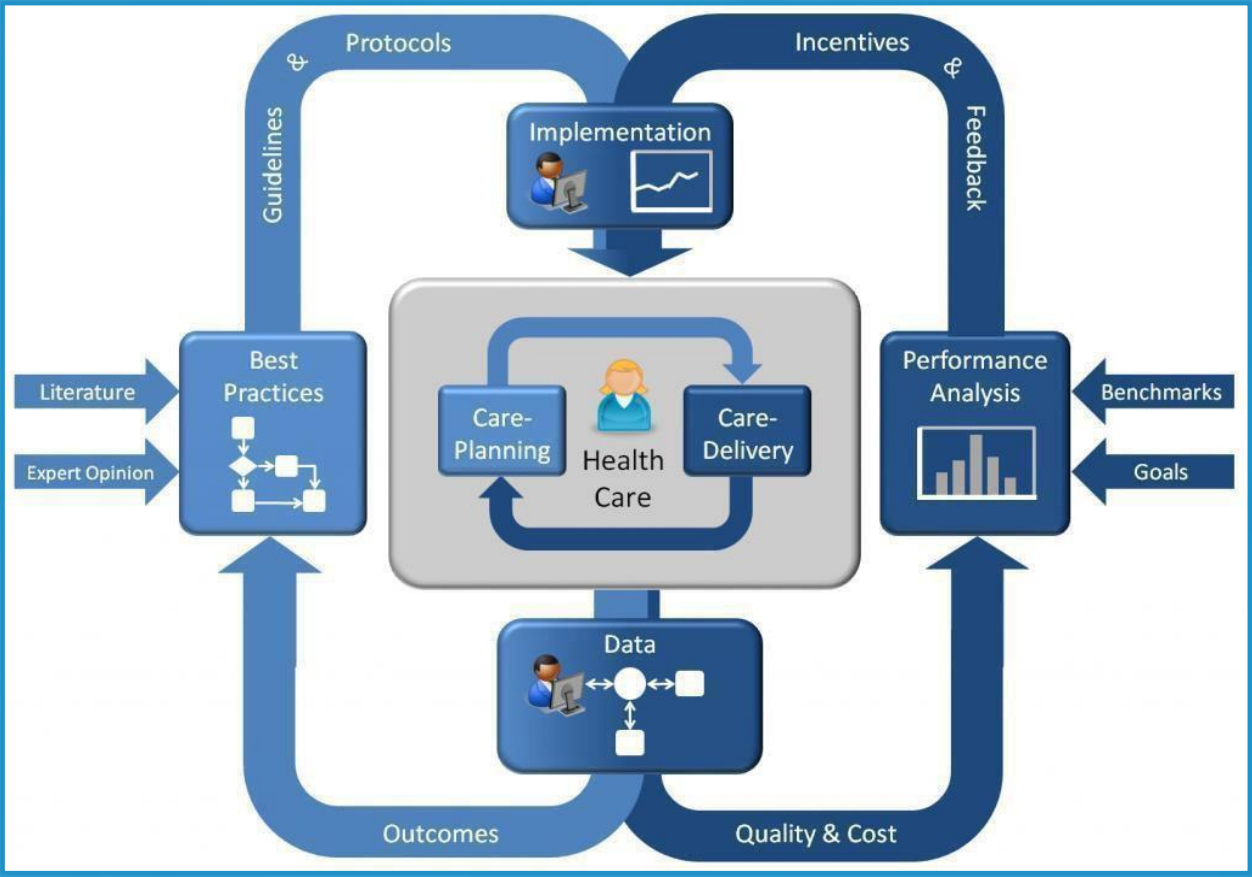
LEAN/LEAP for real-time problem solving has been used to decrease the time metric from EMS at Patient Side to acquisition of the 12-lead EKG in patients with suspected ischemic chest pain. We continue to monitor this metric.

SAN MATEO COUNTY CARDIAC ARREST – CARES DATA CY 2024

433 Cases
69.3% Male
30.7% Female
Mean age of 68.2
Utstein Survival N=60 or 38.3% (witnessed by a bystander & found in a shockable rhythm)
Utstein Bystander Survival N=39 or 43.6% (witnessed by a bystander, found in a shockable rhythm, and received some bystander intervention-CPR and/or AED).

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 has led performance improvement projects 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 min. This is also the standard expected in the hospitals > 90% of the time.

The EMS Agency, in collaboration with the SRC medical directors, put together a guiding document for adding ECMO to their service lines starting from the prehospital population.

ECMO Alert Hospital Designation Validation Tool

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	▪ 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	Copy of shift schedule		

Protocols for triage, diagnosis and ECMO team activation ▪ 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		
15-minute ECMO Alert activation to ECMO cannulation. *Strive for ECMO flow within one hour of arrest.	▪ Copy of policy ▪ Copy of any existing measurement to audit response time of all team members ▪ Copy of last three months of call schedule		
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.	▪ Copy of policy ▪ Record of performance		
Participation in EMS education	Participation at County Level		
Hospital Personnel			
Physician ECMO Program Director: ▪ 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	▪ 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		

ECMO coordinator ▪ 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	▪ Copy of license and resume or CV ▪ Documentation of participation in hospitals QI process for ECMO		
Provide job descriptions and organizational structure clarifying the relationship between the ECMO Program Director, the ECMO coordinator, and the ECMO team.	Job descriptions and organizational chart		
ECMO physician staff ▪ Current Board Certified ▪ Active credentialed member of medical staff with training for ECMO cannulation ▪ Actively taking call	▪ 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 ECMO patients in the last 12 months ▪ Copy of call schedule for 3 – 6 months		

ECMO clinical specialist • 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	Copy of CV, board certification, and ECMO training completion		
Clinical Capabilities			
The following should be readily available on a 24-hour basis • Backup components of the ECMO system and supplies for all circuit components • Adequate lighting to support surgical interventions • Surgical instrument set for revision of cannula 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	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 • 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: ▪ 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 ECMO	Provides Data to SMC EMS Agency		
System Provider Follow-up	Follow up is given to first responder agency		

STEMI Center Agreements

A STEMI Designation agreement ending June 30, 2026, has been implemented with each SRC by the EMS Agency. The first year of each agreement is prorated to allow for standardized fiscal year-based contracting moving forward.

Stanford Health Care which is geographically located in Santa Clara County is designated by the EMS Agency to receive STEMI patients originating within our County. Stanford has been seamlessly integrated as a SRC in our system for many years and is also accredited by the Joint Commission (TJC) and the AHA as a Comprehensive Cardiac Care Center.

Seton Hospital was damaged by the storms that hit San Mateo County in January and February 2024. Its STEMI center has been closed to EMS STEMI patients since February 20, 2024.

Training and Education

Our quarterly SMC STEMI CQI meetings all feature case studies and literature review of cardiac topics. At each meeting, a relevant journal article is reviewed, including discussion of how it relates to our system. Content includes vector change defibrillation for refractory ventricular fibrillation, reperfusion delays and outcomes amount STEMI patients with cardiogenic shock, and the influence of timing on reperfusion in STEMI.

Public Education & Health Promotion

Public education to promote cardiac health has been conducted since the last submission. Some examples include Hands Only CPR, information on heart recognition, information on the importance of calling 9-1-1 for signs and symptoms of heart attack.

Clinical Protocols and Policies

Relevant EMS policies include Policy 605 – STEMI Receiving Center Standards and Designation, Policy 603 – Hospital emergent interfacility transfers, and Reference 902 – STEMI Data Dictionary. Policy 603 facilitates emergent transfer from a non-STEMI Receiving Center to a SRC for emergent treatment. Our data dictionary defines the data elements, definitions, and variables used by SRCs in San Mateo County.

Our clinical protocols outline the care for the STEMI patient. Protocol G01 – Routine Medical Care, describes the clinical care and notification or ringdown to the receiving hospital for the STEMI patient. Protocol A06 – Chest Pain-STEMI is the treatment protocol designed for the STEMI patient.

Annual Update

The San Mateo County EMS Agency updates the STEMI Critical Care Plan annually and submits it to the California Emergency Medical Services Authority (EMSA). Looking forward to 2025, we will be implementing vector change defibrillation for refractory ventricular fibrillation. Additionally, we are beginning discussions with Stanford Healthcare about implementing ECMO for patients remain in refractory ventricular rhythms in the field despite ACLS interventions.

Appendix A – STEMI Agreement

Agreement No. _____

AGREEMENT BETWEEN THE COUNTY OF SAN MATEO AND <HOSPITAL>

This Agreement is entered this first day of November 1, 2022, 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 as a STEMI Receiving Center for COUNTY in accordance with the terms, conditions, and specifications set forth herein.

3. Payments

HOSPITAL shall pay COUNTY an annual service charge for STEMI Receiving Center Designation. The service charge 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, 2022, through June 30, 2026.

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;

i. Any failure by HOSPITAL to assume patient care from prehospital personnel consistent with Ambulance Patient Offload Time standards established by COUNTY; and

j. Repeated failure to submit specified reports, STEMI 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 time 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: 801 Gateway, Boulevard, Second Floor
South San Francisco, California 94080
Telephone:
Facsimile:
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

I. DEFINITIONS FOR THE PURPOSES OF THIS AGREEMENT

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

CARES: Cardiac Arrest Registry to Enhance Survival.

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

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

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

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

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

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

STEMI Care: Emergency cardiac care for a STEMI Patient.

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

STEMI Medical Director: A qualified physician board-certified by the American Board of Medical Specialties ("ABMS") or as defined by the EMS Agency, designated by the hospital as 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-SegmentElevation 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, designated by the hospital as responsible for monitoring, coordinating, and evaluatingthe STEMI program.

STEMI Quality Improvement Committee: The confidential multi-disciplinary peer-review committee, comprised of representatives from the STEMI Receiving Centers ("SRC"), STEMI Referral Hospitals ("SRH") and other professionals designated by the EMS Agency, which audits the STEMI Critical Care

System, makes recommendations for system improvements, and functions in an advisory capacity to the EMS Agency on other STEMI and cardiac care system issues. Committee members designated by the EMS Agency may include, but are not limited to, SRC medical directors and program managers, representatives from SRH, interventional and non-interventional cardiologists, emergency medicine sub-specialists, and representatives from ground and air emergency medical services providers.

STEMI Receiving Center ("SRC"): A licensed general acute care facility that enters into a written agreement with the LEMSA, meets the minimumhospital 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 Cal. Code Regs. Tit. 22, Section 100270.125.

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

II. HOSPITAL ("STEMI RECEIVING CENTER") SERVICE REQUIREMENTS

A. HOSPITAL shall comply with STEMI Critical Care Facility Requirements set forth in Cal. Code Regs. Tit. 22, § 100270.124, or most current version.

B. HOSPITAL shall provide all services, equipment, and personnel including maintenance of adequate staffing levels, equipment, and facilities according to STEMI Receiving Center designation criteria required by the EMS AGENCY.

C. HOSPITAL shall 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, sexual identity, sexual orientation, or ability to pay. For 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"). Any transfer of a STEMI patient by HOSPITAL must be in accordance with EMTALA.

D. 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.

E. HOSPITAL shall comply with EMS Agency STEMI Receiving Center Standards and shall monitor compliance with STEMI Receiving Center Standards on a regular and ongoing basis. Documentation of such efforts shall be made available to the EMS AGENCY upon request.

F. HOSPITAL shall notify the EMS AGENCY, in writing, within twenty-four (24) hours of any failure to meet STEMI Receiving Center Standards and take corrective action within a reasonable period to correct the failure.

G. HOSPITAL shall immediately notify the EMS AGENCY of any circumstances that will prevent HOSPITAL from providing STEMI Receiving Center services and immediately update its status in the ReddiNet system if unable to provide STEMI Receiving Center services.

H. HOSPITAL shall comply with any EMS AGENCY plan of correction regarding any identified failure to meet STEMI Receiving Center Standards, within the timeframe(s) 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 COUNTY's STEMI Continuous Quality Improvement Committee, and such other related committees that may, from time to time, be named and organized by the EMS AGENCY.

K. HOSPITAL shall participate in the EMS AGENCY's data collection process in accordance with the local EMS policies and procedures to provide a data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

L. HOSPITAL shall, at a minimum, collect and maintain the data specified by the EMS AGENCY, unless additional data points are adopted by the STEMI Continuous Quality Improvement Committee.

M. HOSPITAL shall submit all STEMI patient data and CARES data to the EMS AGENCY specified data system(s) no later than the 15th calendar day following the close of the previous month 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 systems at the time this Agreement is executed is *Get with the Guidelines CAD and CARES Registry*.

N. Hospital shall allow and maintain access to prehospital electronic healthcare records via a secure link to MEDS Viewer provided by American Medical Response, under contract with the COUNTY.

O. 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 at the time of execution of this Agreement.

P. HOSPITAL shall designate and maintain 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 STEMI Receiving Center standards and perform ongoing Quality Improvement ("QI") as part of the HOSPITAL QI Program. The STEMI Receiving Center Medical Director must be a credentialed member of the HOSPITAL's medical staff with PCI privileges.

Q. HOSPITAL shall designate and maintain a program manager for the STEMI program who shall have experience in Emergency Medicine or Cardiovascular Care, who shall assist the STEMI Receiving Center Medical Director to ensure compliance with STEMI Receiving Center standards and the QI program.

R. HOSPITAL shall designate and maintain a Cardiovascular Lab Coordinator who shall assist the STEMI Receiving Center Medical Director and the Program Manager to ensure compliance with STEMI Receiving Center standards and the QI Program.

S. HOSPITAL shall maintain a daily roster of on-call Interventional Cardiologists, including physician consultants, 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:
   1. Board certified by the ABIM with subspecialty certification in cardiovascular disease;
   2. Demonstrated lifetime minimum of 500 PCI procedures and 11 primary or 75 PCI procedures annually;
   3. Physicians must respond immediately upon notification and be available within 30 minutes of when a STEMI patient presents to the hospital; and
   4. The STEMI Receiving Center submits a list of Cardiologists with active PCI privileges to the Agency annually.

T. HOSPITAL shall comply with all additional EMS Agency requirements including, but not limited to clinical performance standards, data management, and quality improvement, and evaluation processes.

U. Data and imaging requests by COUNTY shall be fulfilled within seven (7) calendar days.

III. COUNTY (EMS AGENCY) OBLIGATIONS

A. The EMS AGENCY has developed, implemented, and maintains a STEMI critical care system and plan for San Mateo County. The EMS AGENCY's STEMI Critical Care System Plan is updated annually and submitted to the EMS Authority as part of the EMS System Plan.

B. 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 in the COUNTY's STEMI Continuous Quality Improvement Committee.

C. The EMS AGENCY will provide or cause to be provided to HOSPITAL and/ or the STEMI Continuous Quality Improvement Committee, prehospital system data related to STEMI care.

D. 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 to function (both process and outcomes measures) and by employing continuous quality improvement strategies and collaboration with stakeholders.

E. 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.

F. The EMS AGENCY will provide opportunity for STEMI Receiving Centers to participate in the STEMI Critical Care System Plan goals and objectives.

G. The EMS AGENCY establishes EMS System prehospital care protocols related to the early recognition, assessment, treatment, and transport of STEMI patients for prehospital emergency medical care personnel in collaboration with system participants and stakeholders.

H. The EMS AGENCY establishes a mechanism for prehospital personnel to communicate findings of suspected STEMI patients in advance of the arrival to the STEMI centers via a one-call system.

I. The EMS AGENCY develops STEMI Data System Standards in collaboration with designated STEMI Receiving Centers and implements a standardized data collection and reporting process for the STEMI critical care system. The prehospital STEMI patient care elements shall be compliant with the most current version of the California EMS Information Systems ("CEMSIS") database and the National EMS Information System ("NEMSIS") database. The hospital STEMI patient care elements shall be consistent with the U.S. Centers for Disease Control and Prevention and American Heart Association STEMI guidelines.

J. The EMS AGENCY will coordinate a STEMI critical care system quality improvement process that shall include, at a minimum:

1. Evaluation of program structure, process, and outcome;
2. Review of STEMI-related deaths, major complications, and transfers;
3. A multi-disciplinary STEMI Continuous Quality Improvement committee, including both prehospital and hospital members;
4. Ensure participation in the Continuous Quality Improvement process by all designated STEMI Receiving Centers and prehospital providers involved in the STEMI critical care system;
5. Evaluation of regional integration of STEMI movement for best practices;
6. Participation in the STEMI data management system;
7. Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases;
8. Be responsible for ongoing performance evaluations and quality improvement activities of the STEMI critical care system;
9. Provide an opportunity for HOSPITAL to participate in EMS Agency sanctioned studies or research projects;
10. Utilize "The Joint Commission" ("TJC") certification or similar standards as part of the COUNTY verification process for designation as a STEMI Receiving Center;
11. Participate in certification visit(s), including that performed by TJC, to confirm State and Local requirements are being meet for continued designation as a STEMI Receiving Center; and
12. Establish service charges which shall be paid by HOSPITAL to COUNTY for the costs of administering, evaluating, updating, and enhancing data collection system, and public information/ outreach education the STEMI Care System, based on actual cost to the County.

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 service charge schedule and terms:

HOSPITAL shall pay COUNTY an annual service charge of for the STEMI Receiving Center Designation. The service charge 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.

Service Charge

Description	Amount
Base STEMI Receiving Center Designation Service Charge - Twelve-month Period	$27,495.70

CPI Adjustment. COUNTY may increase the annual service charge by a percentage up the percentage change in the Consumer Price Index All Urban Consumers San Francisco-Oakland-San Jose ("Bay Area CPI") published by the United States Bureau of Labor, to account for inflation. The change shall be determined by comparison of the Bay Area CPI from the previous February 1, with that of February 1 of the current calendar year.

> Example: If the Bay Area CPI inflation rate 12-month change for February 1, 2023 (year one of the current agreement) is 2%, the year two CPI inflation rate adjusted service charge shall be $28,045.62.

The proposed adjustment shall be presented to the HOSPITAL by COUNTY ninety (90) days prior to the effective date of the of the next contract year (term: November through October).

Term	Start	End	Service Charge
Year 1	11/1/22	6/30/23	$16,039.16[1]
Year 2	7/1/23	6/30/24	TBD[2]
Year 3	7/1/24	6/30/25	TBD[3]
Year 4	7/1/25	6/30/26	TBD[4]

[1] Pro-rated for seven months based on the total service charge for the twelve-month period.
[2] Base 12-month service charge + February 2023 year-over-year CPI adjustment.
[3] Year 2 service charge + February 2024 year-over-year CPI adjustment.
[4] Year 3 service charge + February 2025 year-over-year CPI adjustment.

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

Appendix B – EMS Policies

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

EMS POLICY	605
Effective:	**April 2024**
Approval: EMS Director **Travis Kusman, MPH**	Signed:
Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

STEMI RECEIVING CENTER STANDARDS AND DESIGNATION

I. PURPOSE

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

II. AUTHORITY

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

III. DEFINITIONS

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

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

CARES: Cardiac Arrest Registry to Enhance Survival.

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

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

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

MEDS Viewer: A proprietary product furnished at no cost by American Medical Response which allows the receiving hospital to view and obtain a copy of the prehospital patient care record forthe 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 emergencybasis 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 directlyto hospitals with specialized capabilities to promptly treat these patients.

STEMI Care: Emergency cardiac care for a STEMI Patient.

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

STEMI Medical Director: A qualified physician board-certified by the American Board of MedicalSpecialties ("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-SegmentElevation in an ECG.

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

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 evaluatingthe 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 auditsthe 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 andnon-interventional cardiologists, emergency medicine sub-specialists, and representatives fromground and air emergency medical services providers.

STEMI Receiving Center ("SRC"): A licensed general acute care facility that enters into a written agreement with the LEMSA, meets the minimumhospital 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 minimumhospital STEMI care requirements pursuant to Section 100270.125.

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

IV. POLICY

A. A STEMI Receiving Center ("SRC"), approved and designated by the Agency, shallmeet the following requirements:
   1. Enter into a written agreement with the Agency;
   2. Comply with STEMI Critical Care Facility Requirements set forth in Cal. Code Regs. Tit. 22, § 100270.124, or most current version.

B. STEMI Referring Hospital ("SRH") Requirements:
   1. The hospital shall be committed to supporting the STEMI Program;
   2. The hospital shall be available to provide care for STEMI patients twenty-four (24) hoursper 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 ofSTEMI patients;
   5. The SRH shall have a transfer process through interfacility transfer agreements and have pre-arranged agreements with EMS ambulance providers for rapid transport of STEMI patients to a SRC;
   6. The SRH shall have a program to track and improve treatment of STEMI patients;
   7. The SRH must have a plan to work with a STEMI receiving center and the EMS Agency on quality improvement processes; and
   8. A SRH designated by the EMS Agency shall have a review conductedat least every three years.

C. Personnel
   1. SRC Medical Director
      The SRC shall designate and maintain 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 SRC standards and perform ongoing Quality Improvement ("QI") as part of the hospital QI Program. The SRC Medical Director must be a credentialed member of the medical staff with PCI privileges.

2. SRC Program Manager
   The SRC shall designate and maintain 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 designate and maintain a Cardiovascular Lab Coordinator who shall assist the SRC Medical Director and the SRC Program Manager to ensure compliance with 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 procedures annually;
   c. Physicians must respond immediately upon notification and be available within 30 minutes of when a STEMI patient presents to the hospital; and
   d. The SRC submits a list of Cardiologists with active PCI privileges to the Agency annually.

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

E. Additional Requirements
   Internal policies and procedures shall be developed for the following:
   1. STEMI Alert: Through a "one call" process, the interventional cardiologist and cardiac catheterization lab team will be immediately contacted upon notification by prehospital personnel that they are transporting a patient on whom a 12-Lead ECG that has been interpreted as an "Acute MI Suspected" or "Meets ST Elevation MI Criteria;"

2. Interventional cardiologist and cardiac catheterization laboratory staff will be required to respond immediately upon notification and have a response time standard of 20-30 minutes;
3. Emergency medicine physicians will have the authority to activate the cardiac catheterization laboratory staff;
4. Allow the automatic acceptance of any STEMI patient from a San Mateo County hospital upon notification by the transferring physician;
5. An interventional cardiologist assumes care of the patient from the time the patient arrives at the SRC;
6. Accept all patients meeting STEMI patient triage criteria or upon transfer notification from a SRH, except when on an internal disaster, and provide a plan for triage and treatment of simultaneously presenting STEMI patients, regardless of ICU/ CCU or ED status;
7. Criteria for patients to receive emergent angiography or emergent fibrinolysis based on physician decisions for individual patients;
8. Data listed in 902 – STEMI Data Dictionary shall be collected on an ongoing basis and provided to the Agency;
9. Data will be entered into the Agency approved collection system(s) and submitted monthly, by no later than the 15th calendar day of the following month. The Agency specified data system at the present time is *Get with the Guidelines CAD*; and
10. In consultation with the STEMI CQI Committee, the Agency will update the data dictionary and/ or identify another process to expedite data submission and reduce duplication.

F. Data Management
1. In accordance with Title 22, Division 9, Chapter 7.1 – ST-Elevation Myocardial Infarction Critical Care System regulations, data listed in this section shall be collected on an ongoing basis and provided to the Agency.
2. Data will be submitted and entered in the Agency approved data collection system and submitted monthly, by no later than the 15th calendar day of the following month.
3. In consultation with the STEMI CQI Committee, the Agency will update the data dictionary and/ or identify another process to expedite data submission and reduce duplication.

G. Quality Improvement and Evaluation Process
1. The Quality Improvement ("QI") program will include a process to review all cases of STEMI patients taken to the catheterization laboratory at the end of the procedure and provide immediate feedback to the staff in the Emergency Department and the catheterization laboratory – prior to the end of that shift. Additionally, formal feedback utilizing the standardized format designated by the Agency will be provided to any

prehospital agency or SRH that participated in the care of a "STEMI Activation" patient, within 72 hours. Approved feedback back forms include the Mission: Lifeline Feedback Report in *Get with the Guidelines CAD*.

2. A SRC QI program shall be established, maintained, and conducted to review performance and outcome data for STEMI patients.
3. The SRC will actively participate in the Agency STEMI QI Program. This will require regular meeting attendance by the SRC Medical Director or designee, who will be a staff interventional cardiologist, and the SRC Program Manager.
4. A quality improvement process shall include, at a minimum:
   a. Evaluation of program structure, process, and outcome;
   b. Review of STEMI-related deaths, major complications, and transfers;
   c. A multidisciplinary STEMI Quality Improvement Committee, including both prehospitaland hospital members;
   d. Participation in the QI process by all designated STEMI centers and prehospital providers involved in the STEMI critical care system;
   e. Evaluation of regional integration of STEMI patient movement; and
   f. Compliance with California Evidence Code, Section 1157.7 to ensure confidentiality and a disclosure-protected review of selected STEMI cases.

VI. PROCEDURE

A. Designation

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

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

B. Re-designation

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

hours of changes in program compliance or performance.

C. Discontinuation

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

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

EMS POLICY	603
Effective:	**April 2024**
Approval: EMS Director **Travis Kusman, MPH**	Signed:
Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

HOSPITAL EMERGENT INTERFACILITY TRANSFERS

I. PURPOSE

This policy provides guidance for hospital emergency or other departments (ICU) for ground ambulance transport of emergency patients that require interfacility transfer at the Basic (EMT), Advanced Life Support (Paramedic), or Critical Care Transport (CCT) levels.

II. AUTHORITY

California Code of Regulations, Title 22, Division 9, §100128 and §100170

III. DEFINITIONS

Advanced Life Support ("ALS"): Special services designed to provide definitive prehospital emergency medical care, including, but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs and other medicinal preparations, and other specified techniques and procedures administered by authorized personnel under the direct supervision of a base hospital as part of a local EMS system at the scene of an emergency, during transport to an acute care hospital and while in the emergency department of an acute care hospital until responsibility is assumed by the emergency or other medical staff of that hospital.

Air ambulance: Any aircraft specifically constructed, modified, or equipped and staffed for the primary purpose of responding to emergency medical calls and transporting critically ill or injured patients. Air ambulance aircraft shall be ALS capable.

Basic Life Support ("BLS"): Emergency first aid and cardiopulmonary resuscitation procedures which, as a minimum, include recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life without invasive techniques until the victim may be transported or until advanced life support is available.

Critical Care Transport: Special services designed to provide definitive critical care such that the failure to assess/ recognize resuscitation needs and urgently initiate and maintain acute medical diagnostics and/ or interventions, pharmacological interventions, or technologies would likely result in sudden, clinically significant, or life-threatening deterioration in the patient's condition. These capabilities exceed those of an Advanced Life Support EMS unit.

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

IV. POLICY

A. All transfers shall comply with State and Federal laws.

B. Paramedic/ 9-1-1 system personnel may be used to transport patients ONLY as a last resort when alternative forms of transportation are unavailable, or when the delay in obtaining alterative transport would pose an imminent threat to the patient's health. Hospital personnel accessing the EMS system for transfers shall note that by accessing the EMS system, they may deplete the EMS resources of their local community.

C. Interfacility transfers utilizing Paramedic/ 9-1-1 system personnel remain under San Mateo County LEMSA medical direction and control.

D. Paramedic/ 9-1-1 system units are staffed with two personnel: Typically, one paramedic, and one EMT.

E. Unstable patients shall be transferred only when the reason for the transfer is to medically facilitate the patient's care. The transport of the patient must have the concurrence of both the transferring and receiving physicians that the transfer is appropriate.

F. The sending physician is responsible for determining the appropriate level of transport required.

G. The sending physician is responsible for making arrangements for the receipt of the patient by another physician at the receiving facility.

H. The sending physician or designee shall contact the appropriate dispatch center to arrange for transport.

I. The sending physician or designee shall provide a verbal report and transfer documents to the arriving ambulance crew. Transfer documents must include the names of the sending and receiving physician.

J. For patients requiring emergency transfer, specifically those needing immediate care or intervention at a higher level of care receiving hospital (e.g., critical trauma, STEMI, or stroke):

   1. Ensure the indication for use is appropriate. Emergency ambulance transport utilizes 9-1-1 resources and is reserved for truly emergent cases;

   2. Activate 9-1-1 to request Interfacility Emergency Response;

   3. Arrange transfer of the patient with the receiving physician;

   4. Assess patient needs prior to the transport to determine if the patient needs exceed the paramedic scope of practice. If the care required during transport is beyond the paramedic scope of practice, hospital staff and/or equipment shall be provided by the

transferring hospital and accompany the patient (e.g., if IV pump needed, blood transfusion in progress, management of paralytic agents for intubated patient);

5. Prepare transfer records for the arriving ambulance crew. The ambulance will generally arrive within thirteen (13) minutes of request and patient, paperwork, staff and equipment should be ready for transport by the time the ambulance arrives. Records which are not time sensitive or critical to immediate ongoing treatment of the patient may be faxed, emailed, or alternatively delivered to the receiving facility. If the transfer is delayed once the ambulance arrives on scene, the 9-1-1 ambulance may be reassigned to other emergency needs.
6. The 9-1-1 ambulance crew will arrive at the Emergency Department (ED). If the patient is being transferred from a location other than the ED, a hospital representative shall meet the responding ambulance crew immediately upon arrival, escort prehospital personnel to the patient's location, remain with the crew, and escort the crew back to the ED.

V. LEVELS OF CARE FOR AMBULANCE TRANSPORT

Type of Transport	Patient Needs	Scope of Practice	Contact
9-1-1 Advanced Life Support (Paramedic) Interfacility Emergency Transfer	Emergency intervention or evaluation not available at the sending hospital (e.g., critical trauma, STEMI, stroke, obstetric care for active labor where birth is not imminent). May include neuro and vascular patients transported directly to an OR/intervention lab.	1. Advanced airway (ETT and King); 2. Administer and adjust IV fluids including: Glucose, isotonic saline, lactated ringers, and those containing potassium; 3. ECG monitoring; 4. Defibrillation and synchronized cardioversion; 5. Monitoring of water-sealed chest tube; 6. Administration of ACLS medications	**9-1-1**

Type of Transport	Patient Needs	Scope of Practice	Contact
Critical Care Transport with RN	Advanced care for patients with complex medical care needs as determined by the transferring physician and the ambulance agency. May include pediatric and obstetric patients.	Critical Care RN	**Contact ambulance service directly**
Air Ambulance	RN/Paramedic level of care for patients with complex medical care needs when the receiving hospital is distant and time is a critical factor. May include pediatric and obstetric patients.	Critical Care RN/Paramedic	**Contact air ambulance service directly**

Type of Transport	Patient Needs	Scope of Practice	Contact
Non-emergency Advanced Life Support (Paramedic)	Scheduled transport of patients who require an advanced level of care. Patient does not require emergency intervention at the receiving facility.	1. Advanced airway (ETT and i-gel); 2. Administer and adjust IV fluids including: Glucose, isotonic saline, lactated ringers, and those containing potassium; 3. ECG monitoring; 4. Defibrillation and synchronized cardioversion; 5. Monitoring of water-sealed chest tube; 6. Administration of ACLS medications	**Contact County-contracted emergency ALS ambulance provider**
Non-emergency Basic Life Support (EMT)	Scheduled transport of patients who require a basic level of care.	EMT	**Contact ambulance service directly**

VI. TRAUMA TRANSFER PROCEDURE

TRAUMA TRANSFER PROCEDURE		
STEP 1	Determine appropriate level of transfer using chart below. Contact receiving Trauma Center and confirm acceptance of patient.	
	Stanford Trauma Center (650) 724-2243 (EMERGENCY) (650) 723-4696 (Urgent adults) (650) 723-7342 (Urgent pediatrics **≤ 6 years**)	**Zuckerberg S.F. General Trauma Center** (628) 206-8111 – request to speak with Attending in Charge ("AIC") about trauma re-triage patient **Adults and Pediatrics > 6 years only**
STEP 2	**As soon as need for transfer is recognized, request CODE 3 TRAUMA TRANSFER using ED to Public Safety Communications microwave direct line #344.**	
STEP 3	Prepare patient and paperwork for immediate transport before ambulance arrives.	
STEP 4	For trauma consults for patients not meeting red or blue box criteria, contact the Trauma Center and request to speak to the Trauma AIC about trauma re-triage patient.	

RED BOX EMERGENCY TRANSFER PROCEDURE

Call Trauma Center PRIOR to transfer and state "RED BOX TRAUMA TRANSFER."

ED physician determines patient requires immediate evaluation/ resuscitation by a trauma center.
Some indicators:

- Blood pressure < 90 or decrease in blood pressure by 30 mmHg following 2L IV crystalloid
- Head injury with blown pupil
- Penetrating thoracic or abdominal trauma

BLUE BOX URGENT TRANSFER PROCEDURE

Call Trauma Center PRIOR to transfer.

ED physician determines patient requires urgent evaluation by a trauma center based on the following indicators:

ANATOMIC AREAS	FINDINGS/ RELATED INJURIES
Central Nervous System	• GCS < 14 with abnormal CT scan • Spinal cord or major vertebral injury
Chest	• Major chest wall injury with > 3 rib fractures and/ or pulmonary contusion • Cardiac injury
Pelvis/ Abdomen	• Pelvic ring disruption • Solid organ injury confirmed by CT scan or ultrasound demonstrating abdominal fluid
Major Extremity Injuries	• Fracture/ dislocation with loss of distal pulses and/ or ischemia • Open long bone fractures • Two or more long bone fractures • Amputations that require reimplantation
Multi-System Injury	• Trauma with associated burns – **transfer to closest trauma center** • Major trauma to more than two body regions • Signs of hypoperfusion – Lactate > 4 or Base Deficit > 4
Co-morbid Factors	• Adults > 65 years of age • Pediatric < 6 years of age – transfer to Stanford Pediatric Trauma Center • Pregnancy > 22 weeks gestation • Insulin dependent diabetes • Morbid obesity • Cardiac or respiratory disease • Immunosuppression • Antiplatelet or anticoagulation agents

SAN MATEO COUNTY HEALTH EMERGENCY MEDICAL SERVICES	EMS POLICY	902
	Effective:	**April 2024**
	Approval: EMS Director **Travis Kusman, MPH**	Signed:
	Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

STEMI DATA DICTIONARY

I. PURPOSE

This policy defines the data elements, definitions, and variables used by STEMI Receiving Centers in San Mateo County.

II. AUTHORITY

Health and Safety Code Division 1, Part 1.8, Section 442220 and 1798-443, Division 2.5, Health and Safety Code, Division 2.5, Sections 1791.102, 1797.100, 1797.102, 1797.103, 1797.104, 1797.107, 1797.114, 1797.174, 1797.176, 1797.200, 1797.202, 1797.204, 1797.206, 1797.214, 1797.220, 1797.222, 1797.250, 1797.254, 1797.540, 1798.150, 1798.167, 1798.170, 1798.172, and 1798.175.; and California Code of Regulations, Title 22, Division 9, Chapter 7.1.

III. 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/YYY (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 Cuban Puerto Rican Another Hispanic, Latino or Spanish Origin	ethnicys	1 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
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 1st 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
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	1st ECG Date/Time	Date		firstecgdt	MM/DD/YYYY HH:MM MM/DD/YYYY
n/a	1st ECG obtained	Single Select	Prior to hospital arrival After first hospital arrival	firstecgobt	1 2
n/a	1st 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
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	ptcurmeds	1 2 3 4 5

			ND		6
n/a	Initial serum creatinine	Decimal		Initscr	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	hxpad	1 2
n/a	Reperfusion candidate?	Single select	Yes No	repcand	1 2
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	noreprsn	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	reasdlay	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 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	nadmlytc	1 2 3 4 5 6 7 8 9 10 11 12 13 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	nperfpci	1 2 3

			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		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 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
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

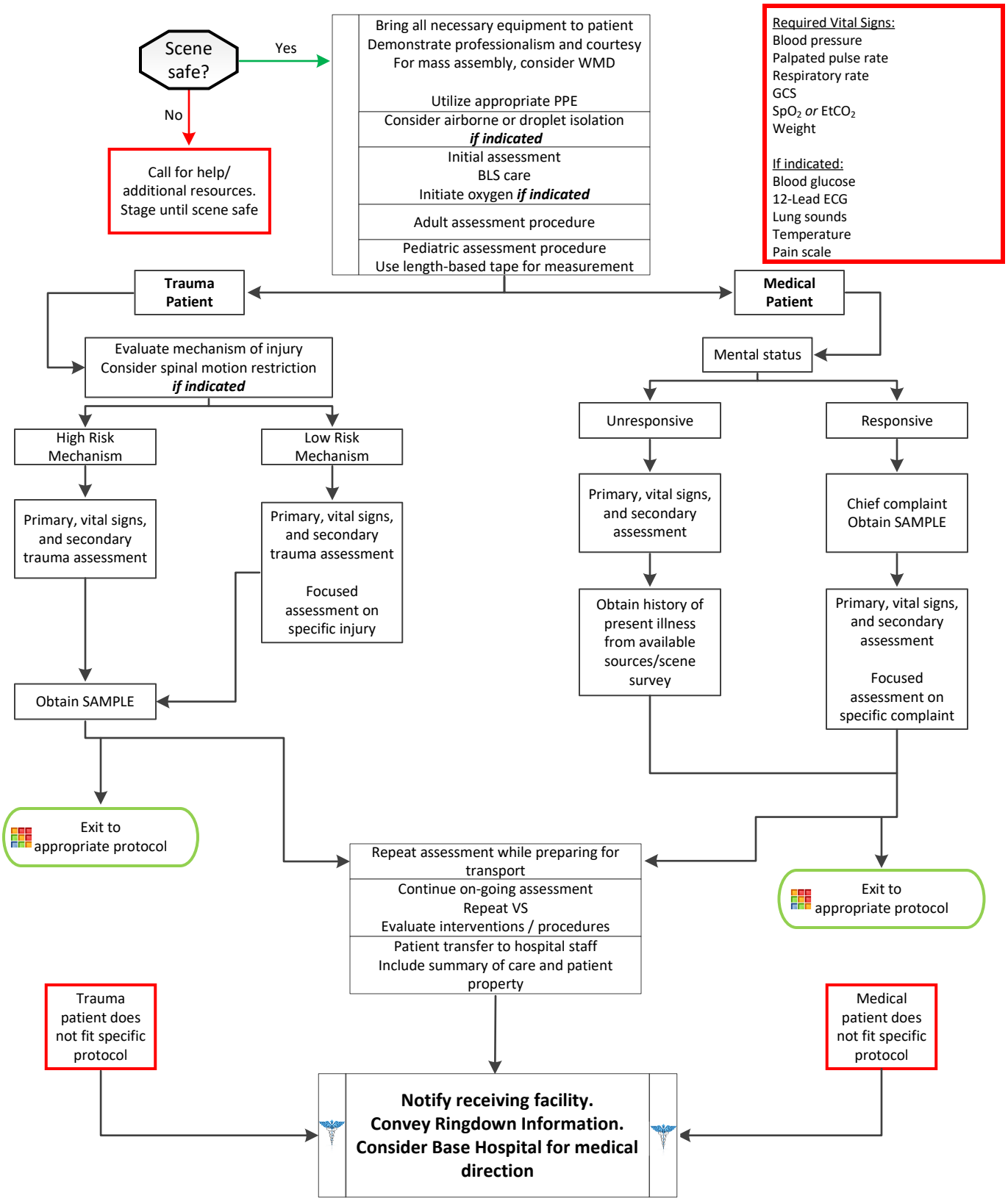
	Comfort measures only	Single select	Yes No	cmo	1 2
n/a	Patient referred to cardiac rehab?	Single select	Yes No referral documented No – medical reason No – patient reason/preference No – healthcare system reason	refehab	1 2 3 4 5
n/a	Smoking cessation counseling	Single select	Yes No	smkcncl	1 2
n/a	ACEI 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
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
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 Desirudin Lupirudin Other direct thrombin inhibitor Apixaban Edoxaban Fondaparinox Rovaroxaban Other Factor Xa inhibitor	medanticoag	1 2 3 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
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

Appendix C – EMS Protocols

San Mateo County Emergency Medical Services

Routine Medical Care



General Treatment Protocol

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

Treatment Protocol G01

Effective April 2024

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 EHR. The EHR 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 *medical* patient is defined as any patient who can be measured on a length-based tape. A pediatric *trauma* patient is defined as any patient < 15 years of age. 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 92% 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 O_2 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.
- For patients on whom a cardiac monitor has been placed, the standard of care and expectation is that they remain on the cardiac monitor until such time that transfer of care has occurred at the hospital.

Routine Medical Care

Trauma Ringdowns

- Unit ID (i.e. M107 or San Mateo Medic 42)
- Code 2 or Code 3 with **trauma activation**
- Age
- Gender
- Mechanism of Injury: Blunt vs. penetrating
  - MVA
    - Restrained vs. unrestrained
    - Location inside 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 location(s)
    - Type of weapon (e.g., handgun/shotgun/ rifle)
  - STABBING
    - Wound location(s)
    - Size of blade
    - Type of blade (e.g., serrated or smooth)
- Chief complaint
- Mental status and GCS
- Physical findings
- Vital signs (BP/HR/RR/O_2 sat/BGL)
- Treatment
- ETA
- How do you copy?

Stroke/ALOC Ringdowns

- Unit ID (i.e. M107 or San Mateo Medic 42)
- Code 2 or Code 3 with **stroke alert**
- Age
- Gender
- Time last known well
- Mental status and GCS
- Chief Complaint
- Physical findings
- Vital signs (BP/HR/RR/O_2 sat/BGL/Temp)
- Treatment
- 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 or San Mateo Medic 42)
- Code 2 or Code 3 with **STEMI alert**
- Age
- Gender
- Chief Complaint
- Physical findings
- Vital signs (BP/HR/RR/O_2 sat/BGL/Temp)
- Treatment
- 12-Lead ECG has been transmitted to your facility
- MR# or patient name and DOB
- ETA
- How do you copy?

Best family contact and phone number must be gathered on all patients and relayed to receiving hospital staff during transfer of care

San Mateo County Emergency Medical Services

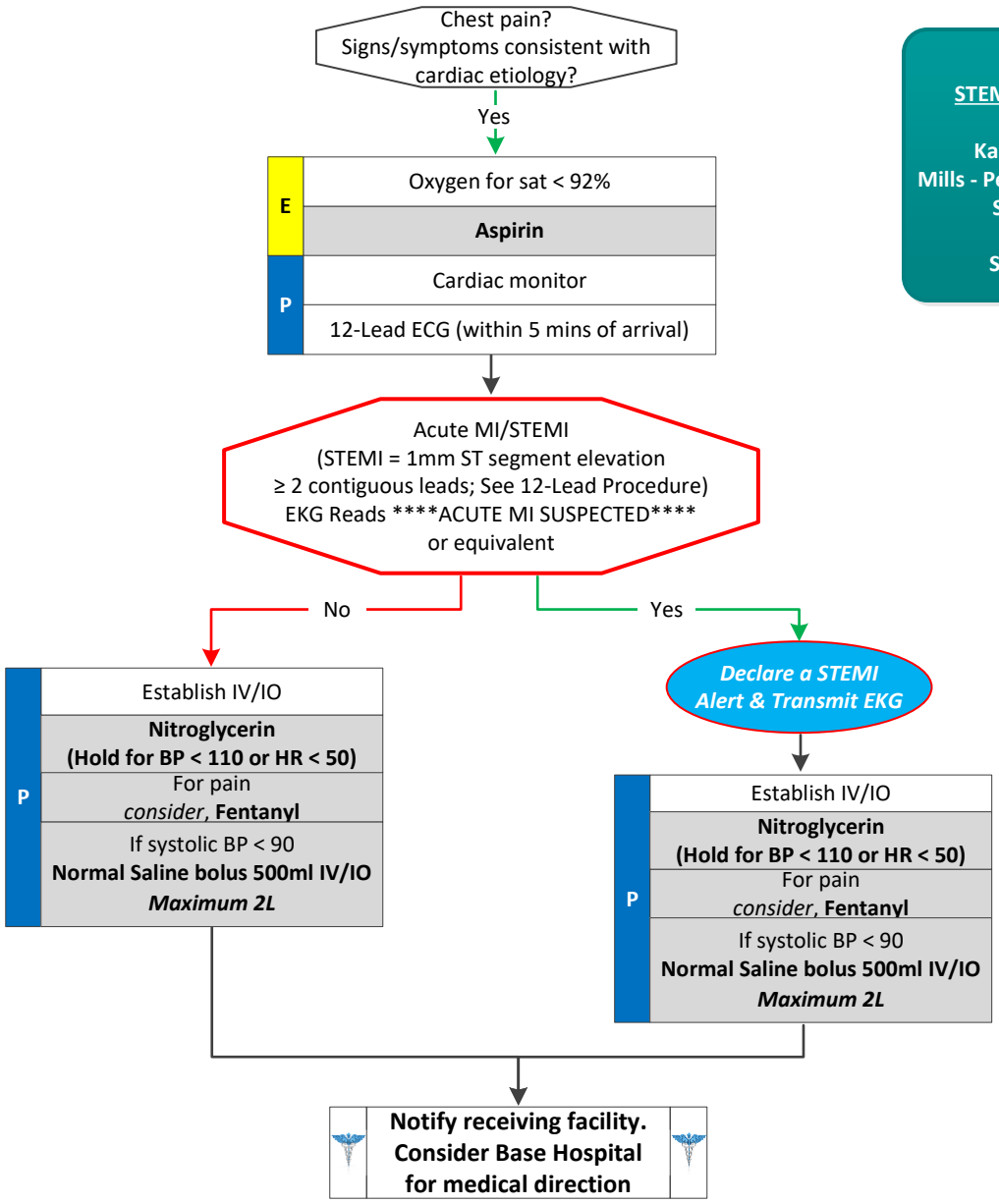
Chest Pain: STEMI

For any suspected STEMI, with or without chest pain

History
- Age
- Medications (Erectile dysfunction medications)
- Past medical history (e.g., MI, angina, diabetes, or post menopausal)
- Allergies
- Recent physical exertion
- **O**nset
- **P**rovocation
- **Q**uality (e.g., pressure, constant, sharp, dull, etc.)
- **R**egion/Radiation/Referred
- **S**everity (0 – 10 scale)
- **T**ime (onset/duration/repetition)

Signs and Symptoms
- Heart rate < 60 with associated hypotension, acute altered mental status, chest pain, acute CHF, seizures, syncope, or shock secondary to bradycardia
- Chest pain
- Respiratory distress
- Hypotension or shock
- Altered mental status
- Syncope
- Nausea
- Abdominal Pain
- Diaphoresis

Differential
- Acute myocardial infarction
- Hypoxia
- Pacemaker failure
- Hypothermia
- Sinus bradycardia
- Athletes
- Head injury (elevated ICP) or stroke
- Spinal cord lesion
- Sick sinus syndrome
- AV blocks (e.g., 1º, 2º, or 3º)
- Overdose



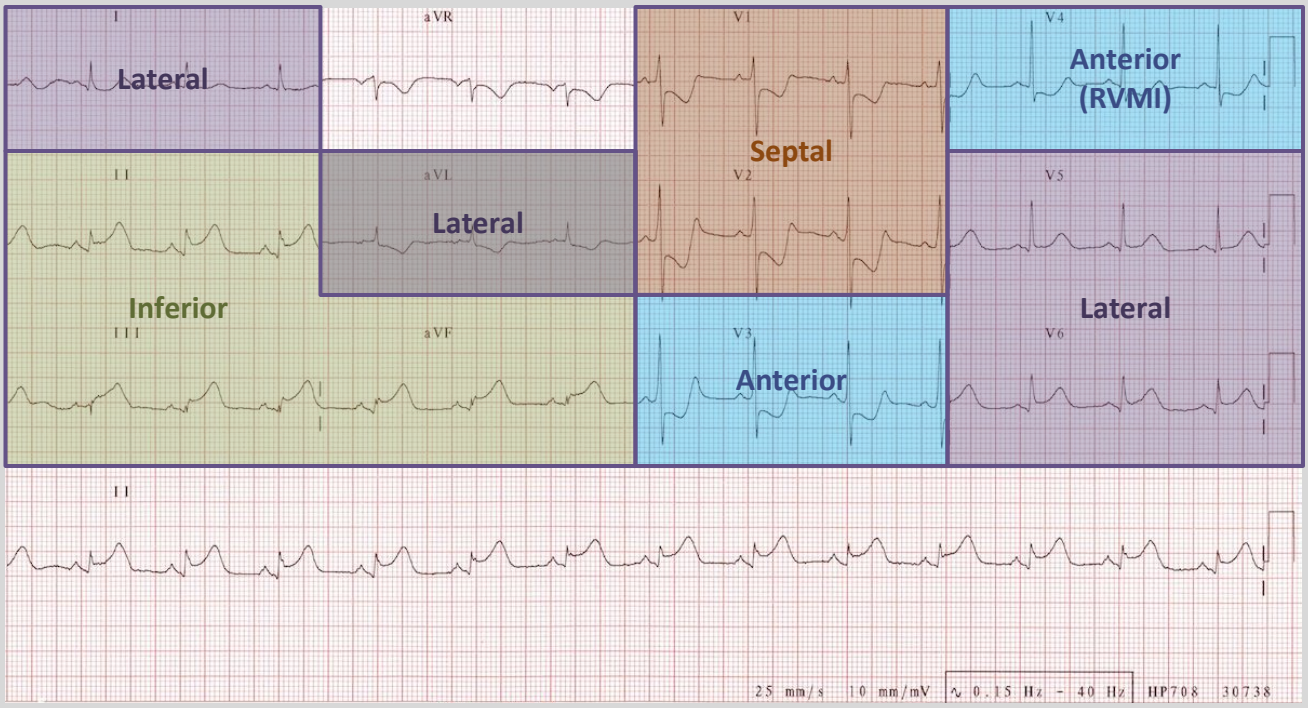
Approved
STEMI Receiving Centers

Kaiser Redwood City
Mills - Peninsula Medical Center
Sequoia Hospital
Seton Hospital
Stanford Hospital

Adult Medical Treatment Protocols

Chest Pain: STEMI

For any suspected STEMI, with or without chest pain



ST Elevation in 2 or more leads: Leads II, III, aVF → Inferior wall MI (vessel likely RCA or LCx)
ST Elevation in 2 or more leads: Leads I, aVL, V_5, V_6 → Lateral wall MI (vessel likely LCx or LAD branch)
ST Elevation in 2 or more leads: Leads V_1, V_2 → Septal wall MI (vessel likely LCx or LAD branch)
ST Elevation in 2 or more leads: Leads V_3, V_4 → Anterior wall MI (vessel likely LCx or LAD branch)

**Look for ST DEPRESSION in reciprocal leads (opposite wall) to confirm diagnosis.
**Isolated ST elevation in aVR with ST depression in all other leads should raise suspicion for a proximal LAD Artery injury or Left Main Coronary Artery abnormality. This is not STEMI criteria, but the 12-Lead ECG should be transmitted to the ED for consultation. Consider transport to a STEMI receiving center.

Pearls

- If there is question about a 12-Lead ECG, transmit it to the closest STEMI Center for physician interpretation.
- Avoid Nitroglycerin in any patient who has used Viagra (Sildenafil) or Levitra (Vardenafil) in the past 24 hours or Cialis (Tadalafil) in the past 36 hours due to the potential of severe hypotension.
- Avoid Nitroglycerin in patients who are having an inferior STEMI
- Many STEMIs evolve during prehospital care and may not be noted on the initial 12-Lead ECG.
- An ECG should be obtained prior to treatment for bradycardia if patient condition permits.
- If a patient has taken their own Nitroglycerin without relief, consider potency of medication. Provider maximum doses do not include patient administered doses.
- Monitor for hypotension after administration of nitroglycerin and opioids.
- Diabetics, geriatric, and female patients often have atypical pain, or only generalized complaints. Suspect cardiac etiology in these patients, and perform a 12-Lead ECG.

COUNTY OF SAN MATEO

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

2024 STROKE Critical Care System Plan

Table of Contents

Introduction 3
Stroke QI Committee – Organizational Description, Structure and Members 4
Stroke QI Committee – Mission, Purpose, and Goals 5
Stroke Receiving Hospitals 6
Stroke Policies and Clinical Protocols 7
Action to Improve 8
Training and Education 9
Annual Update 9
Stroke Center Agreements – Designation Type and Terms 9
Appendix A – Stroke Center Agreements 10
Appendix B – EMS Policies 11
Appendix C – Clinical Protocols 12

Introduction

San Mateo County has a well-developed stroke specialty care program. As one of the first counties in California to establish a tiered destination policy based on last known well time (LWKT), San Mateo County has been a leader in stroke care. We continue to evolve and pursue potential new therapies. All stroke centers have now switched from using tissue plasminogen activator (tPA) to Tenecteplase (TNK) medication for the treatment of acute ischemic strokes. In addition, the mobile stroke unit (MSU) is participating in a clinical trial known as the rFVIIa for Acute Hemorrhagic Stroke Administered at Earliest Time (FASTEST) trial.

San Mateo County's destination policy is designed to quickly deliver patients to the most appropriate hospital for definitive care. Paramedics are trained to identify patients with stroke symptoms and alert hospitals of their arrival via a "stroke alert." Five hospitals serve San Mateo County stroke patients – two as primary stroke centers (PSC), one as a thrombectomy capable stroke center (TSC) and two as comprehensive stroke centers (CSC). This tiered system allows patients to be assessed and treated at either a primary, thrombectomy capable, or comprehensive center, depending on the time of symptom onset and the type of stroke. Seton Hospital is no longer a designated Primary Stroke Center as of April 2023.

San Mateo County's Stroke System Committee is comprised of San Mateo County EMS Agency (EMS Agency) personnel, physicians, stroke coordinator nurses, and American Heart Association (AHA) staff, all of whom participate in the stroke system and work together to improve quality. The committee reviews care and makes recommendations to the EMS Medical Director on best practices for stroke care.

Recent discussions from our stroke committee include protocols for wake-up strokes, and prehospital triage for LVO strokes. We are in the process of collecting data from our prehospital providers and hospital outcome data as we explore LVO triage.

Stroke QI Committee – Organizational Description, Structure and Members

The San Mateo County Stroke Continuous Quality Improvement Committee (Stroke CQI Committee) serves in an advisory capacity to the EMS Agency.
The Stroke CQI Committee has the following values:

- Patient & community-oriented system.
- Provide a caring environment to inspire and produce teamwork.
- Work based on research, scientific examination, and focused process improvement.
- Promotion of candor, integrity, and mutual respect.
- Multidisciplinary partnerships with our system stakeholders help us produce excellence.
- Promotion and provision of community education on stroke prevention and treatment.

The Stroke CQI Committee is a confidential committee and meets quarterly. The committee is comprised of receiving hospital stroke medical directors, receiving hospital stroke coordinators, ED physicians, the American Heart Association, and the EMS Agency Medical Director and staff. The committee supports implementation of stroke system of care regulations promulgated by the California Emergency Medical Services Authority (EMSA), reviews cases, discusses policy and best practices, and makes recommendations to enhance systems of care. San Mateo County was one of the first to implement a tiered destination policy to either a comprehensive, thrombectomy capable, or primary stroke center based on last known well time (LKWT). The committee reviewed and supported a “drip and ship” model for hospitals to expedite transfers to a higher level of care. Enhancements to our stroke system over the last few years include the transition to TNK and the ongoing FASTEST trial involving the MSU.

Get With the Guidelines (GWTG) for Data Collection

Get With the Guidelines (GWTG) ® has been implemented to support the EMS Agency’s evaluation of our system’s performance. GWTG enables the LEMSA and the CQI Committee to view our centers’ adherence to the latest treatment recommendations for stroke. This data is presented at the quarterly CQI Committee meetings.

LEMSA Personnel and Their Roles in the Stroke Critical Care System

- Travis Kusman, MPH, Paramedic, EMS Director
- Gregory H. Gilbert, MD, FAAEMS, EMS Medical Director
- Brian Aiello, MBA, Paramedic, EMS Assistant Director
- Kelly McGinty, MSN, RN, EMS Clinical Nurse
- Chad Henry, MBA, Paramedic, EMS System Manager
- Garrett Fahey, MBA, EMS Management Analyst

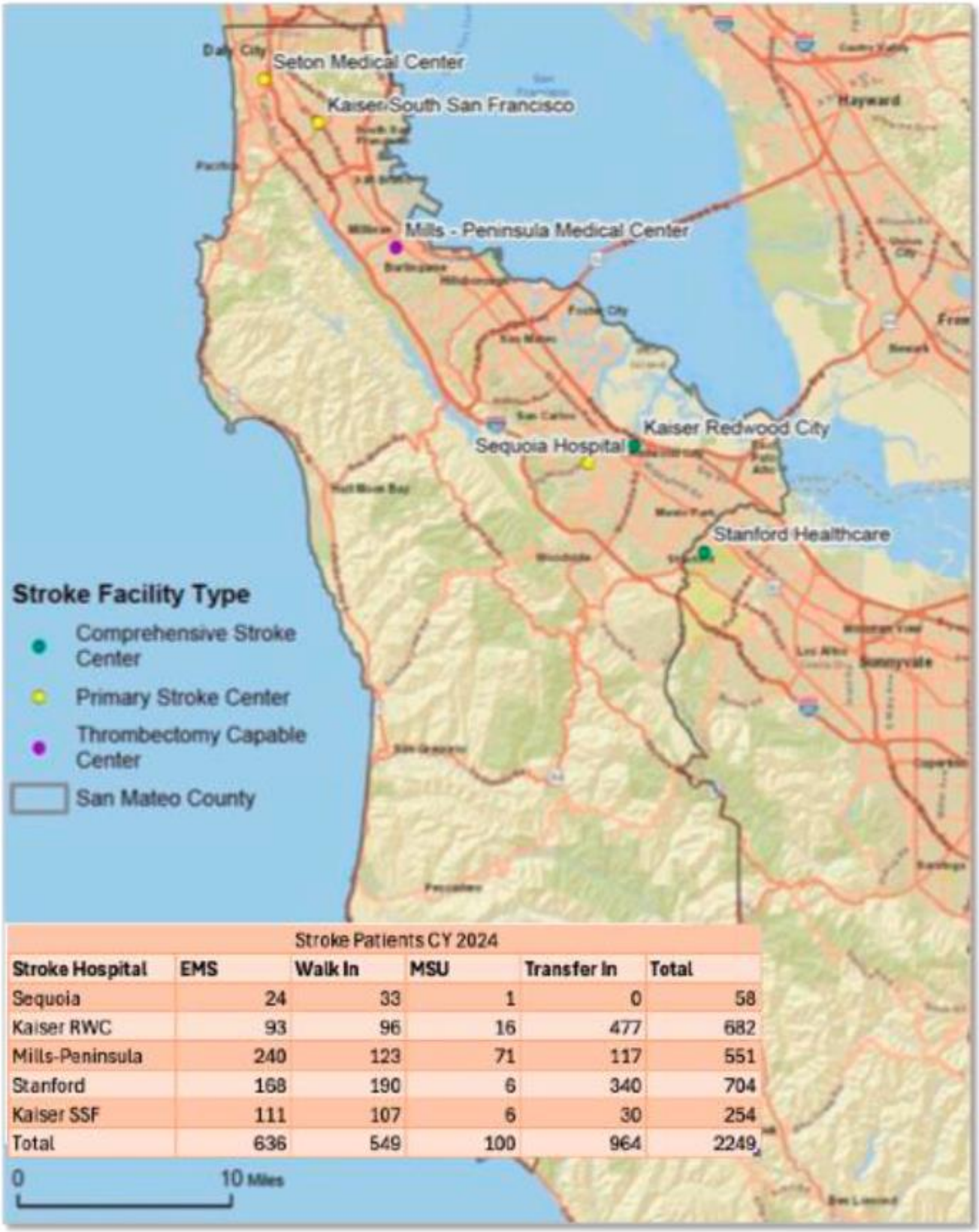
Stroke QI Committee – Mission, Purpose, and Goals

Mission: Improve stroke care outcomes in the San Mateo County Stroke System through data review, quality improvement, education, and innovation.

Purpose: Serve as an advisory committee to the EMS Agency regarding stroke.

Goal	Objectives	Responsible Party(ies)	Target Date	Evaluation/Outcome
1. Improve the quality and service delivered to stroke patients.	1. Collect and analyze SMC EMS system data over the continuum of care. 2. Identify best practices and implement appropriate actions as needed. 3. Recognize clinical excellence in stroke care. 4. Facilitate inter-facility transfers between hospitals and stroke centers.	San Mateo County Receiving Hospitals Designated Stroke Centers EMS Provider Agencies EMS Agency	Continually	Implemented Get With The Guidelines for data collection. Structure of meetings to focus on CQI with data. Stroke regulations are routed for the public comment period. EMS has participated in Joint Commission visits. Policies 522 and 603 have facilitated Interfacility Transfer (IFT) for stroke.
2. Provide education to professionals and community members and measure the effectiveness of public awareness campaigns.	1. Deliver up-to-date and relevant education to health care professionals. 2. Raise public awareness regarding the signs and symptoms of stroke, the importance of activation of the 911 system, and provide education to identified target groups.	San Mateo County Receiving Hospitals Designated Stroke Centers EMS Provider Agencies EMS Agency Pacific Stroke Association	Quarterly	AHA Virtual Stroke Conference available on the SMC Health website until January 2024 Community outreach
3. Conduct, evaluate, and research relevant clinical and system factors having an impact on the stroke system.	1. Collect and analyze research data. 2. Participate in research studies to assist in developing and promoting evidence-based standards of excellence and innovation.	QI Committee Stroke stakeholders	Annually	Mobile Stroke Unit (MSU) FASTEST trial ongoing.

Stroke Receiving Hospitals



Stroke Patients CY 2024

Stroke Hospital	EMS	Walk In	MSU	Transfer In	Total
Sequoia	24	33	1	0	58
Kaiser RWC	93	96	16	477	682
Mills-Peninsula	240	123	71	117	551
Stanford	168	190	6	340	704
Kaiser SSF	111	107	6	30	254
Total	636	549	100	964	2249

Stroke Policies and Clinical Protocols

Our stroke destination policy, Policy 522, was developed in collaboration with receiving hospital stroke program medical directors and is based on the patient's last known well time (LKWT). Additionally, the decision was made to transport all stroke patients, even if the symptom onset was > 24 hours to a stroke center. The associated rationale is that wrap-around services will be available to the patient and their support system, even if acute therapeutic interventions are no longer indicated.

San Mateo County has an agreement designating Stanford Health Care as a receiving center for patients stroke patients originating within our EMS system. While located in neighboring Santa Clara County, Stanford has been seamlessly integrated as a Comprehensive Stroke Center (CSC) into our system. This integration has been incorporated into Policy 519 (Receiving Hospitals) and Policy 522 (Stroke System Triage and Patient Destination). Stanford has been accredited by the Joint Commission as a CSC.

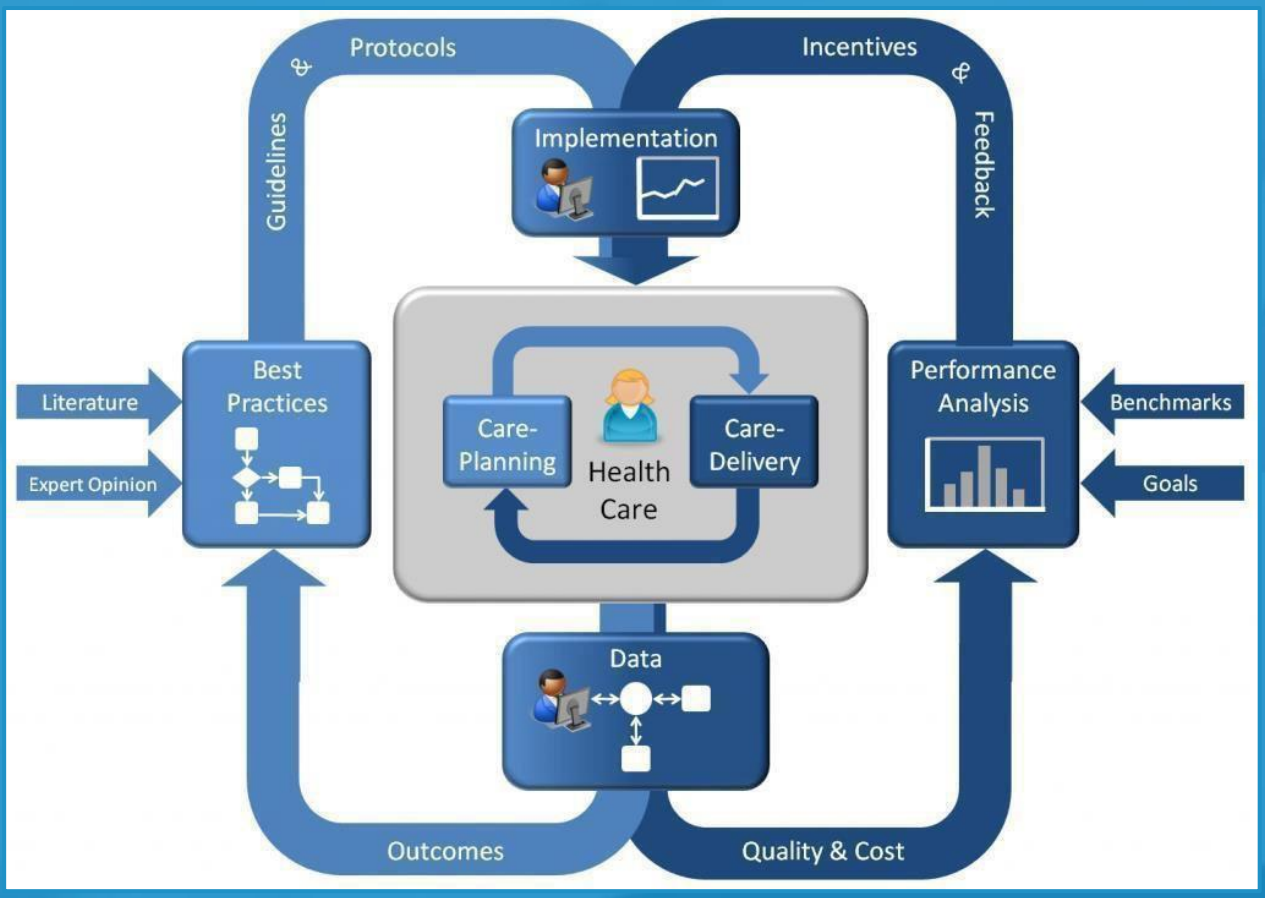
In accordance with our system's general medical treatment protocol, the transporting ambulance provides the receiving hospital with a pre-notification "Stroke Alert" and corresponding pertinent information via a "ring down".

The following polices and protocols determine stroke patient identification, treatment, transport decision, destination decision, and interfacility transport policies:

- Policy 522 – Stroke System Triage and Patient Destination
- Policy 209 – Mobile Stroke Unit Program
- Policy 603 – Hospital Emergency Interfacility Transfers
- Policy 519 – Receiving Hospitals
- Protocol A34 – Stroke/TIA
- Protocol A34T – Stroke/TIA—Mobile Stroke Unit (CT-1)
- Protocol G01 – Routine Medical Care

Action to Improve

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



The EMS Agency reviews and incorporates clinical research and recommendations by the International Stroke Committee (ISC) and the American Heart Association (AHA) to attain best practices in our stroke critical care system. Recommendations from the AHA and the ISC are discussed at quarterly meetings.

Data from GWTG is shared at committee meetings to evaluate and derive system best practices.

Training and Education

The AHA has partnered with the EMS Agency in the provision of training and education, adding valuable resources to the stroke critical care system. The AHA provides continuing education online for EMS providers.

In the last two years, EMS provider agencies and hospitals within the County have provided multiple community outreach activities throughout the county, such as Stroke Awareness Day and Hands-Only CPR education.

Annual Update

The EMS Agency will continue to plan, implement, and evaluate the performance of the EMS system. The Stroke Critical Care System Plan will be updated and submitted to the California Emergency Medical Services Authority (EMSA) annually.

Stroke Center Agreements – Designation Type and Terms

Stroke Centers	Type	Agreement Terms	
Kaiser RWC	CSC	9/1/2019	8/31/2024
Kaiser SSF	PSC	9/1/2019	8/31/2024
Sequoia	PSC	9/1/2019	8/31/2024
Mills-Peninsula	TCS	9/1/2019	8/31/2024
Seton	PSC	1/1/2020	12/31/2024
Stanford	CSC	2/14/2020	2/13/2025

Appendix A – Stroke Center Agreements

Agreement No. _____

AGREEMENT BETWEEN THE COUNTY OF SAN MATEO AND <HOSPITAL>

This Agreement is entered into this <DAY> of <MONTH and YEAR>, 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 Stroke System of Care for patients with Stroke symptoms; and

Whereas, COUNTY wishes to assure the highest quality of care by directing Stroke patients, as defined below, to facilities committed to meeting Primary Stroke Center ("PSC") standards; and

Whereas, COUNTY has found the Hospital meets COUNTY PSC standards; and

Whereas, HOSPITAL is willing to accept designation as a PSC: and

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

Whereas the San Mateo County Emergency Medical Services 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, it is agreed by the parties to this Agreement as follows: 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. <u>Exhibits and Attachments</u>

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

Exhibit A—Services
Exhibit B—Payments and Rates

2. <u>Services to be performed by Hospital</u>

HOSPITAL shall perform services as a PSC for the COUNTY in accordance with the terms, conditions, and specifications set for herein.

3. <u>Payments</u>

HOSPITAL shall pay COUNTY an annual service charge for PSC Designation. The service charge shall be used to pay COUNTY costs of administering and evaluating the Stroke 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 <DATE> through June 30, 2028.

5. Termination

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

COUNTY may terminate or temporarily suspend this Agreement for cause. To terminate or temporarily suspend for cause, COUNTY must first give HOSPITAL written notice of the alleged breach, subject to HOSPITAL's opportunity to cure as set forth below, upon the occurrence of any one or more of the following events:

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 physician coverage for Stroke patients, causing unnecessary risk of mortality and/or morbidity for Stroke 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 Primary Stroke Center Standards;
f. Loss or suspension of licensure as an acute care hospital or loss or suspension of any existing or future special permits 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 stroke patients intended for HOSPITAL; and
i. Repeated failure to submit specified reports, Stroke System data, or other information required under this Agreement.

HOSPITAL shall not advertise in any manner or otherwise hold itself out to be affiliated with a stroke critical care system or identify itself as a stroke center unless they have been designated by the local EMS Agency, in accordance with the Health and Safety Code.

6. Contract Materials

Prior to the exercise of COUNTY's 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 entity 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.

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 subcontractor, 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) 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, regulations, and executive orders, 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, as well as any required economic or other sanctions imposed by the United States government or under state law in effect during the term of the Agreement. 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, regulation, or executive order, the requirements of the applicable law, regulation, or executive order 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 subcontractor 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 HOSPITAL and subcontractors 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 HOSPITAL 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 also report to the County the filing by any person in any court any complaint of discrimination or the filing by any person of any and all charges with the Equal Employment Opportunity Commission, the Fair Employment and Housing Commission, or any other entity charged with the investigation of allegations of discrimination within seventy-five (75) days of such filing, provided that within such seventy-five (75) days such entity has not notified HOSPITAL that such charges are dismissed or otherwise unfounded. Such notification to COUNTY shall include a general description of the allegations and the nature of specific claims being asserted. HOSPITAL shall provide COUNTY with a statement regarding how it responded to the allegations within sixty (60) days of its response and shall update COUNTY regarding the nature of the final resolution of such allegations.

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 Executive Officer, 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 Executive Officer.

To effectuate the provisions of this Section, the County Executive 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.

h. Compliance with Living Wage Ordinance

As required by Chapter 2.88 of the San Mateo County Ordinance Code, HOSPITAL certifies all contractor(s) and subcontractor(s) obligated under this contract shall fully comply with the provisions of the County of San Mateo Living Wage Ordinance, including, but not limited to, paying all Covered.

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 unless this Agreement's total value listed in the Section titled "Payments", exceeds two-hundred thousand dollars ($200,000); HOSPITAL acknowledges that Chapter 2.85's requirements will apply if this Agreement is amended such that its total value exceeds that threshold amount.

14. Retention of Records; Right to Monitor and Audit

(a) HOSPITAL shall maintain all required records relating to services provided under this Agreement for three (3) years after COUNTY makes final payment and all other pending matters are closed, and HOSPITAL shall be subject to the examination and/or audit by COUNTY, a Federal grantor agency, and the State of California.

(b) HOSPITAL shall comply with all program and fiscal reporting requirements set forth by applicable Federal, State, and local agencies and as required by COUNTY.

(c) HOSPITAL agrees upon reasonable notice to provide to COUNTY, to any Federal or State department having monitoring or review authority, to COUNTY's authorized representative, and/or to any of their respective audit agencies access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules, and regulations, to determine compliance with this Agreement, and to evaluate the quality, appropriateness, and timeliness of services performed.

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 / EMS Director
Address:	801 Gateway Blvd., Ste. 200 South San Francisco, CA 9408
Telephone:	650-573-2564
Email:	tkusman@smcgov.org

In the case of HOSPITAL, to:

Name/Title:	<NAME/TITLE>
Address:	<ADDRESS>
Telephone:	<PHONE>
Email:	<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. <u>Payment of Permits/Licenses</u>

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 NAME>

_____	_____	_____
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 (Primary Stroke Center) shall meet the following minimum criteria:

1. Have adequate staff, equipment, and training to perform rapid evaluation, triage, and treatment for the stroke patient in the emergency department.

2. Develop, demonstrate, and maintain standardized stroke care protocol/order set.

3. Have stroke diagnosis and treatment capacity twenty-four (24) hours a day, seven days a week, three hundred and sixty-five (365) days per year.

4. Participate in the County Stroke Continuous Quality Improvement (CQI) committee.

5. Participate in the local EMS data collection process in accordance with local EMS policies and procedures to provide a data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

   A. Timely enter and submit standardized San Mateo County stroke data via the County-approved data collection system.

   B. Timely submit standardized San Mateo County stroke data to the California EMS Information System ("CEMSIS") quarterly.

6. Provide continuing education in stroke care provided for staff physicians, staff nurses, staff allied health personnel, and EMS personnel.

7. Provide public education on stroke and illness prevention.

8. Maintain a Stroke Medical Director, who may also serve as a physician member of the stroke team, who is board-certified in neurology or neurosurgery, or another board-certified physician with sufficient experience and expertise dealing with cerebral vascular disease as determined by the hospital credentials committee.

9. Maintain a Stroke Program Manager who is a registered nurse, physician assistant, or nurse practitioner capable of caring for acute stroke patients who may also serve as a member of the stroke team.

10. Maintain a stroke team, available to see in person or via telehealth, a patient identified as a potential acute stroke patient within 15 minutes following the patient's arrival at the emergency department or within 15 minutes following a diagnosis of a patient's potential acute stroke.

11. Maintain at a minimum, a stroke team that shall:

    A. Have a neurologist, neurosurgeon, interventional neuro-radiologist, or emergency physician who is board-certified or board-eligible in neurology, neurosurgery, endovascular radiology, or other board-certified physician with sufficient experience and expertise in managing patients with acute cerebral vascular disease as determined by the hospital's credentials committee.

B. Have a registered nurse, physician assistant, or nurse practitioner capable of caring for acute stroke patients that has been designated by the hospital who may serve as a stroke program manager.

12. Have written policies and procedures for stroke services which shall include written protocols and standardized orders for the emergency care of stroke patients, that are updated and revised at least every three (3) years.

13. Participate in data-driven continuous quality improvement processes including collection and monitoring of standardized performance measures using the County-approved stroke program data system.

14. Have neuro-imaging services capability that is available twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days per year, such that imaging shall be initiated within twenty-five (25) minutes following emergency department arrival.

15. Provide other imaging within a clinically appropriate timeframe to include at a minimum: MRI, CTA and/or Magnetic Resonance Angiography (MRA), TEE or TTE, and interpretation of the imaging.

16. If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital and available to County upon request.

17. Neuro-imaging studies shall be reviewed by a physician with appropriate expertise, such as a board-certified radiologist, board-certified neurologist, board-certified neurosurgeon, or residents who interpret such studies a part of their training in ACGME-approved radiology, neurology, or neurosurgery training program within forty-five (45) minutes of emergency department arrival.

18. Have laboratory services available twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days per year, such that services be performed within forty-five (45) minutes following emergency department arrival.

19. Provide acute care rehabilitation services.

20. Have transfer agreements with one or more higher-level care centers when clinically warranted or for neurosurgical emergencies

COUNTY (EMS AGENCY) shall:

1. Developed and implemented a stroke critical care system for San Mateo County.

2. Provide opportunity for Stroke Centers to participate in the Stroke Critical Care System Plan goals and objectives.

3. Develop a Stroke Critical Care System Plan and submit annual updates to the State EMS Authority as part of the EMS System Plan.

4. Establish EMS System prehospital care protocols related to the early recognition, assessment, treatment, and transport of stroke patients for prehospital emergency medical care personnel in collaboration with system participants and stakeholders.

5. Require the use of a validated prehospital stroke-screening algorithm for early recognition and assessment by prehospital personnel.

6. Establish mechanism for prehospital personnel to communicate findings of suspected stroke patients in advance of the arrival to the stroke centers via a one-call system.

7. Develop Stroke Data System Standards in collaboration with designated Stroke Centers and implement a standardized data collection and reporting process for stroke critical care systems. EMS Agency is currently utilizing "Get With The Guidelines" (GWTG for Stroke) that collects both prehospital and hospital patient care data.

    A. The prehospital stroke patient care elements shall be compliant with the most current version of CEMSIS and the National EMS Information System (NEMSIS).

    B. The hospital stroke patient care elements shall be consistent with the U.S. Centers for Disease Control and Prevention, Paul Coverdell National Acute Stroke Program Resource Guide.

8. Coordinate County stroke critical care system quality improvement process that shall include at a minimum:
    A. Evaluation of program structure, process, and outcome

    B. Review of stroke-related deaths, major complications, and transfers.

    C. A multi-disciplinary Stroke CQI committee, including both prehospital and hospital members.

    D. Ensure participation in the CQI process by all designated stroke centers and prehospital providers involved in the stroke critical care system.

    E. Evaluation of regional integration of stroke movement for best practices.

    F. Participation in the stroke data management system.

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

9. Be responsible for ongoing performance evaluations and quality improvement activities of the stroke critical care system.

10. Provide an opportunity for HOSPITAL to participate in EMS Agency sanctioned studies or research projects.

11. Utilize "The Joint Commission" (TJC) certification or similar nationally recognized standard as part of the COUNTY verification process for designation as a Primary Stroke Center.

12. Participate in TJC certification visit to confirm State and Local requirements are being meet for continued designation as a Primary Stroke Center.

13. Establish service charges which will be paid by HOSPITAL to pay COUNTY for the costs of administering, evaluating, updating and enhancing data collection system, and public information/outreach education the Stroke Care System, based on actual cost to the COUNTY.

DEFINITIONS FOR THE PURPOSES OF THIS AGREEMENT:

1. EMERGENCY MEDICAL SERVICES AUTHORITY or "EMS Authority" means the department in California that is responsible for the coordination and the integration of all state activities concerning emergency medical services (EMS).

2. LOCAL EMERGENCY MEDICAL SERVICES AGENCY (LEMSA) OR "local EMS agency" means the agency, department, or office having primary responsibility for administration of emergency medical services in a county which is designated pursuant Health and Safety Code section 1797.200.

3. BOARD-ELIGIBLE means a physician who has applied to a specialty board examination and has completed the requirements and is approved to take the examination by ABMS. Board certification must be obtained within the allowed time by ABMS from the first appointment.

4. COMPREHENSIVE STROKE CENTER means a hospital with specific abilities to receive, diagnose, and treat all stroke cases and provide the highest level of care for stroke patients.

5. CLINICAL STROKE TEAM means a team of healthcare professionals who provide care for the stroke patient and may include but is not limited to, neurologists, neuro-interventionalists, neurosurgeons, anesthesiologists, emergency medicine physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.

6. PRIMARY STROKE CENTER-means a hospital that treats acute stroke patients and patients who may benefit from transfer to a higher level of care when clinically warranted.

7. PROTOCOL means a predetermined medical care guideline, which may include standing orders.

8. QUALIFIED NEUROLOGIST, for this agreement, shall be board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry.

9. QUALIFIED NEUROSURGEON, for this agreement, shall be board-certified by the American Board of Neurological Surgery.

10. QUALIFIED RADIOLOGIST, for this agreement, shall be board certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

11. QUALITY IMPROVEMENT or "QI" means methods of evaluation that are composed of structure, process, and outcome evaluations which focus on improvement efforts to identify causes of the problems, intervene to reduce or eliminate these causes, and take steps to correct the process and recognize excellence in performance or delivery of care.

12. STROKE means a condition of impaired blood flow to a patient's brain resulting in brain dysfunction, most commonly through vascular occlusion or hemorrhage.

13. STROKE CALL ROSTER means a schedule of licensed health professionals available twenty-four (24) hours a day, seven days a week for the care of stroke patients.

14. STROKE CARE means emergency transport, triage, diagnostic evaluation, acute intervention and other acute care services for stroke patients that potentially require immediate medical or

surgical intervention treatment and may include education, primary prevention, acute intervention, acute and subacute management, prevention of complications, secondary stroke prevention, and rehabilitative services.

15. STROKE CRITICAL CARE SYSTEM means s subspecialty care component of the EMS system developed by a local EMS agency. This critical care system links prehospital and hospital care to deliver optimal treatment to the population of stroke patients.

16. STROKE MEDICAL DIRECTOR means a board-certified physician in neurology or neurosurgery or another board with sufficient experience and expertise dealing with cerebrovascular disease as determined by the hospital credentialing committee that is responsible for the stroke service, performance improvement, and patient safety programs related to a stroke critical care system.

17. STROKE PROGRAM MANAGER means a registered nurse or qualified individual designated by the hospital with the responsibility for monitoring and evaluating the care of stroke patients and the coordination of performance improvement and patient safety programs for the stroke center in conjunction with the stroke medical director.

18. STROKE PROGRAM means an organizational component of the hospital specializing in the care of stroke patients.

19. STROKE TEAM means the personnel, support personnel, and administrative staff that function together as part of the hospital's stroke program.

20. TELEHEALTH means the mode of delivering healthcare services and public health via information and communication technologies to facilitate the diagnosis, consultation, treatment, education, care management, and self-management of a patient's healthcare while the patient is at the originating site and the health care provider is at a distant site.

21. THROMBECTOMY-CAPABLE STROKE CENTER (TSC) means a primary stroke center with the ability to perform mechanical thrombectomy for the ischemic stroke patient when clinically

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 service charge schedule and terms:

HOSPITAL shall pay COUNTY an annual service charge of for the PSC Designation. The service charge shall be used to pay COUNTY costs of administering and evaluating the Stroke Care System, updating and enhancing the data collection system, and providing public information/outreach education.

Service Charge

Description	Amount
Base Primary Stroke Center (PSC) Designation Service Charge – Twelve-month Period	**$29,647.85**

CPI Adjustment. COUNTY may increase the annual service charge by a percentage up the percentage change in the Consumer Price Index All Urban Consumers San Francisco-Oakland-San Jose ("Bay Area CPI") published by the United States Bureau of Labor, to account for inflation. The change shall be determined by comparison of the Bay Area CPI from the previous February 1, with that of February 1 of the current calendar year.

> Example: If the Bay Area CPI inflation rate 12-month change for February 1, 2025 (year one of the current agreement) is 2.4%, the year two CPI inflation rate adjusted service charge shall be $30,359.40.

The proposed adjustment shall be presented to the HOSPITAL by COUNTY ninety (90) days prior to the effective date of the of the next contract year (term: June through July).

Term	Start	End	Service Charge
Year 1	TBD	6/30/2025	**$TBD[1]**
Year 2	7/1/2025	6/30/2026	TBD[2]
Year 3	7/1/2026	6/30/2027	TBD[3]
Year 4	7/1/2027	6/30/2028	TBD[4]

[1] Year 1: Base service charge pro-rated for ten months.
[2] Year 2: Base service charge + February 2025 year-over-year CPI adjustment.
[3] Year 3: Year 2 service charge + February 2026 year-over-year CPI adjustment.
[4] Year 4: Year 3 service charge + February 2027 year-over-year CPI adjustment.

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

Appendix B – EMS Policies

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

EMS POLICY	522
Effective:	**April 2024**
Approval: EMS Director **Travis Kusman, MPH**	Signed:
Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

STROKE SYSTEM TRIAGE AND PATIENT DESTINATION

I. PURPOSE

This policy describes the San Mateo County stroke system and triage policy and provides an overview of data collection and system quality improvement for the San Mateo County stroke system.

This system is designed to provide timely, appropriate care to patients who have symptoms of acute stroke. Acute stroke patients will be transported to a Primary Stroke Center, Thrombectomy Capable Stroke Center, or a Comprehensive Stroke Center in accordance with LEMSA policy.

II. AUTHORITY

Health and Safety Code, Division 2.5, Section 1797.220 and 1798

III. DEFINITIONS

Acute stroke patient: A patient who meets assessment criteria for an acute stroke in accordance with LEMSA's patient care protocols and last known well time is within 24 hours.

Comprehensive Stroke Center ("CSC"): A hospital that has successfully completed and maintains Joint Commission accreditation as a CSC and enters into a written agreement with LEMSA to be designated as a stroke receiving center. These centers can treat both ischemic and hemorrhagic strokes.

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

Mobile Stroke Unit ("MSU"): An ambulance capable of delivering at minimum Advanced Life Support ("ALS") services that has a Computerized Tomography ("CT") scanner capable of performing head CTs in the community and prior to arriving at a hospital.

Primary Stroke Center ("PSC"): A hospital that has successfully completed and maintains Joint Commission accreditation as a PSC and enters into a written agreement with LEMSA to be

designated as a PSC. These centers can treat stroke patients throughout the continuum of care.

Thrombectomy Capable Stroke Center ("TSC"): A primary stroke center with the ability to perform mechanical thrombectomy for an ischemic stroke patient and meets the designation requirements by Joint Commission and enters into a written agreement with LEMSA to be designated as a TSC. These centers can treat both ischemic and hemorrhagic strokes throughout the continuum of care.

IV. AUTHORIZED STROKE RECEIVING CENTERS

Primary Stroke Centers (PSC):

1. Kaiser Redwood City
2. Kaiser South San Francisco
3. Mills-Peninsula Medical Center
4. Sequoia Hospital
5. Stanford Hospital

Thrombectomy-Capable Stroke Center (TSC):

1. Kaiser Redwood City
2. Mills-Peninsula Medical Center
3. Stanford Hospital

Comprehensive Stroke Centers (CSC):

1. Kaiser Redwood City
2. Stanford Hospital

V. PROCEDURE

A. Notification of the Stroke Center
   1. The EMS crew shall notify the Stroke Center as soon as possible during the call.
   2. EMS verbal report: As soon as feasible, the crew from the scene will contact the intended stroke center and inform them an acute stroke patient is enroute to that facility. It is recommended that the report be started with the statement "This is a Stroke Alert."
   3. The report shall include EMS Stroke/ ALOC ringdowns per Routine Medical Care Protocol.

B. Diversion by a Stroke Center
   1. Stroke Centers shall not close to acute stroke patients except for the following:
      a. Failure of all CT scanners in the Stroke Center
      b. Declared internal disaster
   2. If a Stroke Center must close to stroke patients, the nurse leader or equivalent will call San Mateo County Public Safety Communications at (650) 363-4981 and request a system wide notification.

C. Documentation

1. A completed electronic health record ("EHR") shall be left at the Stroke Center for all stroke patients before the paramedic leaves the receiving hospital.

D. Transferring an acute stroke patient to a higher level of care (See also 603 – Hospital Emergency Interfacility Transfers)

1. Patients found to have a large vessel occlusion ("LVO") should be expeditiously transferred to a CSC or TSC if the patient meets inclusion criteria for clot retrieval.
2. In the event that an acute stroke patient needs to be transferred to a higher level of stroke care, the emergency department should:
   a. Provide appropriate assessment and emergency treatment.
   b. Notify the receiving CSC or TSC of the intent to transfer the patient, using the term "SIR" ("Stroke Interventional Radiology") and provide as complete a report as possible.
   c. Use the microwave line and request an interfacility transport. If unable to use the microwave line, San Mateo County Public Safety Communications can be contacted at (650) 363-4981. Request a paramedic ambulance to transport the patient to the receiving CSC or TSC. The ambulance will arrive shortly.
3. If initiated patient care exceeds the paramedic scope of practice, qualified medical or nursing staff should accompany the patient in the 9-1-1 ambulance, or a Critical Care Transport unit is required.
   a. It is recommended that the medical staff or RN perform a neurological exam every 15 minutes enroute and follow their routine hospital procedures for care of the patient.
4. Provide the ambulance crew with as complete a record as possible (verbal essential, written if possible). Do not delay transport of the patient. A complete written patient report can be faxed to the receiving stroke center prior to patient arrival at CSC or TSC.
5. If a non-stroke center emergency department receives an acute stroke patient by 9-1-1 ambulance, the hospital shall notify LEMSA in accordance with 523 – EMS Event Reporting.

E. Stroke System Quality Improvement

Each designated stroke hospital, EMS system participant, and LEMSA will have representatives on the Stroke Quality Improvement Committee.

F. Data Collection

1. Hospitals shall enter stroke patient and care data into Get With the Guidelines or LEMSA authorized equivalent.
2. LEMSA staff will review hospital and EMS data and provide reports to be presented to the Stroke Quality Improvement Committee.

SAN MATEO COUNTY HEALTH EMERGENCY MEDICAL SERVICES	EMS POLICY	209
	Effective:	**April 2024**
	Approval: EMS Director **Travis Kusman, MPH**	Signed:
	Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

MOBILE STROKE UNIT PROGRAM

I. PURPOSE

This policy establishes requirements for a mobile stroke program.

II. AUTHORITY

California Health and Safety Code Division 2.5, §1797.90. 1797.220, 1797.221; California Code of Regulations, Title 22, Division 9, Chapter 7.2

III. DEFINITIONS

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

Mobile Stroke Unit ("MSU"): An ambulance capable of delivering at minimum Advanced Life Support ("ALS") services that has a Computerized Tomography ("CT") scanner capable of performing head CTs in the community and prior to arriving at a hospital.

Mobile Stroke Unit ("MSU") Program: A predetermined plan that includes a MSU and MSU team who respond in an ambulance and provide high level acute stroke care at the scene of an emergency, during transport to an acute care hospital and while in an acute care hospital until responsibility is assumed by the emergency or other medical staff of that hospital. The program is approved by the EMS Agency to be deployed in the prehospital setting to provide rapid assessment of suspected acute stroke patients by utilizing a mobile computed tomography ("CT") scanner on-scene and able to transmit images to a remote site and provide a hard copy to receiving hospitals. Further elements of the program can include treatment with intravenous thrombolytic therapy, hemostatic agents, and blood pressure medications and determination of appropriate hospital destination depending on CT scanner findings and consultation with closest receiving facility capable of supporting the suspected or confirmed stroke patient.

Mobile Stroke Unit ("MSU") Team: An organized group of health care providers that specialize in stroke care and may include, but not limited to a radiology technician, registered nurse, paramedic, emergency medical technician, and neurologist.

IV. MOBILE STROKE PROGRAM REQUIREMENTS

A. A mobile stroke program shall meet the following requirements:
   1. Be approved by LEMSA.

2. Possess a physical response unit specially configured and suitable for the delivery of MSU services that has been appropriately authorized as emergency response vehicle by the California Highway Patrol and LEMSA.
3. Designate a program Medical Director who shall be responsible for the functions of the MSU. The MSU Program Medical Director shall be a physician on hospital staff at a San Mateo County hospital, licensed in the State of California, and Board Certified in Neurology, Neurosurgery, or Neuroradiology by the American Board of Medical Specialties.
4. Designate a Program Manager who shall be responsible for ensuring timely and accurate data collection and who works with the MSU Program Medical Director to develop a data collection process and a quality improvement program.
5. MSU shall be staffed with a minimum of one (1) stroke trained nurse, one (1) emergency medical technician or paramedic, and one (1) CT technician. A stroke neurologist may also be included as part of the team. Neurology services may be provided in person or via telemedicine consult.
6. Implement a quality improvement ("QI") program for program monitoring and evaluation. Program results shall be shared with LEMSA and San Mateo County Stroke QI Committee quarterly, or when requested.
7. Transport patients to the closest appropriate stroke facility based on LEMSA protocols, regardless of the results of patient evaluation or treatment rendered by MSU, unless redirected by receiving facility.
8. Provide copies of all staff evaluation, lab results, electronic health records, and imaging to the receiving hospital upon delivery of the patient.
9. MSU Program shall develop activation, dispatch and longitudinal patient-care integration procedures in collaboration with the Authorized San Mateo County EMS Provider in each exclusive operating area in which the MSU delivers service and Public Safety Communications, which are subject to LEMSA approval.
10. A written agreement between MSU Program and each exclusive operating area provider in which MSU will operate shall be executed, which is subject to LEMSA approval. The agreement shall address, at minimum, the following:
    a. Staffing
    b. Billing
    c. Documentation Sharing
    d. Insurance and Indemnity

B. MSU Program shall develop policies and procedures that address patient care, include the following and are subject to LEMSA approval:
1. Patient assessment and identification of patients requiring MSU services;
2. indications for CT procedures for transmission and reporting;

3. indications and contraindications for IV thrombolytic therapy (based on current American Heart Association/American Stroke Association guidelines);
4. documentation of all evaluation and treatment (including lab results and copies of imaging); and
5. reporting of adverse events.

C. MSU Program shall develop policies that address data collection, dispatch, and interaction between staff of MSU and the 9-1-1 jurisdictional ambulance provider and first responders, which are subject to LEMSA approval.

V. MOBILE STROKE PROGRAM APPROVAL

A. MSU Programs shall submit a letter of intent to LEMSA outlining the following:
   1. Qualifications of the composition of MSU program;
   2. Proposed response area;
   3. Deployment and dispatch plan for integration with the 9-1-1 jurisdictional provider; and
   4. Data collection and quality improvement process.

B. Institutional Review Board approvals from all participating hospitals are to be shared with LEMSA.

C. If MSU will be used to transport stroke patients, submit a copy of the written agreement with the 9-1-1 jurisdictional provider/ EOA provider.

D. LEMSA will review and verify the submitted information. LEMSA reserves the sole discretion to approve or reject any MSU proposal as well as suspend, stipulate terms of cure of deficiency / non-compliance, or terminate the service of any MSU program.

E. After completion of the study program, MSU program will submit a comprehensive report to LEMSA. LEMSA will consider the report in conjunction with the Stroke QI Committee, in determining whether to approve MSU for continued operation in San Mateo County beyond the initial term of the pilot study.

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

EMS POLICY	603
Effective:	**April 2024**
Approval: EMS Director **Travis Kusman, MPH**	Signed:
Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

HOSPITAL EMERGENT INTERFACILITY TRANSFERS

I. PURPOSE

This policy provides guidance for hospital emergency or other departments (ICU) for ground ambulance transport of emergency patients that require interfacility transfer at the Basic (EMT), Advanced Life Support (Paramedic), or Critical Care Transport (CCT) levels.

II. AUTHORITY

California Code of Regulations, Title 22, Division 9, §100128 and §100170

III. DEFINITIONS

Advanced Life Support ("ALS"): Special services designed to provide definitive prehospital emergency medical care, including, but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs and other medicinal preparations, and other specified techniques and procedures administered by authorized personnel under the direct supervision of a base hospital as part of a local EMS system at the scene of an emergency, during transport to an acute care hospital and while in the emergency department of an acute care hospital until responsibility is assumed by the emergency or other medical staff of that hospital.

Air ambulance: Any aircraft specifically constructed, modified, or equipped and staffed for the primary purpose of responding to emergency medical calls and transporting critically ill or injured patients. Air ambulance aircraft shall be ALS capable.

Basic Life Support ("BLS"): Emergency first aid and cardiopulmonary resuscitation procedures which, as a minimum, include recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life without invasive techniques until the victim may be transported or until advanced life support is available.

Critical Care Transport: Special services designed to provide definitive critical care such that the failure to assess/ recognize resuscitation needs and urgently initiate and maintain acute medical diagnostics and/ or interventions, pharmacological interventions, or technologies would likely result in sudden, clinically significant, or life-threatening deterioration in the patient's condition. These capabilities exceed those of an Advanced Life Support EMS unit.

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

IV. POLICY

A. All transfers shall comply with State and Federal laws.

B. Paramedic/ 9-1-1 system personnel may be used to transport patients ONLY as a last resort when alternative forms of transportation are unavailable, or when the delay in obtaining alterative transport would pose an imminent threat to the patient's health. Hospital personnel accessing the EMS system for transfers shall note that by accessing the EMS system, they may deplete the EMS resources of their local community.

C. Interfacility transfers utilizing Paramedic/ 9-1-1 system personnel remain under San Mateo County LEMSA medical direction and control.

D. Paramedic/ 9-1-1 system units are staffed with two personnel: Typically, one paramedic, and one EMT.

E. Unstable patients shall be transferred only when the reason for the transfer is to medically facilitate the patient's care. The transport of the patient must have the concurrence of both the transferring and receiving physicians that the transfer is appropriate.

F. The sending physician is responsible for determining the appropriate level of transport required.

G. The sending physician is responsible for making arrangements for the receipt of the patient by another physician at the receiving facility.

H. The sending physician or designee shall contact the appropriate dispatch center to arrange for transport.

I. The sending physician or designee shall provide a verbal report and transfer documents to the arriving ambulance crew. Transfer documents must include the names of the sending and receiving physician.

J. For patients requiring emergency transfer, specifically those needing immediate care or intervention at a higher level of care receiving hospital (e.g., critical trauma, STEMI, or stroke):

   1. Ensure the indication for use is appropriate. Emergency ambulance transport utilizes 9-1-1 resources and is reserved for truly emergent cases;

   2. Activate 9-1-1 to request Interfacility Emergency Response;

   3. Arrange transfer of the patient with the receiving physician;

   4. Assess patient needs prior to the transport to determine if the patient needs exceed the paramedic scope of practice. If the care required during transport is beyond the paramedic scope of practice, hospital staff and/or equipment shall be provided by the

transferring hospital and accompany the patient (e.g., if IV pump needed, blood transfusion in progress, management of paralytic agents for intubated patient);

5. Prepare transfer records for the arriving ambulance crew. The ambulance will generally arrive within thirteen (13) minutes of request and patient, paperwork, staff and equipment should be ready for transport by the time the ambulance arrives. Records which are not time sensitive or critical to immediate ongoing treatment of the patient may be faxed, emailed, or alternatively delivered to the receiving facility. If the transfer is delayed once the ambulance arrives on scene, the 9-1-1 ambulance may be reassigned to other emergency needs.
6. The 9-1-1 ambulance crew will arrive at the Emergency Department (ED). If the patient is being transferred from a location other than the ED, a hospital representative shall meet the responding ambulance crew immediately upon arrival, escort prehospital personnel to the patient's location, remain with the crew, and escort the crew back to the ED.

V. LEVELS OF CARE FOR AMBULANCE TRANSPORT

Type of Transport	Patient Needs	Scope of Practice	Contact
9-1-1 Advanced Life Support (Paramedic) Interfacility Emergency Transfer	Emergency intervention or evaluation not available at the sending hospital (e.g., critical trauma, STEMI, stroke, obstetric care for active labor where birth is not imminent). May include neuro and vascular patients transported directly to an OR/intervention lab.	1. Advanced airway (ETT and King); 2. Administer and adjust IV fluids including: Glucose, isotonic saline, lactated ringers, and those containing potassium; 3. ECG monitoring; 4. Defibrillation and synchronized cardioversion; 5. Monitoring of water-sealed chest tube; 6. Administration of ACLS medications	**9-1-1**

Type of Transport	Patient Needs	Scope of Practice	Contact
Critical Care Transport with RN	Advanced care for patients with complex medical care needs as determined by the transferring physician and the ambulance agency. May include pediatric and obstetric patients.	Critical Care RN	**Contact ambulance service directly**
Air Ambulance	RN/Paramedic level of care for patients with complex medical care needs when the receiving hospital is distant and time is a critical factor. May include pediatric and obstetric patients.	Critical Care RN/Paramedic	**Contact air ambulance service directly**

Type of Transport	Patient Needs	Scope of Practice	Contact
Non-emergency Advanced Life Support (Paramedic)	Scheduled transport of patients who require an advanced level of care. Patient does not require emergency intervention at the receiving facility.	1. Advanced airway (ETT and i-gel); 2. Administer and adjust IV fluids including: Glucose, isotonic saline, lactated ringers, and those containing potassium; 3. ECG monitoring; 4. Defibrillation and synchronized cardioversion; 5. Monitoring of water-sealed chest tube; 6. Administration of ACLS medications	**Contact County-contracted emergency ALS ambulance provider**
Non-emergency Basic Life Support (EMT)	Scheduled transport of patients who require a basic level of care.	EMT	**Contact ambulance service directly**

VI. TRAUMA TRANSFER PROCEDURE

TRAUMA TRANSFER PROCEDURE		
STEP 1	Determine appropriate level of transfer using chart below. Contact receiving Trauma Center and confirm acceptance of patient.	
	Stanford Trauma Center (650) 724-2243 (EMERGENCY) (650) 723-4696 (Urgent adults) (650) 723-7342 (Urgent pediatrics **≤ 6 years**)	**Zuckerberg S.F. General Trauma Center** (628) 206-8111 – request to speak with Attending in Charge ("AIC") about trauma re-triage patient **Adults and Pediatrics > 6 years only**
STEP 2	**As soon as need for transfer is recognized, request CODE 3 TRAUMA TRANSFER using ED to Public Safety Communications microwave direct line #344.**	
STEP 3	Prepare patient and paperwork for immediate transport before ambulance arrives.	
STEP 4	For trauma consults for patients not meeting red or blue box criteria, contact the Trauma Center and request to speak to the Trauma AIC about trauma re-triage patient.	

RED BOX EMERGENCY TRANSFER PROCEDURE

Call Trauma Center PRIOR to transfer and state "RED BOX TRAUMA TRANSFER."

ED physician determines patient requires immediate evaluation/ resuscitation by a trauma center.
Some indicators:

- Blood pressure < 90 or decrease in blood pressure by 30 mmHg following 2L IV crystalloid
- Head injury with blown pupil
- Penetrating thoracic or abdominal trauma

BLUE BOX URGENT TRANSFER PROCEDURE

Call Trauma Center PRIOR to transfer.

ED physician determines patient requires urgent evaluation by a trauma center based on the following indicators:

ANATOMIC AREAS	FINDINGS/ RELATED INJURIES
Central Nervous System	• GCS < 14 with abnormal CT scan • Spinal cord or major vertebral injury
Chest	• Major chest wall injury with > 3 rib fractures and/ or pulmonary contusion • Cardiac injury
Pelvis/ Abdomen	• Pelvic ring disruption • Solid organ injury confirmed by CT scan or ultrasound demonstrating abdominal fluid
Major Extremity Injuries	• Fracture/ dislocation with loss of distal pulses and/ or ischemia • Open long bone fractures • Two or more long bone fractures • Amputations that require reimplantation
Multi-System Injury	• Trauma with associated burns – **transfer to closest trauma center** • Major trauma to more than two body regions • Signs of hypoperfusion – Lactate > 4 or Base Deficit > 4
Co-morbid Factors	• Adults > 65 years of age • Pediatric < 6 years of age – transfer to Stanford Pediatric Trauma Center • Pregnancy > 22 weeks gestation • Insulin dependent diabetes • Morbid obesity • Cardiac or respiratory disease • Immunosuppression • Antiplatelet or anticoagulation agents

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

EMS POLICY	519
Effective:	**April 2024**
Approval: EMS Director **Travis Kusman, MPH**	Signed:
Approval: EMS Medical Director **Greg Gilbert, MD**	Signed:

RECEIVING HOSPITALS

I. PURPOSE

This policy identifies the most frequented receiving hospitals and specialty centers for patients transported by 9-1-1 ground ambulance, air ambulance or interfacility patients who become unstable during transport. This is not an inclusive list of all receiving hospitals.

II. AUTHORITY

California Code of Regulations, Title 22, Division 9, §100128 and §100170

III. POLICY

A. A patient, transported as part of an EMS response, shall be delivered to the most appropriate hospital staffed and equipped to provide care appropriate to the needs of the patient, despite County boundaries.

B. Field transport personnel should refer to 505 – Patient Destination Determination for destination determination.

IV. RECEIVING CENTERS

San Mateo County Hospitals	Specialty Services	ED Phone
Kaiser Medical Center - Redwood City 1100 Veterans Boulevard Redwood City, CA 94063	OB/ Neonatal STEMI Stroke - Comprehensive	(650) 299-2201
Kaiser Medical Center - South San Francisco 1200 El Camino Real South San Francisco, CA 94080	Stroke - Primary	(650) 742-3111
Mills-Peninsula Medical Center 1501 Trousdale Drive Burlingame, CA 94010	**HELIPAD** OB/ Neonatal Psychiatric STEMI Stroke - Thrombectomy Capable	(650) 696-5446

San Mateo County Hospitals	Specialty Services	ED Phone
San Mateo Medical Center 222 West 39th Avenue San Mateo, CA 94403	Psychiatric Sexual Assault Center	(650) 573-2671 Psych ED (650) 573-2662
Sequoia Hospital 170 Alameda de las Pulgas Redwood City, CA 94062	OB/ Neonatal STEMI Stroke - Primary	(650) 367-5542
Seton Coastside 600 Marine Boulevard Moss Beach, CA 94038	Standby Emergency Department	(650) 563-7107
Seton Medical Center 1900 Sullivan Avenue Daly City, CA 94015	STEMI	(650) 991-6892

Santa Clara County Hospitals	Specialty Services	ED Phone
El Camino Hospital 2500 Grant Road Mountain View, CA 94040	*none*	(650) 940-7051
Kaiser Medical Center - Santa Clara 700 Lawrence Expressway Santa Clara, CA 95051	VAD	(408) 851-5310 VAD Coordinator (408) 851-3750
Lucille Packard Children's Hospital at Stanford 725 Welch Road Palo Alto, CA 94394	NO EMERGENCY OB/ GYN VAD	(650) 723-4422 VAD Coordinator (650) 723-6661
Palo Alto Veteran's Hospital 3801 Miranda Avenue Palo Alto, CA 94304	*none*	(650) 849-0221
Santa Clara Valley Medical Center 751 South Bascom Avenue San Jose, CA 95128	**HELIPAD** Burn Trauma	(408) 885-3228 Burn Unit (408) 885-6666

Santa Clara County Hospitals	Specialty Services	ED Phone
Stanford Hospital (BASE HOSPITAL) 500 Pasteur Drive Stanford, CA 94305	**HELIPAD** OB/ Neonatal Pediatrics Adult Trauma Pediatric Trauma STEMI Stroke - Comprehensive VAD	Adult Base Physician (650) 497-4802 Peds Base Physician (650) 723-5032 Reports (650) 723-7337 VAD Coordinator (650) 723-6661

San Francisco County Hospitals	Specialty Services	ED Phone
Californa Pacific Medical Center - Van Ness Campus 1260 Franklin Street San Francisco, CA 94109	*none*	Adult (415) 600-3333 Pediatric (415) 600-4444
Californa Pacific Medical Center - Davies Campus Castro and Duboce Streets San Francisco, CA 94114	VAD *(Hand Reimplantation)*	(415) 600-0600 VAD Coordinator (415) 600-1051
Californa Pacific Medical Center - Bernal Campus 3555 Cesar Chavez Street San Francisco, CA 94110	*none*	(415) 461-6625
Chinese Hospital 845 Jackson Street San Francisco, CA 94133	*none*	(415) 677-2300
Kaiser Medical Center - San Francisco 2425 Geary Boulevard San Francisco, CA 95115	OB/ Neonatal	(415) 883-5628

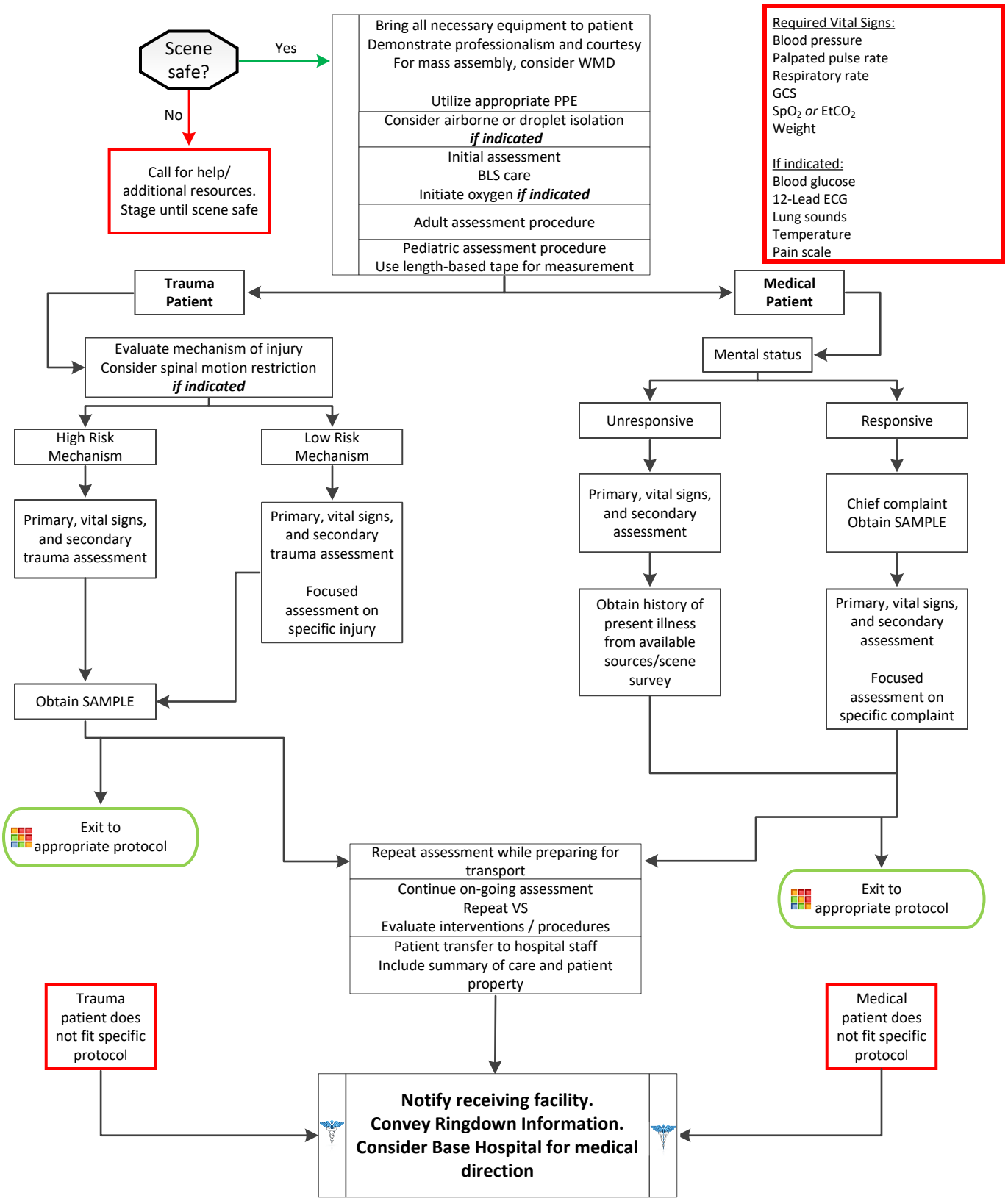
San Francisco County Hospitals	Specialty Services	ED Phone
St. Francis Memorial Hospital 900 Hyde Street San Francisco, CA 95109	Burn	(415) 353-6255
St. Mary's Medical Center 450 Stanyan Street San Francisco, CA 95117	*none*	(415) 750-5700
UCSF Medical Center - Parnassus Heights Campus 505 Parnassus Avenue San Francisco, CA 95143	VAD *(Hand Reimplantation)*	(415) 353-1037 VAD Coordinator (415) 514-5823
UCSF Medical Center - Mission Bay Campus 1975 Fourth Street San Francisco, CA 95158	OB/ Neonatal	(415) 476-7788
UCSF Benioff Children's Hospital - Mission Bay 1975 Fourth Street San Francisco, CA 95158	*none*	(415) 353-1818
Zuckerberg San Francisco General Hospital (TRAUMA BASE HOSPITAL) 1001 Potrero Avenue San Francisco, CA 95110	OB/ Neonatal Trauma/ Trauma Base Hospital *(Hand Reimplantation)*	Base Physician (415) 647-4747 Report/Emergent (628) 206-9600

Other Out-of-County Hospitals	Specialty Services	ED Phone
Eden Medical Center 20103 Lake Chabot Road Castro Valley, CA 94546	**HELIPAD** Adult Trauma	(510) 727-3015
Dominican Hospital 1555 Soquel Drive Sata Cruz, CA 95065	**HELIPAD**	(831) 476-2746

Appendix C – Clinical Protocols

San Mateo County Emergency Medical Services

Routine Medical Care



General Treatment Protocol

SAN MATEO COUNTY HEALTH
EMERGENCY MEDICAL SERVICES

Treatment Protocol G01

Effective April 2024

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 EHR. The EHR 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 *medical* patient is defined as any patient who can be measured on a length-based tape. A pediatric *trauma* patient is defined as any patient < 15 years of age. 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 92% 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 O_2 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.
- For patients on whom a cardiac monitor has been placed, the standard of care and expectation is that they remain on the cardiac monitor until such time that transfer of care has occurred at the hospital.

Routine Medical Care

Trauma Ringdowns

- Unit ID (i.e. M107 or San Mateo Medic 42)
- Code 2 or Code 3 with **trauma activation**
- Age
- Gender
- Mechanism of Injury: Blunt vs. penetrating
  - MVA
    - Restrained vs. unrestrained
    - Location inside 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 location(s)
    - Type of weapon (e.g., handgun/shotgun/ rifle)
  - STABBING
    - Wound location(s)
    - Size of blade
    - Type of blade (e.g., serrated or smooth)
- Chief complaint
- Mental status and GCS
- Physical findings
- Vital signs (BP/HR/RR/O_2 sat/BGL)
- Treatment
- ETA
- How do you copy?

Stroke/ALOC Ringdowns

- Unit ID (i.e. M107 or San Mateo Medic 42)
- Code 2 or Code 3 with **stroke alert**
- Age
- Gender
- Time last known well
- Mental status and GCS
- Chief Complaint
- Physical findings
- Vital signs (BP/HR/RR/O_2 sat/BGL/Temp)
- Treatment
- 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 or San Mateo Medic 42)
- Code 2 or Code 3 with **STEMI alert**
- Age
- Gender
- Chief Complaint
- Physical findings
- Vital signs (BP/HR/RR/O_2 sat/BGL/Temp)
- Treatment
- 12-Lead ECG has been transmitted to your facility
- MR# or patient name and DOB
- ETA
- How do you copy?

Best family contact and phone number must be gathered on all patients and relayed to receiving hospital staff during transfer of care

San Mateo County Emergency Medical Services

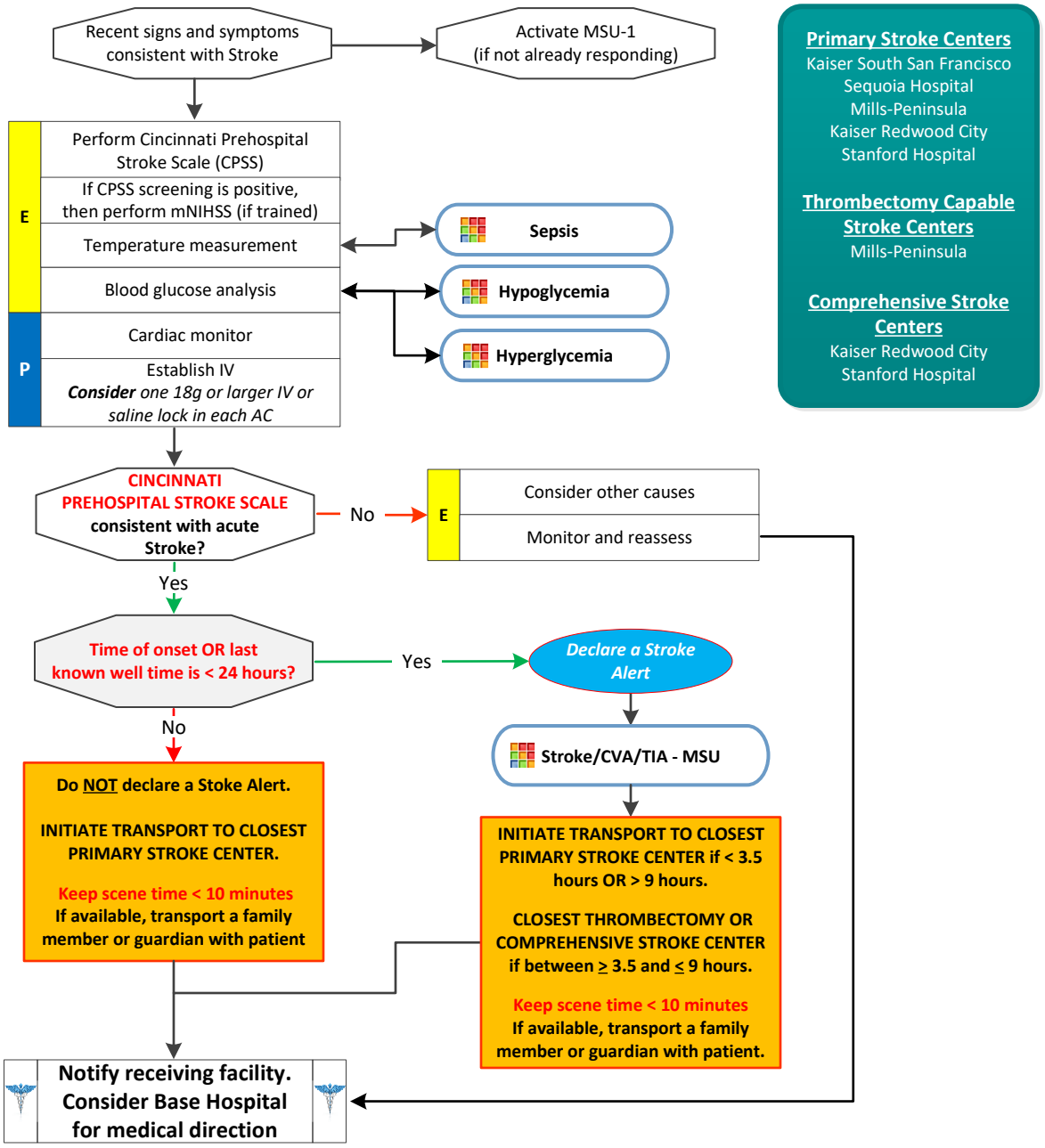
Stroke/TIA

For suspected stroke or transient ischemic attack (stroke symptoms that resolve rapidly)

History
- Last seen normal
- A&O Status and GCS
- Family members phone number
- Previous stroke or TIA or brain hemorrhage
- Major surgery within last 2 weeks
- Signs of active bleeding, including Melena
- Associated diseases (DM, HTN, CAD)
- Atrial fibrillation
- Medications (blood thinners)
- History of trauma
- History of brain tumor, aneurysm, or AVM.

Signs and Symptoms
- Altered mental status
- Weakness or paralysis
- Blindness or other sensory loss
- Aphasia or dysarthia
- Syncope
- Vertigo or dizziness
- Vomiting
- Headache
- Seizure
- Respiratory pattern change
- Hypertension/hypotension
- Diplopia or double vision

Differential
- See Altered Mental Status
- TIA
- Sepsis
- Seizure/Todd's paralysis
- Hypoglycemia
- Stroke
  - Thrombotic or embolic (~85%)
  - Hemorrhagic (~15%)
- Tumor
- Trauma
- Dialysis or renal failure
- Bell's Palsy



Primary Stroke Centers
Kaiser South San Francisco
Sequoia Hospital
Mills-Peninsula
Kaiser Redwood City
Stanford Hospital

Thrombectomy Capable Stroke Centers
Mills-Peninsula

Comprehensive Stroke Centers
Kaiser Redwood City
Stanford Hospital

Adult Medical Treatment Protocols

Stroke/TIA

For suspected stroke or transient ischemic attack (stroke symptoms that resolve rapidly)

A Stroke Alert is indicated when the Cincinnati Prehospital Stroke Scale findings are abnormal and onset (time last seen normal) is less than 24 hours from time of patient contact. Make hospital contact following the format described in Routine Medical Care G01 for Stroke.

If a family member or guardian is available, assure their availability by either transporting them in the ambulance or obtain their name and phone number to allow the receiving physician to contact them. Encourage a family member to be available to speak with hospital staff.

- If any of portion of the Cincinnati Prehospital Stroke Scale is abnormal and it is a new finding, the stroke screen is positive and may indicate an acute stroke.
- Early hospital notification is necessary for the receiving facility to make rapid treatment and potential transfer decisions.
- Because the patient may need to receive thrombolytic therapy, avoid multiple IV attempts.
- Avoid distal placement of IVs, if possible, as this is a preferred access site by Interventionalists.
- When turning over patient care to hospital staff, make sure to include common anticoagulants taken by the patient. Known use of these medications may affect the course of hospital treatment:
  - Warfarin (Coumadin)
  - Heparin
  - Fondaparinux (Arixtra)
  - Apixaban (Eliquis)
  - Enoxaparin (Lovenox)
  - Dabigatran (Pradaxa)
  - Rivaroxaban (Xarelto)

Cincinnati Prehospital Stroke Scale	
Finding	Interpretation
Facial Droop	Normal: Symmetrical smile or face **Abnormal: Asymmetry**
Arm Weakness	Normal: Both arms move symmetrically **Abnormal: Asymmetrical arm movement**
Speech Abnormality	Normal: Correct words; no slurring **Abnormal: Slurred or incorrect words**

Supplementary Tabel 2: The Modified National Institutes of Health Stroke Scale (mNIHSS)

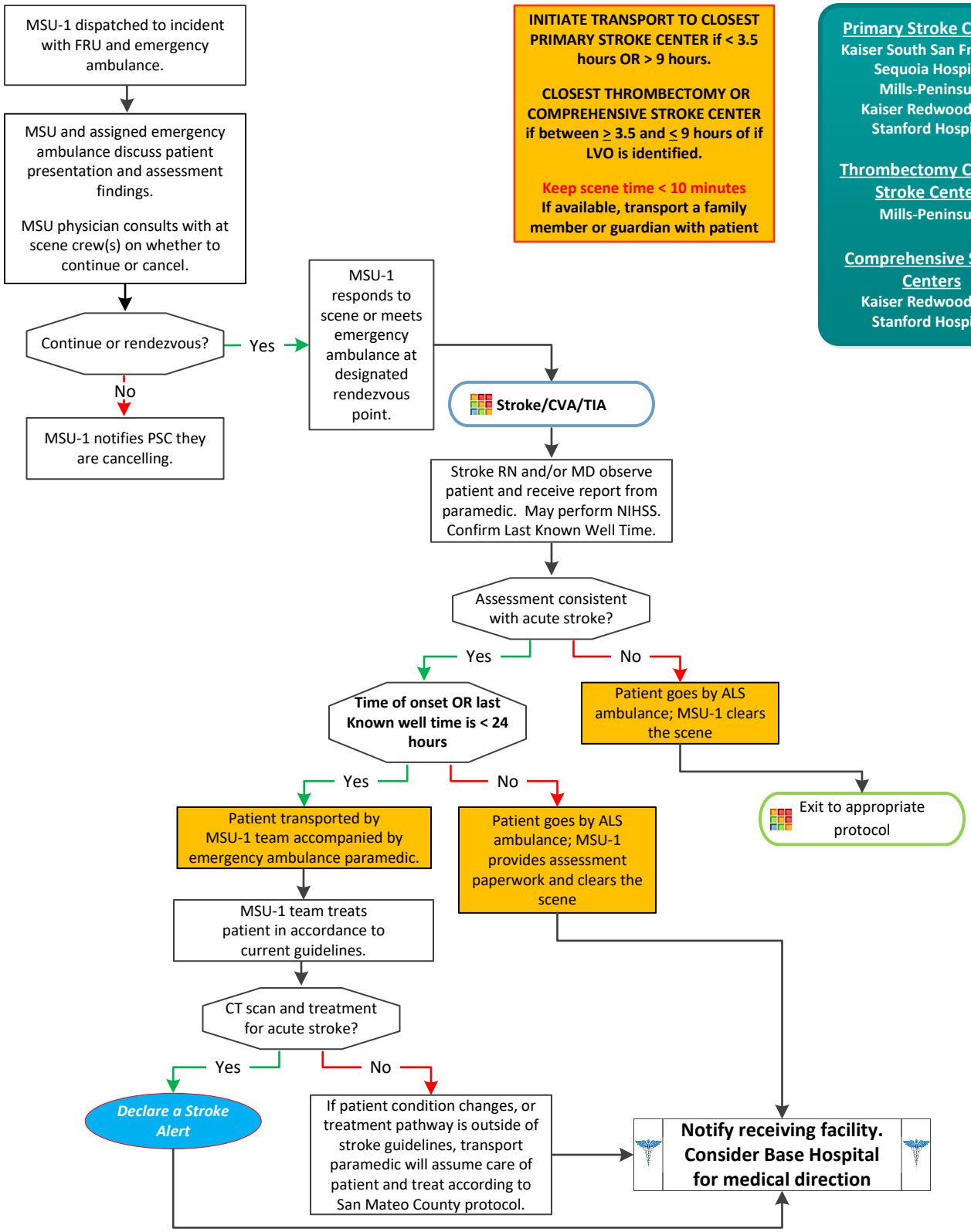
Tested Item Description		Responses & Scores	
1B	LOC (orientated questions)	0 1 2	Answers both correctly Answers one correctly Answers neither correctly
1C	LOC (response to commands)	0 1 2	Performs both tasks correctly Performs one task correctly Performs neither
2	Gaze	0 1 2	Normal horizontal movements Partial gaze palsy Complete gaze palsy
3	Bidang visual	0 1 2 3	No visual field defect Partial hemianopia Complete hemianopia Bilateral hemianopia
5	Motor function (arm) a. Left b. Right	0 1 2 3 4	No drift Drift before 5 seconds Falls before 10 seconds No effort against gravity No movement
6	Motor function (leg) a. Left b. Right	0 1 2 3 4	No drift Drift before 5 seconds Falls before 5 seconds No effort against gravity No movement
8	Sensory	0 1	Normal Abnormal
9	Language	0 1 2 3	Normal Mild aphasia Severe aphasia Mute or global aphasia
11	Neglect	0 1 2	Absent Mild (loss 1 sensory modality) Severe (loss 2 modalities)
TOTAL (0–31)			

Pearls

- MSU-1 should be alerted if you arrive on scene and determine a stroke is occurring. Based on ETA, MSU-1 will meet on scene, at rendezvous, or advise not responding and will recommend transport to the closest, most appropriate SRC.
- Last known well time: Critical information that prehospital providers can obtain, on which all treatment decisions are based. Be very precise in gathering data to establish the time of onset and report as an actual time (i.e., "13:45," NOT "about 45 minutes ago"). Without this information, patients may not receive thrombolytics at the hospital. For patients who "woke up and noticed stroke symptoms," time starts when the patient was last awake.
- If there is any question as to status of patient with acute symptoms of stroke, transport to Primary Stroke Center.
- If last know well time is unknown or > 24 hours, transport to closest or requested Primary, Thrombectomy Capable, or Comprehensive Stroke Center.
- The differential listed in A04 – Altered Level of Consciousness should also be considered.
- Be alert for airway problems (difficulty swallowing, vomiting and aspiration). PO meds are not appropriate.
- Hypoglycemia or hyperglycemia can present as a LOCALIZED neurologic deficit, especially in the elderly.
- Document the Cincinnati Prehospital Stroke Scale in the EHR.

Stroke/TIA – Mobile Stroke Unit (MSU-1)

For suspected stroke or transient ischemic attack (stroke symptoms that resolve rapidly)



INITIATE TRANSPORT TO CLOSEST PRIMARY STROKE CENTER if < 3.5 hours OR > 9 hours.

CLOSEST THROMBECTOMY OR COMPREHENSIVE STROKE CENTER if between ≥ 3.5 and ≤ 9 hours of if LVO is identified.

Keep scene time < 10 minutes
If available, transport a family member or guardian with patient

Primary Stroke Centers
Kaiser South San Francisco
Sequoia Hospital
Mills-Peninsula
Kaiser Redwood City
Stanford Hospital

Thrombectomy Capable Stroke Centers
Mills-Peninsula

Comprehensive Stroke Centers
Kaiser Redwood City
Stanford Hospital

Stroke/TIA – Mobile Stroke Unit (MSU-1)

For suspected stroke or transient ischemic attack (stroke symptoms that resolve rapidly)

Pearls

- If a patient is transported by MSU-1 and a large vessel occlusion or intracranial hemorrhage is identified, either on non-contrast CT or CT angiogram, the patient shall be transported to a Comprehensive or Thrombectomy Capable Stroke Center, regardless of the last known well time.
- If a patient being transported by MSU-1 and a large vessel occlusion is ruled out using CT angiogram, the patient shall be transported to a Primary Stroke Center, regardless of the last known well time.
- Radio communications between responding/ at scene units with MSU-1 shall be on YELLOW channel.

Stroke/TIA – Mobile Stroke Unit (MSU-1)

For suspected stroke or transient ischemic attack (stroke symptoms that resolve rapidly)

MSU-1 Rendezvous Point Locations

Call Location	Rendezvous Point	Alternate Rendezvous Points
Brisbane	Station 81 – 3445 Bayshore Blvd.	None
Colma	Serramonte Center 3 Serramonte Center - at *Cost Plus*	None
Daly City	Serramonte Center 3 Serramonte Center – at *Cost Plus*	None
El Granada	Upper Lakes Vista – Hwy. 35/Hwy. 92	1. Station 40 – 1191 Main St. 2. Half Moon Bay Airport – 9850 Cabrillo Hwy.
Foster City	San Mateo Fairgrounds – 2495 S. Delaware St.	Bridgepoint Center – 2205 Bridgepoint Pkwy.
Half Moon Bay	Upper Lakes Vista – Hwy. 35/Hwy. 92	Station 40 – 1191 Main St.
Miramar	Upper Lakes Vista – Hwy. 35/Hwy. 92	1. Station 40 – 1191 Main St. 2. Half Moon Bay Airport – 9850 Cabrillo Hwy.
Montara	Tri-County Bank – 1450 Linda Mar Blvd.	1. Station 72 – 1100 Linda Mar Blvd. 2. Lunardi's – 2801 San Bruno Ave.
Moss Beach	Tri-County Bank – 1450 Linda Mar Blvd.	1. Tri-County Bank – 1450 Linda Mar Blvd. 2. Station 72 – 1100 Linda Mar Blvd. 3. Half Moon Bay Airport – 9850 Cabrillo Hwy.
Pacifica	Sharp Golf Course – 1 Sharp Park Rd.	1. Tri-County Bank – 1450 Linda Mar Blvd. 2. Station 72 – 1100 Linda Mar Blvd. 3. Lunardi's – 2801 San Bruno Ave.
Portola Valley	Ladera Shopping Center – 3130 Alpine Road	None
Princeton	Tri-County Bank – 1450 Linda Mar Blvd.	1. Tri-County Bank – 1450 Linda Mar 2. Station 72 – 1100 Linda Mar Blvd. 3. Half Moon Bay Airport – 9850 Cabrillo Hwy.
San Bruno	Lunardi's – 2801 San Bruno Blvd.	Tanforan Mall – 1151 El Camino Real
San Mateo	San Mateo Fairgrounds – 2495 S. Delaware St.	Bridgepoint Center – 2205 Bridgepoint Pkwy.
South Coast *(Pescadero/ San Gregorio/ La Honda)*	Station 40 – 1191 Main St.	1. Half Moon Bay Airport – 9850 Cabrillo Hwy. 2. Upper Lakes Vista – Hwy. 35/Hwy. 92
Woodside	Fire Station 7 – 3111 Woodside Road	Sand Hill Road at Whiskey Hill Road

MSU-1 Leveling Locations

Call Location	Rendezvous Point	Alternate Rendezvous Points
Brisbane	Station 81 3445 Bayshore Blvd.	None
Daly City (Cow Palace Area)	Station 81 3445 Bayshore Blvd.	None
Millbrae	Station 37 511 Magnolia Ave.	None
Burlingame	*Inquire with Fire*	None
Hillsborough	Hillsborough Police Station 1600 Floribunda Ave.	Station 33 – 835 Chateau Dr.

SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

2024 EMSQIP

Table of Contents

Introduction 3
Mission Statement 3
Structure & Organizational Description 3
LEMSA Personnel and Their Roles in EMSQIP 6
SMC Emergency Medical Services Quality Improvement Program (EMSQIP) 6
Emergency Medical Care Committee (EMCC) 7
Executive Steering Council (ESC) 7
Medical Advisory Committee (MAC) 8
Quality Leadership Committee (QLC) 8
EMS Operations Committee (EMS OPS) 8
Stroke Quality Improvement Committee 9
ST-Elevated Myocardial Infarction (STEMI) Quality Improvement Committee 9
Triple P (Policies, Procedures, and Protocols) 9
Response Time Requirements 11
Opiate Crisis 12
Specialty Care – Cardiac Patients 12
Specialty Care – Stroke CY 2024 13
Specialty Care – Trauma CY 2024 13
Action to Improve 15
Training and Education 16
Annual Update 17

Introduction

The EMS System depends on many different elements working seamlessly, from an informed public able to recognize medical emergencies to a network of public safety communication centers, fire departments, ambulance providers, and hospitals providing specialized care to sick or injured people.

To achieve this, a collaborative system with many stakeholders comes together. These stakeholders include our County-operated Public Safety Communications (PSC) emergency medical dispatch (EMD) center; our fire department based first responders; American Medical Response (AMR) and South San Francisco Fire Department, which are our 9-1-1 ambulance transport providers; and our hospitals, including specialty care centers.

The purpose of the San Mateo County EMSQIP is to ensure that quality delivered throughout the system is at the highest level including clinical care and customer service.

Mission Statement

To ensure the highest quality emergency medical care to the people of San Mateo County through an integrated and coordinated system of services, and to foster the medical and health resiliency of our community during disasters and emergencies.

Structure & Organizational Description

The San Mateo County EMS Agency (EMS Agency) serves as the designated LEMSA for the County of San Mateo. Under the direction of our EMS Agency leadership, we value:

- Patient & community-oriented system.
- A caring environment to inspire and produce teamwork.
- Work based on research, scientific examination, and focused process improvement.
- Promotion of candor, integrity, and mutual respect.
- Multidisciplinary partnerships with our system stakeholders to help us produce excellence.
- Promotion and provision of community education on injury prevention, CPR and first aid including Stop the Bleed, fall prevention, emergency preparedness, and many other topics.

The EMS Agency leads EMS system activity including the following:

- Serve as an advocate for patients and resolve or facilitate complaint resolution.
- Collaborate with others to ensure a unified, collaborative approach to patient care.
- Implement, evaluate, and provide feedback regarding California EMS statutes and

regulations, as well as exert Medical Control over the EMS system.

- Certify EMTs and provide local accreditation for Paramedics.
- Authorize, evaluate, and develop local EMS training programs.
- Develop, approve, and evaluate medical treatment protocols and policies for the EMS Agency and system stakeholders.
- Establish and maintain EMS communication systems.
- Collaborate with all divisions of County Health in developing local medical and health disaster plans for local and regional mutual aid and mutual assistance.
- Lead County Emergency Operations Center (EOC) Medical Health Branch activities via the Medical Health Operational Area Coordination (MHOAC) program.
- Designate and evaluate hospital specialty care centers.
- Facilitate and provide oversight of EMS system quality improvement program.
- Collect, analyze, and report data to the California Emergency Medical Services Authority (EMSA).
- Provide 24/7 EMS system level coordination and oversight including field response capability via County EMS / MHOAC Duty Officer.

EMS System Goals are principally to reduce morbidity and mortality from illnesses and injuries through both prevention and the delivery of high-quality patient care. This is achieved by:

- Developing and maintaining methods of evaluation focusing on identifying the root cause and solving the problem to root (see below).
- Continually searching for opportunities to improve, educate, and resolve problems prospectively.
- Striving for effective communication with our stakeholders.
- Educating EMS system stakeholders regarding the importance of the quality improvement process.

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

San Mateo County EMS in conjunction with County Health has implemented the LEAP process. Based on the structural foundation of LEAN, the LEAP process uses a real-time problem-solving guide with two key principles in mind: to solve problems at their root cause, and to build awareness of the problems our system stakeholders face.

The EMS Agency has utilized the real-time problem-solving methodology several times recently to address high utilizers, communication, and potential for patient harm events.

The County has one exclusive operational area (EOA) awarded through a competitive process. This EOA includes the entire County except for the City of South San Francisco. American Medical Response (AMR) currently holds a ten-year contract (2019-2029) with the County to provide ALS ambulance services for the EOA, comprised of an initial five-year term and subsequent five-year earned extension period. AMR was awarded this contract through a competitive RFP process. The second exclusive operational area (EOA) is the City of South San Francisco, which is grandfathered. The South San Francisco Fire Department (SSFFD) has provided paramedic ambulance services within the City since 1975.

All fire first responder Advanced Life Support (ALS) services provided within the County EOA are coordinated through the San Mateo County Pre-Hospital Emergency Medical Services Medical Group (JPA). The JPA is a joint powers authority comprised of fire agencies and districts within the County. For coordination of education, trainings and quality improvement, fire agencies and districts within the JPA are categorized by primarily geographical region (North, Central, South, and Coastside) and assigned to one of four JPA EMS Supervisors. The San Mateo County EMS Agency holds performance-based contracts with both American Medical Response (AMR) and the JPA. These contracts include both operational and clinical QI measures.

System indicators that address the components found in Title 22 are included in our program. All our EMS providers are using the same EHR (ImageTrend) to document patient care. Aside from frequency indicators such as the number of transports and the number of AED activations, the EMS Agency is involved in the following:

- Development of policies, procedures, and treatment protocols
- Submission of the Core Measures to EMSA
- Compliance review and oversight
- Initial and ongoing skill competency evaluations
- Contract compliance, monitoring, and enforcement

Further, our EMS CQI program includes the following which are outlined in our emergency ambulance contract:

- Clinical and Operational Performance including but not limited to patient care, outcome, inventories (medication, procedure, skills maintenance), documentation, response, and transportation
- Customer-Patient Satisfaction
- Injury/Illness Prevention and Community Education

- Resilience for Healthcare Providers
- Human Resources
- Safety
- Fleet, Equipment Performance and Materials Management
- Finance
- Unusual occurrences or incidents, sentinel events, complaint management & risk management
- Leadership
- Emergency Medical Dispatch

LEMSA Personnel and Their Roles in EMSQIP

- Travis Kusman, MPH, Paramedic, EMS Director
- Gregory H. Gilbert, MD, FAAEMS, EMS Medical Director
- Brian Aiello, MBA, Paramedic, Assistant EMS Director
- Kelly McGinty, MSN, RN, EMS Clinical Nurse
- Chad Henry, MBA, Paramedic, EMS System Manager
- Garrett Fahey, MBA, EMS Management Analyst

SMC Emergency Medical Services Quality Improvement Program (EMSQIP)

The goal of San Mateo County's Emergency Medical Services Quality Improvement Plan (EMSQIP) is to ensure that the highest quality emergency medical care is provided throughout our EMS system. This goal requires a comprehensive approach to quality improvement and includes participation of all key system stakeholders.

The EMS Agency staff in collaboration with our system stakeholders leads most internal quality improvement efforts and activities. All EMS Agency staff participate in quality improvement activities pertinent to their respective assigned areas of responsibility. EMS Agency staff routinely audit records pertaining to and physically inspect 9-1-1 system medical response apparatus, including on-board supply and equipment inventories to assure compliance with medical control requirements.

Quality improvement is a key and detailed component of on-going contractual agreements with the fire first responder (JPA), the ALS ambulance provider (AMR), specialty care centers and base hospitals. The structure of the EMS system lends itself to communication and coordination of all quality improvement activities. The EMS Agency utilizes a committee structure via several

standing committees to assist with the planning and implementation of the many components of our local EMS system, as well as participating in the external evaluation of regional systems of care such as trauma and on-going system quality improvement processes. These committees are multi-disciplinary and are composed of key system stakeholders. Committees have been structured to provide the EMS Agency with both system/operational and medical guidance promoting highly functional systems. Standing QI committees include the following:

Emergency Medical Care Committee (EMCC)

The EMCC is an advisory committee to both the San Mateo County Board of Supervisors and the EMS Agency on issues pertaining to the EMS system, with a focus on public policy and overall performance evaluation. Membership is through appointment by the Board of Supervisors and includes representation from the following groups and organizations:

- Fire first responder
- San Mateo County Police Chiefs' Association
- San Mateo County Fire Chiefs' Association
- California Highway Patrol
- San Mateo County Medical Association
- American Heart Association
- American Red Cross
- Consumers
- San Mateo County field care paramedic or paramedic supervisor of the county-wide emergency ambulance contractor
- Emergency nurse from a San Mateo County receiving hospital
- Emergency physician from a San Mateo County receiving hospital

Additionally, there are categorical members of the EMCC:

- County Health Officer
- County Director of Public Safety Communications
- County Area Coordinator of the Department of Emergency Services
- Executive leader of San Mateo County receiving hospitals
- Executive leader of the county-wide exclusive emergency ambulance contractor

Executive Steering Council (ESC)

Established in 2009 to promote transparency in the system, the ESC drives strategic planning

and system priorities, establishes, and monitors key performance indicators for each component of the EMS system. A major goal for this committee is to promote system evolution while doing so in a fiscally sound manner.

Medical Advisory Committee (MAC)

The MAC advises the EMS Agency and its EMS Medical Director on medical policies, procedures and protocols and provides a forum for communication between prehospital emergency medical care providers and receiving hospitals. The committee serves as the system's Quality Technical Advisory Committee for clinical issues between receiving hospitals and prehospital providers. The MAC also functions as the system's Trauma Advisory Committee.

The committee meets quarterly, and membership is comprised of receiving hospital physicians and nurses, fire departments, ambulance transport, law enforcement, public safety communication, hospital consortium representative, the American Heart Association, the EMS Medical Director, and EMS Agency staff.

Quality Leadership Committee (QLC)

QLC is a peer-based quality improvement committee that develops, and monitors identified key clinical performance indicators (KPI's), as well as provides input for clinical protocols, policies and procedures pertaining to prehospital emergency care provided in San Mateo County. The committee is a forum for issue identification, discussion and resolution utilizing system data, benchmarks and evidence-based practices.

In conjunction with the Medical Advisory Committee, the QLC serves as the system's Quality Technical Advisory Committee for clinical issues. The QLC also develops standardized educational programs and trainings as indicated for EMS responders. This committee meets monthly and is voting membership includes the EMS Medical Director and EMS staff, JPA EMS Supervisors, Advanced Life Support (ALS) ambulance transport provider agency clinical leadership, and County Public Safety Communications.

Recent discussions have included IV Acetaminophen for pediatrics, Behavioral Health Presentation, overview of SMC crisis response teams, temperature management, pre- existing vascular access workgroup recommendations, H5N1 updates, obvious death field pronouncement guidelines, controlled substance waste procedure and policy, and vector change during defibrillation.

EMS Operations Committee (EMS OPS)

The OPS Committee is a peer-based committee which meets monthly and provides a forum for problem identification, discussion, and resolution of operational issues affecting the EMS

system. This committee serves as the system's Quality Technical Advisory Committee for operational issues. The committee also assists in the development, implementation and evaluation of EMS operational-related policies and issues, data system, responses to mass casualty incidents, equipment, and supplies.

Stroke Quality Improvement Committee

The Stroke Quality Improvement Committee is a confidential committee which meets quarterly. The committee is comprised of receiving hospital stroke medical directors, receiving hospital stroke coordinators, ED physicians, the American Heart Association, and the EMS Agency Medical Director and staff.

Implementing and subsequently monitoring EMSA regulations, the committee reviews cases and provides advice regarding policy and best practices, as well as recommendations related to systems of care. San Mateo County was one of the first to implement a tiered destination policy to either a comprehensive, thrombectomy capable, or primary stroke center based on last known well time (LKWT). A Mobile Stroke Unit or (MSU) is now fully integrated into our system response. The MSU is currently undergoing a trial called FASTEST, which is examining the efficacy of rFVIIa as a first line treatment for acute spontaneous intracerebral hemorrhage

Get with The Guidelines (GWTG) ® has been fully implemented enabling the EMS Agency to evaluate performance both in our system and benchmark nationally.

ST-Elevated Myocardial Infarction (STEMI) Quality Improvement Committee

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. Evaluative criteria for re-designation as a STEMI Receiving Center (SRC) were developed by the committee.

Consistent with prevailing regulations and best practices, the committee reviews cases, assesses data for walk-in, EMS, and transfer cases from a STEMI Referral Hospital (SRH) to a STEMI Receiving Center (SRC). Additionally, the committee discusses best practices and current literature. Recent discussions have included community outreach opportunities and collaboration with first responders, microaxial flow pump versus standard of care for infarct-related cardiogenic shock, mechanical support for cardiogenic shock, PCI for OHCA patients, and opportunities for improvement in door to ECG times.

Triple P (Policies, Procedures, and Protocols)

Comprised of a cross section of clinical system stakeholders, the Triple P committee provides

initial feedback related to policies, procedures, and protocols in development or review and makes recommendations for change, which are then sent to the entire system for clinical review. Through this committee, scheduled annual and ad-hoc review and modifications of policies, procedures and protocols are ongoing.

The Triple P committee recently discussed adding an ECMO destination protocol for patients who present in v-fib/pulseless v-tach, ImageTrend certification management, BVM inventory requirements, accessing existing central lines, and expanding the use of IV acetaminophen.

PRIMARY IMPRESSIONS

The EMS Agency has designed all the patient treatment protocols to align with the EMSA list of primary impressions. The primary and secondary impression drop down choices across the countywide EHR platform. ImageTrend has been modified accordingly.

SYSTEM ENHANCEMENTS

The EMS Agency utilizes First Pass ® to augment our EMSQIP program. First Pass ® sits "on top" of ImageTrend. The EMS Agency is currently reviewing clinical compliance with protocols for pain, cardiac, stroke, refusal of medical treatment or against medical advice, and STEMI via First Pass ®. First responder and ambulance response times are monitored through the First Watch Online Compliance Utility Module (OCU) (see next page).

Response Time Requirements

REQUIRED 9-1-1 EMERGENCY RESPONSE TIMES

Urban/Suburban – Response to 90 percent of calls each month shall be compliant		
Code Type	JPA ALS First Responder	AMR Emergency Ambulance
Code 3	6:59 minutes	12:59 minutes
Code 2	14:59 minutes	22:59 minutes
Rural – Response to 90 percent of calls each month shall be compliant		
Code Type	JPA ALS First Responder	AMR Emergency Ambulance
Code 3	11:59 minutes	19:59 minutes
Code 2	24:59 minutes	59:59 minutes
Remote – Response to 90 percent of calls each month shall be compliant		
Code Type	JPA ALS First Responder	AMR Emergency Ambulance
Code 3	21:59 minutes	39:59 minutes
Code 2	29:59 minutes	59:59 minutes

The table above outlines the response times with which our emergency medical responders are required to comply. These times depend on the urgency of the case (priority of the response), the region of the county (area type), and whether the response is by fire first responders or ambulance.

Based on the priority of the response and the patient's location, AMR and the paramedic fire EMS providers are required to respond within the response times listed above 90% of the time in each of the response time zones (excluding South San Francisco).

All late calls are reviewed for the causative reason. The EMS Agency's Contract Compliance Officer meets monthly to review late calls with the providers. The Online Compliance Utility (OCU) is directly linked to the County's computer aided dispatch (CAD) system. The OCU provides a real-time and retrospective web enabled tool to monitor system status and response time compliance, promoting optimal deployment of resources to meet the needs of our community.

Opiate Crisis

The misuse and abuse of opioid pain medication is a national public health problem, and most drug overdose deaths are from an opioid pain medication.

San Mateo County actively monitors morbidity and mortality from the misuse of opioids. This is accomplished by ongoing surveillance via our electronic patient care records as well as a review by the county epidemiologists surveying Emergency Department (ED), medical examiner and multiple other data sources. This data is shared amongst our system stakeholders to assess, monitor, and develop solutions to this public health crisis in our community.

The EMS Agency has supported law enforcement agencies countywide in the development and implementation of Naloxone training and administration programs. In April 2024, the EMS Agency launched an EMS Suboxone program. Paramedics can administer Suboxone to patients who display symptoms of opioid use disorder, and these patients can be transported to any SMC receiving hospital for further care and referral to connected services. In addition, paramedics can leave behind Naloxone for at risk patients, and a brochure that outlines available county resources. The EMS Agency is tracking outcome data for these patients, which includes 100% review of all Suboxone administrations.

Specialty Care – Cardiac Patients

San Mateo County participates in the Cardiac Arrest Registry to Enhance Survival or CARES program. Data for 2024 is displayed below.

CARDIAC ARREST- CARES

2024 CARDIAC ARREST FACTS
433 CASES
69.3% MALE
30.7% FEMALE
MEAN AGE OF 68.2
Utstein Survival N = 60 or 38.3% (witnessed by a bystander & found in a shockable rhythm).
Utstein Bystander Survival N = 39 or 43.6% (witnessed by a bystander, found in a shockable rhythm, and received some bystander intervention- CPR and/or AED

Specialty Care – Stroke CY 2024

San Mateo County has a well-established, evidence-based stroke triage and patient destination system designed to quickly deliver patients to the most appropriate hospital for definitive care. Paramedics can identify patients as having a stroke and alert the hospital of their impending arrival via a "stroke alert." Five hospitals serve San Mateo County stroke patients. Two are primary stroke centers (PSC), one is a thrombectomy capable stroke center (TSC), and two are comprehensive centers (CSC). The tiered system allows patients to receive assessment and treatment at either a primary, thrombectomy capable, or comprehensive center depending on the time of symptom onset and the type of stroke.

San Mateo County's Stroke CQI Committee is comprised of San Mateo County EMS Agency personnel, physicians, stroke coordinator nurses, and American Heart Association (AHA) staff, all of whom participate in the stroke system and work together to improve quality. The committee reviews care and makes recommendations to the EMS Medical Director on best practices for stroke care.

Please see the Stroke Plan for additional details.

Specialty Care – Trauma CY 2024

The San Mateo Emergency Medical Services Agency ("EMS Agency") is the local EMS agency (LEMSA) responsible for planning, implementing, evaluating, and regulating the County's comprehensive emergency medical system. The EMS Agency appreciates that the delivery of definitive, high quality trauma care requires a highly collaborative and integrated system which is focused on patient needs and corresponding optimal processes to attain desired outcomes. While none of the receiving hospitals physically located within San Mateo County are designated trauma centers at any level, the LEMSA supports and ensures that all responders have the ability to quickly identify, triage, and transport patients to designated receiving trauma centers when indicated.

Stanford Healthcare and Zuckerberg San Francisco General Hospital are the designated receiving trauma centers for the San Mateo County EMS system. EMS Agency staff participate in the American College of Surgeons (ACS) trauma designation surveys for both hospitals.

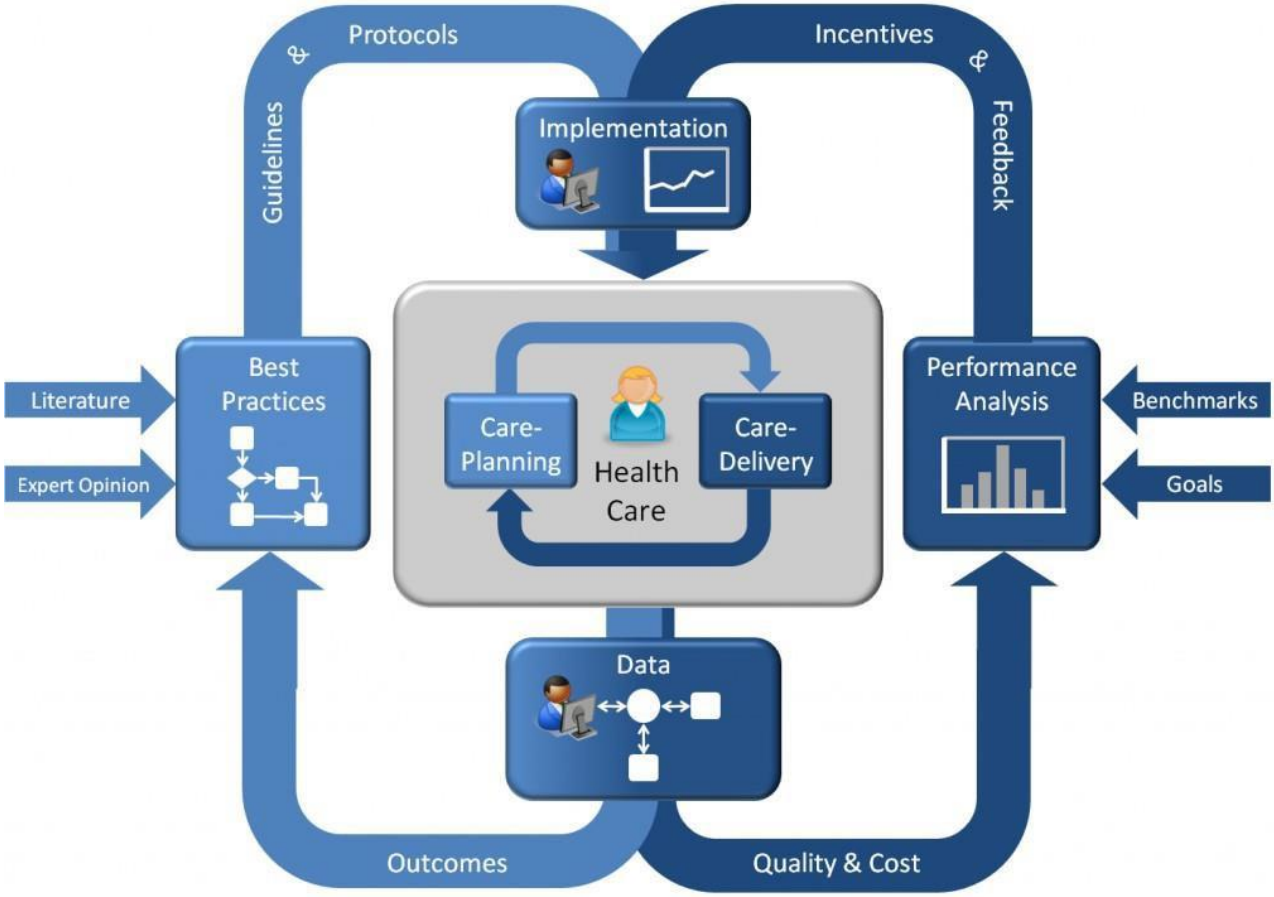
To assist in the evaluation of our system, EMS clinical staff participate in both Santa Clara and San Francisco County's trauma quality improvement processes as well as the Regional Trauma Committee. The results of QI issues/efforts are reported back to our committees.

The EMS Agency continues to monitor the scene time for trauma patients with a goal of getting off scene rapidly with transport to the trauma center as quickly as possible.

Please see the Trauma Plan for additional details.

Action to Improve

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



Striving to create best practices, the EMS Agency focuses on clinical research, recommendations by the California EMS Medical Director's Association of California (EMDAC), and EMS Administrators Association of California (EMSAAC). Additionally, information is shared via the LEMSA CQI committee.

Throughout the year, reports are shared at the appropriate committee level with our stakeholders. Representatives from those committees share information with line EMTs and paramedics.

The EMS Agency reviews all sentinel events and creates an action plan. The EMS Medical Director along with the clinical staff reviews and makes recommendations on remedial education if indicated.

Training and Education

Through the County's contracts with AMR and the Fire EMS First Responder JPA contracts, measures are identified for standardized training, orientation, skills maintenance, and education. Standards for maintaining paramedic skills and required trainings are developed and implemented by the QLC with the approval of the EMS Medical Director. An annual training calendar is developed and shared with all system stakeholders.

Skills labs offering hands-on experience and demonstration of proficiency in skills that are not frequently used or are optional scope are held annually. Joint training opportunities among JPA and AMR staff are encouraged. Any additional training such as changes in treatment protocols, new EMS policies/procedures, and new skills/equipment is developed with system input. The addition of any new piece of equipment or medication is vetted through the ESC if an anticipated increase cost to the system is to occur. These trainings are incorporated into the quarterly training schedule. Education and training methodologies utilized may include any of the following:

- Didactic
- Classroom-based
- Web-based
- Skills labs
- Virtual labs
- Scheduled clinical experience
- Receiving hospitals
- Specialty care centers

Protocols and procedures related to patient care are reviewed utilizing the Agency's standing committees. Any system stakeholder including our specialty committees may request clinical protocol reviews. The Triple P committee reviews clinical policies and makes recommendations on how best to provide updated education and training methodologies for disseminating the changes to field personnel. All policies, procedures and protocols are publicly available on the EMS Agency website and on the widely used San Mateo County EMS mobile application which is available on iOS and Android platforms.

The EMS Agency is responsible for ensuring that on-going training is appropriate to the skill level and service goals as defined by contracts and best practices. Annual infrequent skills labs are conducted to evaluate skills of prehospital providers. Each contractor (JPA and AMR) is responsible for the scheduling of quarterly educational and training programs for their staff. JPA EMS Supervisors, the AMR Clinical Manager and AMR/JPA Training Coordinators are responsible for ensuring that all their staff successfully complete education and trainings as

required per their respective contracts with the County. They are also responsible for maintaining supporting documentation that all training and educational requirements have been completed. Joint education and training programs among contractors occur often. Compliance to contractual trainings and education are reviewed periodically by EMS Agency staff, in addition to comprehensive compliance reviews conducted by the Agency bi-annually of both contractors.

Annual Update

The EMSQIP plan is updated every year. Goals for the upcoming year are identified by a retrospective analysis, planning, and forecasting future changes focusing on best practices.
The EMSQIP update is shared annually with our stakeholders and is found on our website.