

EMERGENCY MEDICAL SERVICES AUTHORITY

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



April 17, 2019

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

Dear Ms. Lapolla:

After a review, the Emergency Medical Services Authority has determined that the San Mateo County EMS Agency Quality Improvement Program is in compliance with Title 22, Division 9, Chapter 12 EMS System Quality Improvement and EMSA #166 Emergency Medical Services System Quality Improvement Program Model Guidelines.

An update will be due 12 months from the date of this letter (April 17, 2019). If you have any questions regarding the plan review, please call Adam Davis, at (916) 322-4336, extension 409.

Sincerely,

A handwritten signature in blue ink that reads 'Tom McGinnis - EMT-P'.

Tom McGinnis, EMT-P
EMS Systems Division Chief

TM:ad



SAN MATEO COUNTY HEALTH
**EMERGENCY
MEDICAL SERVICES**

2019 EMSQIP



Table of Contents

Introduction	1
Mission Statement	1
Structure & Organizational Description	3
SMC Emergency Medical Services Quality Improvement Program (EMSQIP)	5
Emergency Medical Care Committee (EMCC)	5
Executive Steering Council (ESC)	6
Medical Advisory Committee (MAC).....	6
Quality Leadership Committee (QLC)	6
Operations Committee (OPS).....	7
Stroke Quality Improvement Committee	7
ST-Elevated Myocardial Infarction (STEMI) Quality Improvement Committee	7
Nurse Managers	8
Triple P (Policies, Procedures, and Protocols).....	8
Response Volume and Speed	9
Opiate Crisis	10
Specialty Care – Cardiac Patients	12
Specialty Care – STEMI 2018	13
Specialty Care – Stroke CY 2018	14
Specialty Care – Trauma CY 2018	15
Action to Improve	16
Training and Education	17
Annual Update.....	19

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.

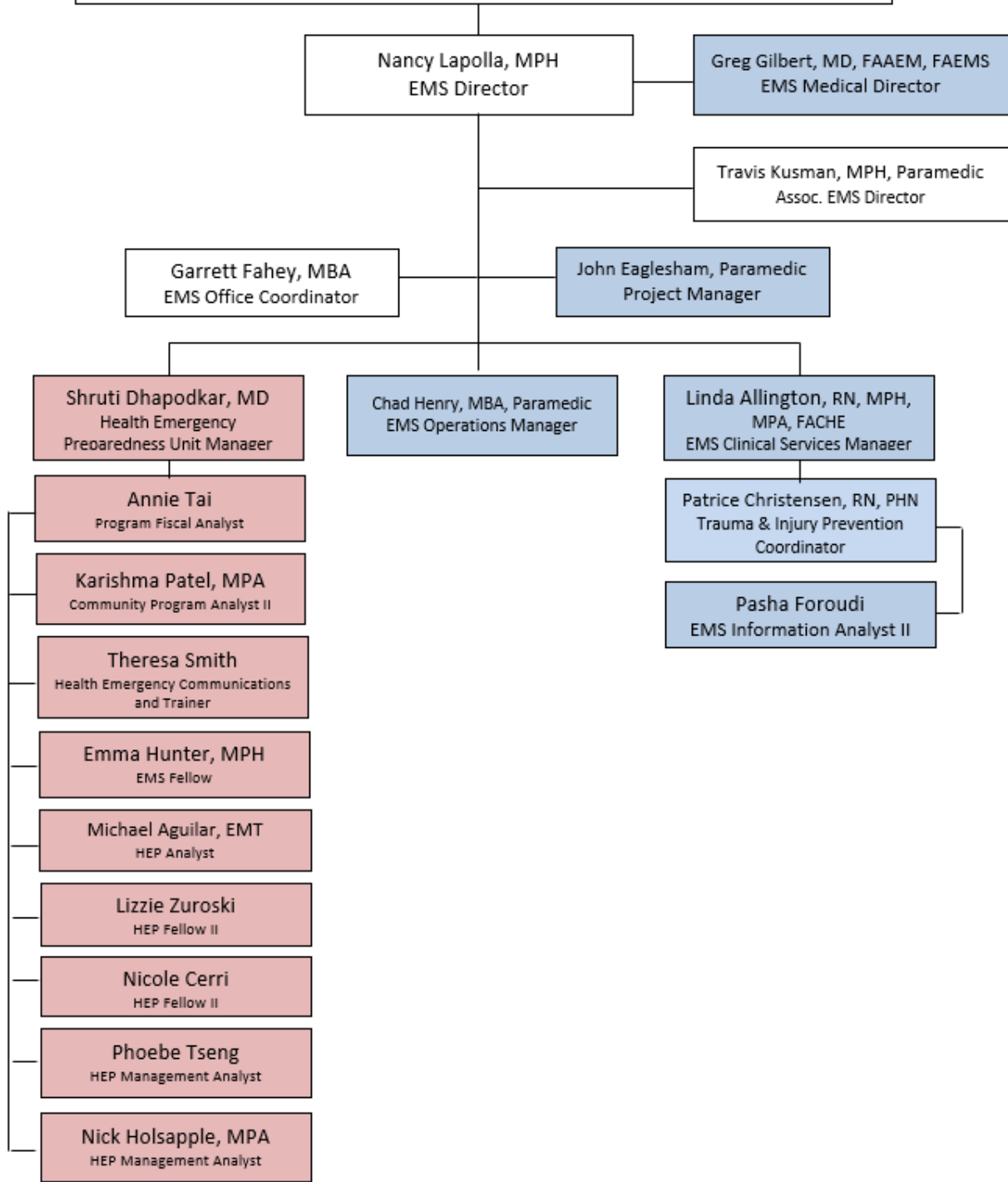
To achieve this, a collaborative system with many stakeholders come together starting with Medical Priority Dispatch System (MPDS) Emergency Medical Dispatch (EMD) services performed by our County Public Safety Communications (PSC) center, our fire first responders, our 911 emergency ambulance services transport providers American Medical response (AMR) and South San Francisco Fire Department, and our hospitals and specialty care centers.

The purpose of the San Mateo County Emergency Medical Services Quality Improvement Plan (EMSQIP) is to ensure the services delivered throughout the system are 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.

**SAN MATEO COUNTY EMS AGENCY
ORGANIZATION CHART**



Structure & Organizational Description

The San Mateo County EMS Agency (EMS Agency) serves as the designated Local Emergency Medical Services Agency (LEMSA) for the County of San Mateo in accordance with guidelines established in the Health and Safety Codes.

Under the direction of our EMS Agency leadership, we value:

- 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 which help us produce excellence
- 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 continually evaluates the EMS system, which including the following:

- Serve as an advocate for patients and resolve or facilitate complaint resolution
- Collaborate with others to ensure a unified, organized approach to patient care
- Implement, evaluate, and provide feedback regarding California regulations
- 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 public health in developing local medical and health disaster plans for local or mutual aid.
- Designate and evaluate specialty centers
- Conduct and provide oversight and directions for quality improvement
- Collect, analyze, and report data to EMSA

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, 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 is an integral part.

San Mateo County EMS which is a division of County Health has implemented the LEAP process. Based on the structural foundation of LEAN, the LEAP process uses a real-time

problem-solving approach with two key principles in mind: to solve problems to 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 Operating Area (EOA) awarded through a competitive process. This EOA includes the entire County with the exception of the City of South San Francisco. American Medical Response (AMR) currently holds a five-year contract extension (2014-2019) with the County to provide Advanced Life Support (ALS) emergency ambulance services for the EOA.

The EMS Agency is actively completing a Request for Proposals (RFP) process for services to the County EOA beginning July 1, 2019 and intends to award the corresponding Board approved contract prior to that time. The second operational area is the City of South San Francisco. This operational area is recognized in accordance with grandfathering permissible in the California Health and Safety Code. The South San Francisco Fire Department (SSFFD) has provided paramedic services within the City since 1975.

All fire first responder ALS services provided within the 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 the eighteen fire agencies and districts within the County. For coordination of education, training and quality improvement, fire agencies and districts within the JPA are categorized by primarily by geographical region: (North, Central, South and Coastside) and assigned to one of four JPA EMS Supervisors. 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 of our EMS providers use the same ePCR - MEDS - to document patient care. Aside from monitoring frequency indicators such as the number of transports and the number of AED activations, the EMS Agency is involved in the following:

- Pilot project training and usage statistics
- Multidisciplinary subject matter expert in development of policies and treatment protocols
- Submission of the Core Measures to EMSA
- Compliance review and oversight
- Skill competency initial and ongoing evaluation
- Contract compliance

Further, our EMS CQI program includes the following which are outlined in our ambulance contract.

- Clinical Performance including but not limited to patient care, outcome, inventories (medication, procedure, skills maintenance), documentation, and transportation.
- Customer-Patient Satisfaction
- Accountability for patient belongings
- Injury/Illness Prevention and Community Education
- Human Resources
- Safety

- Fleet, Equipment Performance and Materials Management
- Finance
- Unusual Occurrences, Incidents, sentinel events, complaint Management & risk management
- Leadership
- Public Safety Communications (dispatch)

SMC Emergency Medical Services Quality Improvement Program (EMSQIP)

The goal of San Mateo County's 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 including participation from all key system stakeholders.

The EMS Agency staff in collaboration with our system stakeholders leads most internal quality improvement efforts and activities. All Agency staff participate in quality improvement activities pertinent to their respective assigned areas of responsibility.

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 structure including a number of standing committees to assist with the planning and implementation of the many components of our local EMS system, as well as participates in the external evaluation and evolution 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 our LEMSA with either system/operational or medical guidance promoting highly functional systems and excellent patient care. 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. This committee meets bi-yearly. Membership is through appointment by the Board of Supervisors and includes representation from the following groups and organizations:

- Hospital Consortium of San Mateo County
- ALS ambulance provider administration
- Fire first responder JPA
- 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

- Field paramedic
- Emergency nursing
- Emergency physicians

Additionally, there are four categorical members of the EMCC:

- San Mateo County Health Officer
- San Mateo County Coroner
- Public Safety Communications Director and
- Office of Emergency Services Coordinator

Executive Steering Council (ESC)

Established in 2009 to promote transparency in the system, the ESC drives provider 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 but do so in a fiscally sound manner.

Medical Advisory Committee (MAC)

The MAC advises the EMS Medical Director and the EMS Agency on medical policies, procedures and protocols and provides a forum for communication between 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 and provides medical advice to the EMCC, as it formulates recommendations on policy.

The committee meets every two months and membership is comprised of receiving hospital physicians and nurses, fire departments, ambulance transport, law enforcement, public safety communication, hospital consortium representative, the EMS Medical Director and EMS Agency staff.

Recent topics have included a discussion on termination of resuscitation in non-shockable rhythms with unknown down time and no bystander CPR, review of new treatment protocol guidelines, and the new safe discharge process for hospitals.

Quality Leadership Committee (QLC)

The QLC is a peer-based quality improvement committee that develops, and monitors identified key clinical performance indicators (KPI's), 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. Recently, the QLC went through a LEAN/LEAP process with a professional facilitator to understand challenges with a video laryngoscopy product using a scientific method of problem solving.

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 its membership includes the EMS Medical Director and EMS staff, JPA EMS Supervisors, contracted transport agency clinical leadership team, public safety dispatch, and aero-medical providers.

Operations Committee (OPS)

The OPS Committee is a peer-based committee that 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. This committee meets monthly.

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 the recent EMSA regulations, the committee reviews cases, looks at policy, best practices, and makes recommendations for systems of care. San Mateo County was one of the first to implement a tiered destination policy to either a comprehensive 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. In the last year enhancements to our stroke system include the designation of a thrombectomy-capable stroke center and implementation of a pilot study involving a Mobile Stroke Unit or (MSU).

Get With The Guidelines (GWTG) ® has been implemented allowing the EMS Agency to look at performance both in our system and to 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.

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

Nurse Managers

The Nurse Managers Committee is a forum for collaboration and information sharing between hospitals, transport agencies, and the EMS Agency. Best practices and information sharing are hallmarks of this committee. An educational component is often part of this meeting.

Triple P (Policies, Procedures, and Protocols)

Comprised of a cross section of clinical system stakeholders, the Triple P does the initial review of policies, procedures and protocols, and makes recommendations for change, which are then sent to the entire system for clinical review.

PRIMARY IMPRESSIONS

The EMS Agency is in the process of updating and modifying all of our patient treatment protocols to align with the EMSA list of primary impressions. The primary and secondary impression drop down choices across our countywide MEDS ePCR platform have been modified accordingly. System-wide teaching regarding the primary impressions has been a focus for the first quarter, 2019.

SYSTEM ENHANCEMENTS

The EMS Agency has purchased First Pass® to augment our EMSQIP program. First Pass® sits “on top” of MEDS. The EMS Agency is reviewing clinical compliance with protocols for pain, cardiac, stroke, refusal of medical treatment or against medical advice, and STEMI. The FirstWatch Online Compliance Utility Module® (OCU) is used by the EMS Agency to monitor response times (see next page).

Response Volume and Speed

REQUIRED RESPONSE TIMES

Priority of Response	Area Type	Paramedic Fire Responder, Non-transport	Emergency Ambulance
1	Urban/Suburban	06:59 Minutes	12:59 Minutes
1	Rural	11:59 Minutes	19:59 Minutes
1	Remote	21:59 Minutes	29:59 Minutes
2	Urban/Suburban	14:59 Minutes	22:59 Minutes
2	Rural	24:59 Minutes	59:59 Minutes
2	Remote	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 are based on the urgency of the case (priority of the response), the region of the county (area type), and whether the responding unit is an ALS fire first responder or ambulance.

Based on the priority of the response and the patient's location, AMR and the fire EMS providers are required to respond within the response times listed above 90% of the time in each of the five response time zones (excluding South San Francisco). Each of San Mateo County's five zones exceeded this nationally established benchmark of 90%.

All late calls are reviewed for the causative reason. The EMS Agency meets monthly to review late calls with the provider. Later this year, our LEMSA will more comprehensively implement the Online Utility Compliance Model or OCU. The OCU will provide a web enabled tool to monitor online compliance in real time as part of our contract compliance and ensuring we are providing the resources necessary to serve our communities.

Opiate Crisis

The misuse and abuse of opioid pain medication is a national public health problem and the majority of drug overdose deaths are from an opioid pain medication. To put the problem in perspective, more people died of opioid overdoses than in motor vehicle crashes in 2015. The Center for Disease Control (CDC) reports 91 Americans die every day because of an opioid overdose.

San Mateo County is actively monitoring the morbidity and mortality from the misuse of opioids. Ongoing surveillance occurs via our electronic patient care records as well as by County epidemiologists reviewing Emergency Department (ED) data, data from multiple other sources, and medical examiner data. This data is shared amongst our system stakeholders to assess, monitor, and develop solutions to this public health crisis.

The EMS Agency has worked extensively with law enforcement agencies which have implemented Naloxone administration programs.

In 2017, the San Mateo County Age-Adjusted rate for all opioid deaths was 4.7/100,000 residents.

The next page shows a summary of how San Mateo County Health conducts opioid surveillance.

San Mateo County Drug Surveillance

December 2018

(prepared 1/23/2019)

Drug/Doses/Data	Month 12/1/18 to 12/31/18	Prior month comparison	Rolling Year to Date 1/1/2018 to 12/31/18	Prior Year Baseline
First Watch				
Narcan # of doses (total mg):				
2 (4mg), 2 (3mg), 2 (2 mg)	3	-	52	51
ESSENCE				
Analysis in process				
CA Poison Control				
Oxycontin; LSD + lithium, gabapentin; Meth; Norco; Tramadol + ativan	5	↑	112	124
Coroner				
Referred cases	2	-	28	34
VRBIS				
Drug-related	0	↓	N/A	N/A
Pending investigations	24	↑	N/A	N/A
Narcotics Task Force				
<i>Nothing to report</i>				N/A
Crime Lab Specimens				
Heroin	24	↑	N/A	N/A
Heroin + cocaine	0	↓	N/A	N/A
Heroin + methamphetamine	1	-	N/A	N/A
Fentanyl	4	↓	N/A	N/A
Methamphetamine	166	↓	N/A	N/A
Total items submitted	347	↑	N/A	N/A

Summary of drug overdose activity in San Mateo County

Legend - prior month comparison:	
increase vs prior month	↑
decrease vs prior month	↓
same as prior month	-

Data Sources:

- First Watch: Patient cases with use of 2 or more doses of Naloxone/Narcan
- ESSENCE: Hospital report of ED cases with dx of drug overdose for confirmed or suspected opioids (i.e. fentanyl, heroin, Norco) marijuana, other illicit drugs
- CA Poison Control: Resident self-report of potential overdose on opioids, marijuana, illicit drugs
- Coroner: Drug-related deaths with suspected/confirmed dx including fentanyl, heroin, other drugs
- VRBIS: monthly confirmed drug-related & pending investigation deaths
- Narcotics Task Force: updates regarding any unusual drug-related activity
- Crime Lab: drug specimens tested by the crime lab and total specimens submitted

Specialty Care – Cardiac Patients

San Mateo County participates in the Cardiac Arrest Registry to Enhance Survival or CARES program and data is displayed below for 2017.

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

SAN MATEO COUNTY CARDIAC ARREST- CARES DATA

361 CASES
69% MALE
31% FEMALE
MEAN AGE OF 66.9
22% OF THE TIME, AN AED WAS APPLIED PRIOR TO EMS ARRIVAL
39.2% OF THE TIME, A BYSTANDER INITIATED CPR

Specialty Care – STEMI 2018

San Mateo County STEMI System Summary for 2018 Quarter 4 (October, November, December)

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

Specialty Care – Stroke CY 2018

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 have the ability to identify patients as having a stroke and alert the hospitals of their arrival via a “stroke alert.” Four hospitals serve San Mateo County patients as primary stroke centers and two are recognized as comprehensive centers. This tiered system allows patients to receive assessment and treatment at either a primary or a comprehensive center, depending on the time of symptom onset and the type of stroke.

San Mateo County’s Stroke System Committee is comprised of physicians, stroke coordinator nurses, and EMS Agency members who participate in the stroke system all working together to improve quality. The committee reviews care and makes recommendations to the EMS Medical Director on best practices for stroke care.

As mentioned earlier, system enhancements include the designation of a thrombectomy-capable stroke center and a pilot study involving the use of a mobile stroke unit.

Specialty Care – Trauma CY 2018

Although San Mateo County does not have any designated trauma centers located within the boundaries of the County, we do have a trauma system. To assist in the evaluation of our system, EMS clinical staff including the EMS Medical Director participate in Santa Clara and San Francisco Counties' trauma quality improvement processes. The results of clinically based QI issues/efforts are reported to MAC and QLC committees. The results of operationally based QI issues and efforts are reported to OPS and ESC committees. Both Santa Clara and San Francisco Counties are receiving facilities for our trauma patients at Stanford Health Care and Zuckerberg San Francisco General Hospitals respectively. EMS Agency clinical personnel attend regional meetings for both counties.

San Mateo EMS recently revised the red box/blue box criteria in consultation with both of our receiving trauma hospitals. The revision and education guide our local receiving hospitals on whether to accept a patient or refer to a trauma center when paramedics make the initial notification or "ring down" and to help ED physicians expedite transfer to trauma center when the patient presents at a non-trauma hospital.

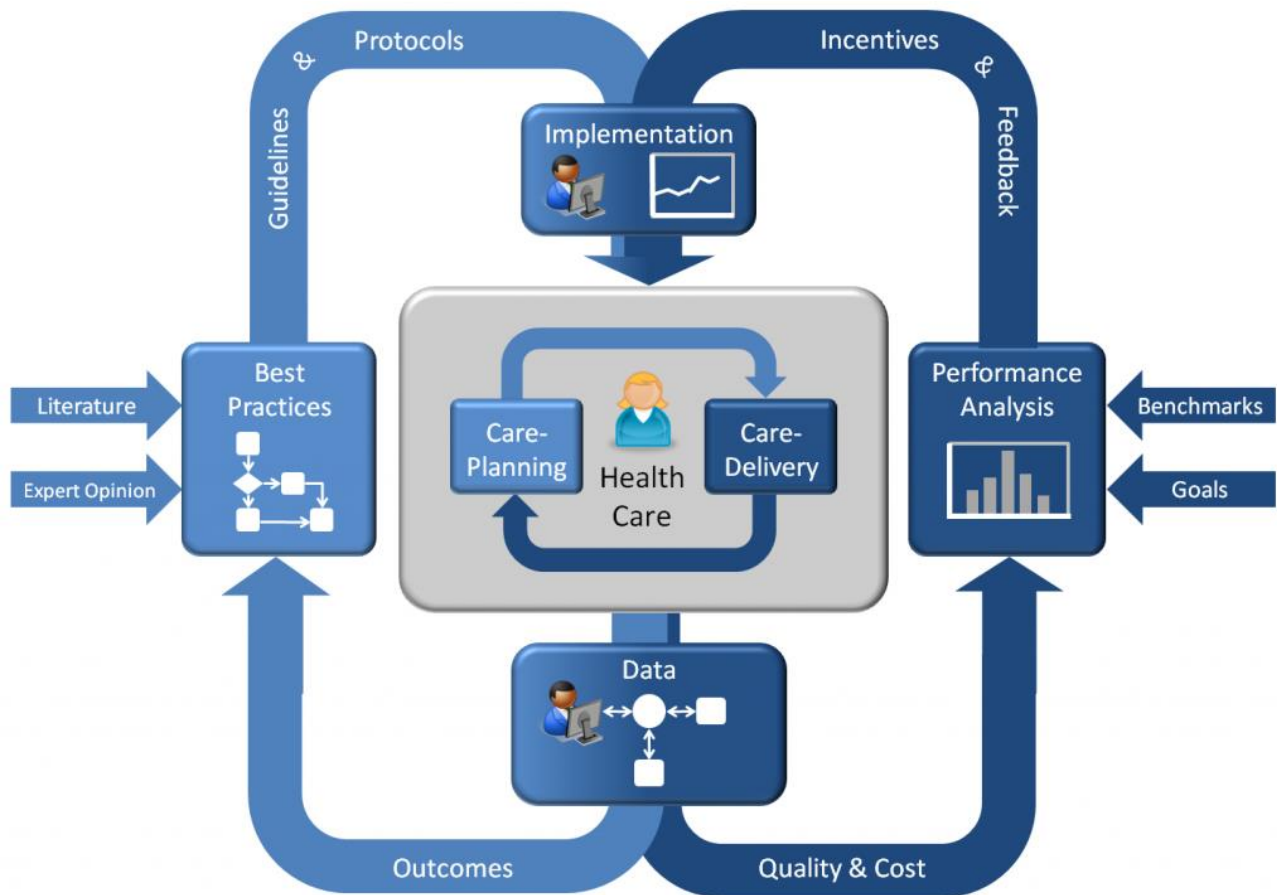
Changes since the last submission include pediatric trauma patients < 6 years old are transported to Stanford Health Care, a Level One Pediatric Trauma Center. We recognize the specialty care this patient population needs as well as the wrap-around services available.

We have reduced the average scene time for trauma patients by 5:43 since our last submission. It should be noted that this metric includes all traumas and does not account for delays due to extrication or standbys until the scene is deemed safe for EMS to enter by law enforcement.

Please see the Trauma report recently submitted 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 Advisory Committee (EMDAC) and EMS Administrators Advisory Committee (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 AMR and 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. AMR has a mobile training unit utilized for off-site trainings. 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 (including cost of trainings). 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
- Cadaver labs
- Virtual labs
- Scheduled clinical experience
- Receiving hospitals
- Specialty care centers

Protocols and procedures related to patient care are reviewed utilizing the EMS 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 posted on the EMS Agency website.

The EMS Agency is responsible for ensuring that on-going training is appropriate to the skill level and service goals as defined by contracts. 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 of 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. Adherence to contractual training and education requirements are reviewed periodically by EMS clinical 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.