

2019
2020

Monterey County Emergency Medical Services Agency Report to the Monterey County Board of Supervisors

ANNUAL REPORT

COUNTY OF MONTEREY | Health Department

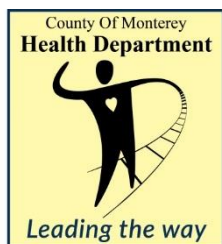


Table of Contents

Comments from the EMS Director.....	2
Comments from the EMS Medical Director.....	3
Preface	4
The Monterey County EMS System-An Overview	5
EMS Agency Role in the Monterey County EMS System	5
EMS System Management.....	5
Policy and Protocol Development.....	5
Quality Improvement.....	6
Regulation.....	7
Contract Compliance.....	7
Exclusive Operating Area	8
EMS System.....	8
911 Call Receipt.....	8
EMS Dispatch	9
Clinical Care.....	9
Specialty Care Systems	10
Monterey County STEMI System Metrics.....	11
EMS Advisory Committees.....	13
EMS Personnel	13
EMS Education and Training	14
Emergency Medical Responder (EMR)	14
Emergency Medical Technician (EMT).....	14
Disaster Management.....	15
Medical Health Operational Area Coordinator (MHOAC)	15
COVID-19.....	16
EMS Funding	17
Community Service Area (CSA) 74	17
Maddy Fund	17
Looking Ahead.....	18

Comments from the EMS Director

Honorable Chair and Members of the Board of Supervisors:

I am pleased to present to you the 2019-2020 Monterey County EMS Agency Annual Report which covers the period of July 1, 2019 through December 31, 2020. This report highlights the major accomplishments and describes some of our activities in this period.

COVID-19 had a significant impact on all of us. The impact on the EMS Agency was magnified as we were expected to not only perform our regular duties, but the EMS Agency was tasked with critical responsibilities in managing the COVID-19 emergency through the Medical Health Operational Area Coordinator (MHOAC) role filled by EMS Agency staff.

As COVID-19 cases started to pop up in areas adjacent to Monterey County, the EMS Agency began to seek out the best information about this virus and how to provide patient care when the virus might be present. The EMS Agency was extremely proactive in distributing this information in an effort to mitigate fear and concern on the part of the EMTs and paramedics who continued to provide patient care to the people of Monterey County. The EMS Agency created new policies and worked through the Local Optional Scope of Practice process to allow paramedics and EMTs to not only provide testing for COVID-19 but we also began the process to create policies to have paramedics provide vaccination against COVID-19. The MHOAC was instrumental in obtaining and distributing PPE to healthcare providers from hospitals to dentists. The MHOAC was even instrumental in obtaining PPE for agriculture workers.

In the midst of the COVID-19 emergency, the EMS Agency continued its work to improve the EMS system and ensure quality patient care. Under the guidance of the EMS Medical Director, the EMS Agency continued to update policies and treatment protocols. To help slow major internal bleeding, paramedics are now able to administer TXA to improve survivability in the trauma patient buying them time to get to the trauma center and into surgery. To guide paramedics in its use as well as in the treatment of trauma patients in general, the Major Trauma Patient treatment protocols was introduced.

In addition to increasing the scope of practice of paramedics, the EMS Agency brought additional medications and procedures into the EMT scope of practice. The use of epinephrine auto-injectors is potentially lifesaving when the patient is having a severe allergic reaction. EMTs may now administer naloxone to reverse the effect of narcotics on breathing causing many overdose victims to begin breathing on their own again.

These things, and many others are discussed in the following pages.

Respectfully submitted,



Teresa Rios

EMS Bureau Chief

Comments from the EMS Medical Director

In Emergency Medical Services, it is the nature of our work to face the unpredictable, to plan for the unimaginable, to learn and adapt to new circumstances, and to safeguard human lives with confidence and compassion in the midst of chaos and uncertainty. We must be prepared for *all* things, as the challenges of 2020 so clearly illustrated.

During the COVID-19 pandemic, the Monterey County EMS Agency has worked closely with local hospitals, Emergency Medical Dispatch, EMS providers, fire and law enforcement agencies, the Health Department, and numerous local, state, and federal authorities as we address various stages of the pandemic. Early in the process, we revised 911 dispatch screening questions to identify at-risk individuals and to communicate pertinent information to EMS field personnel. We modified respiratory treatment protocols to enable life-saving interventions while reducing the risk of viral transmission to hospital staff and EMS providers, and we coordinated the distribution of Personal Protective Equipment to the many agencies within the system. As the pandemic unfolded, we provided guidance regarding treatment and transport of COVID-19 patients in accordance with CDC recommendations, and we worked with the state to allow paramedics and EMTs to administer vaccines in an effort to bolster immunity and reduce the spread of COVID-19 within the population.

Monterey County's EMS system faced other challenges as well. Last year marked one of the worst wildfire seasons the state has ever seen. Heavy rains in January caused flash flooding. The narcotic epidemic continued to escalate, and the EMS Agency worked with local partners to provide naloxone (a narcotic reversal agent) to at-risk patients and their families to administer in the event of a narcotic overdose. Protocol revisions included additional tools for airway management, glucometers and epinephrine auto-injectors for use by EMTs and first responders, and administration of tranexamic acid to reduce blood loss in critically ill trauma patients.

Despite these advances, the EMS Agency recognizes that our work is never done. This next stage of the pandemic will bring new challenges, and 2021 will be full of struggles and opportunities in a world that is always changing and requires us to evolve along with it. The EMS Agency is dedicated to protecting the lives and well-being of the people of Monterey County. It is a privilege to serve in that capacity, and we look forward to collaborating with our EMS partners to ensure the best possible outcomes for our patients and communities.

Sincerely,



John Beuerle, M.D.
EMS Medical Director

Preface

2019 and 2020 were very challenging years for Emergency Medical Services (EMS) in Monterey County. Not only was the EMS Agency challenged to put together an RFP for ambulance services, COVID-19 emerged adding additional responsibilities to an already significant workload.

The EMS Agency dug in and tackled the challenges as they came.

As you read through this Annual Report, you will see how the EMS Agency met these challenges, provided leadership, and served the EMS professionals that provided direct patient care, answered the call for help, and continued that care in the hospital.

The Monterey County EMS System-An Overview

What do you think of when you think of Emergency Medical Services (EMS)? An ambulance rushing a deathly ill child to the hospital while the paramedics and EMTs push back against death? Perhaps you think about the fire department feverishly working to extricate the victim of a vehicle crash from their car. Maybe doctors and nurses fighting for the life of a hiker who fell off a trail and sustained massive internal injuries is the picture that comes to your mind. All three scenarios are pieces of the Monterey County EMS system. All reflect that there is an emergency resulting in the need for medical services. Rarely does the picture come to mind about the coordination of the parts that create a system of care.

This year, the EMS Agency Annual Report will be highlighting the system and the systems that make up a cohesive system of communications, response, treatment, transport, and emergency department and specialty hospital services.

EMS Agency Role in the Monterey County EMS System

EMS System Management

In 2020, the EMS system faced challenges unlike any it has seen in the past. COVID-19 forced us to examine and modify many of our standards procedures for everything from how we meet with stakeholders, to how we train, and, most importantly, how each of the links in our EMS system cares for patients. Additionally, the response to COVID-19 occupied a great number of EMS Agency resources and staff hours. As a result of all these factors, many of our usual projects, meetings, and other items were placed on hold to respond to more urgent needs.

The EMS Agency was on the forefront in disseminating information to field personnel on recommended practices for safety and patient care in the early days of COVID-19. The EMS Agency, with EMS Medical Director involvement and leadership, reviewed best practices and recommendations and provided clear information and direction in an effort to ensure quality patient care and to ensure, as best as possible, safety for the EMS providers.

Policy and Protocol Development

The development and implementation of EMS system policies and treatment protocols is, in many ways, the glue that holds the EMS system together. These policies and protocols set standards, establish common operating requirements, and designate the roles of the multiple organizations that function within our system.

Despite the challenges we faced in 2020, the EMS Agency accomplished several key items that improved the care delivered throughout the EMS system. These key accomplishments included:

- Revision of numerous policies and treatment protocols – These revisions have included modification to the format to make the policies easier for the providers in the field to utilize, modifications to keep existing policies in line with industry-wide best practices and standards of care, and the addition of new treatments and medications to give our providers the ability to care for their patients in new and innovative ways. Recent changes have allowed a broader swath of our prehospital providers to administer treatment for life-threatening allergic reactions and opioid overdoses. This ensures that these time-sensitive treatments are more widely and rapidly available. The EMS Agency recently expanded

the scope of practice for Paramedics by adding a medication that has been shown to improve outcomes for some of the sickest patients suffering from life-threatening bleeding.

- The EMS Agency has started the process to expand the scope of practice for flight paramedics to standardize their scope of practice across county lines.
- Policies were created and adjusted to ensure appropriate patient care while also meeting the needs of EMS personnel to function safely due to the widespread presence of COVID-19. One such change is the use of a metered dose inhaler instead of a nebulized breathing treatment. Limiting exhaled droplets that are widespread by the use of a nebulizer helps limit exposure of EMS and ED personnel to droplet contamination and potential virus exposure.
- Drafting performance standards – We not only want to ensure that our providers have a current evidence-based set of tools to treat their patients, but we also want to ensure that these tools are being utilized in the correct situations and in appropriate ways. In pursuit of this goal, we have created performance standards for high risk procedures such as placement of a breathing tube when a patient needs assistance with breathing.

As described later in this document, the EMS Agency utilizes the expertise of the EMS Medical Director, EMS Agency staff, and EMS committee members representing all aspects of the EMS system to ensure the policies and protocols set up the EMS system for success.

Quality Improvement

As we begin to emerge from the constraints imposed by COVID-19, we have turned our eyes to not only returning to our previous practices but, also towards identifying ways to improve the EMS system. In pursuit of this goal, staff from the EMS Agency completed a survey of our processes and programs related to Quality Improvement (CQI), reviewed State of California requirements in these areas, and researched best practice and leading programs from other areas throughout the country.

We have reinstated our quality improvement meeting schedule. The Continuous Quality Improvement Technical Advisory Group (CQI TAG), Trauma Evaluation and Quality Improvement Committee (TEQIC), and Stroke and STEMI (ST Elevation Myocardial Infarction) Quality Improvement Committees have all resumed regularly scheduled meetings. We utilized the first meetings of these groups to review the current state of EMS in Monterey County and determine objectives for the future. Committee members were asked to come to the meetings prepared to discuss topics such as: organizational capabilities, philosophies related to QA/CQI, potential performance indicators and improvement projects, and practices to ensure appropriate dissemination of information from the meetings. As a follow up to the meetings, the EMS Agency distributed a SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis form to committee members. We are utilizing the results to inform the direction of the committees in the future.

The EMS Agency has worked to bring additional prehospital providers on to the County's electronic documentation system. This helps to create a single repository for the history of the care provided to a patient before they reach the hospital. This information is provided to the hospital that will continue to care for the patient. Such information can prove useful in providing a complete picture of the course of a patient's illness or injury and guiding treatment decisions.

Towards this end, the EMS Agency also worked with prehospital provider agencies and local hospitals to create a Data Utilization and Governance Policy. This policy creates standards for sharing data between the various entities and will facilitate future efforts at providing enhanced patient outcome information to our prehospital providers.

Our goals for the coming year include:

- Modifications to our procedure for reviewing and adopting policy and protocol changes to allow for more input from our stakeholders.
- Development of system and provider performance indicators for monitoring by the EMS Agency and our committees.
- Ensuring EMS Agency access to patient outcome data contained in our trauma center's (Natividad Medical Center) patient tracking database. This will allow the Agency to provide valuable and timely educational feedback to our prehospital providers.
- Expanding the number of hospitals providing patient outcome information via our electronic documentation system's Health Data Exchange capabilities.
- Standardization of documentation practices across all EMS provider agencies.
- Improvement of our system's capabilities to respond to incidents involving many patients at once. These types of incidents are commonly referred to as Mass Casualty Incidents or MCIs. We have recently resumed daily MCI communication drills between the EMS Communication Center and all Monterey County hospitals. Future projects related to this topic include: review and revision of the EMS Agency's Response Plan for MCIs as well as policies related to active shooter incidents, implementation of regularly scheduled "Triage Tag Days" during which our EMS providers gain skill and practice at classifying severity of injury/illness, and exercises or drills to give our providers opportunities to practice response to these type of incidents.
- Creation of a Helicopter Emergency Medical Services (HEMS) working group to focus on issues unique to these services.

Regulation

In addition to the leadership and coordination role of the EMS Agency, the EMS Agency is also a regulatory body. As such, we ensure that the requirements under EMS Statutes and Regulations are met. We also ensure that the terms of the agreements with EMS service providers are followed. A primary responsibility for the EMS Agency is to ensure that the EMTs and paramedics who make up our field responders are appropriately certified and accredited to work in the Monterey County EMS system. Details of these regulatory activities are included in several of the following sections.

Contract Compliance

The current agreement for ambulance services requires a high level of performance by American Medical Response (AMR), the ambulance contractor for the majority of Monterey County. The effects of COVID-19 have created challenges which include longer times to get the patient into an ED bed, additional responsibilities to clean-up of the ambulance after each transport, and fewer available staff for the ambulance as they are either ill or exposed to COVID-19.

The EMS Agency continues to work with AMR to ensure the response time data is correct, assist AMR in getting patients off the ambulance gurney and into a bed in the ED, following the contract to ensure that late calls that are due to a factor beyond the control of AMR are not counted against their response time compliance.

The EMS Agency also worked with AMR in 2020 to bring in additional paramedics from other areas to staff ambulances due to paramedic shortages and the need to back-fill positions, as well as to staff additional ambulances requested for stand-by at the fires in Summer 2020. The EMS Agency, within the parameters of the ambulance contract, State regulations, and Monterey County EMS policies established the process to quickly accredit these paramedics to work in Monterey County. As these were all experienced paramedics, time in training was minimized allowing prompt deployment of these paramedics putting the Monterey County staff back on the streets to handle 911 calls. EMS Agency staff was available to provide paramedic accreditation to those new to Monterey paramedics even on weekends and evenings to assist AMR in keeping an adequate number of ambulances staffed and available to respond to meet patient needs and compliance with the contract.

Exclusive Operating Area

A primary function of the EMS Agency is to ensure effective ambulance services throughout Monterey County. The EMS Agency has secured an agreement with AMR to provide comprehensive ambulance services in the Exclusive Operating Area into 2022. AMR will continue to meet contractual requirements to provide emergency ambulance services in response to 911 calls, interfacility transports for patients who need continued medical monitoring and care as they are transferred to another hospital or skilled nursing facility, and for stand-by services at special events.

The EMS Agency will be seeking to extend the agreement with AMR in 2021 to continue the provision of ambulance services.

Developing a new ambulance services provider agreement is a complex task. It is a responsibility the EMS Agency takes very seriously. The ambulance services provider agreement must address the unprecedented changes that are occurring and will continue to occur in EMS systems and healthcare over the next several years. Some of these changes include changes in EMS system financing and reimbursement, direct patient care affected by research and outcomes, advances in technologies, changes in call volume, and changes in regulations. Even with an eye to the future, the ambulance provider agreement must also address the current, unique needs of our community. If that was not enough, the EMS Agency must work to strike a balance between the scope of services provided to our community and the cost of providing those services.

EMS System

911 Call Receipt

This is the point in the EMS system that is the first connection between the person in need of emergency medical care and the EMS system. A dedicated cadre of professional communications personnel at the Monterey County Emergency Communications Department (MCECD) receive the majority of 911 calls placed in Monterey County. The California Highway Patrol (CHP) also maintains a dispatch center in Monterey County and receives 911 calls made by cell phone around the highways in Monterey County. The majority of the 911 callers reporting a medical emergency

are transferred to the EMS Dispatch Center that is co-located at the MCECD for processing. 911 calls such as those involving an active shooting or other dangerous situations may be retained by MCECD personnel as they gather information necessary for the safety of all responders such as law enforcement, fire, and ambulance personnel.

EMS Dispatch

911 callers with a medical emergency are transferred from MCECD to the EMS Dispatch Center (EMS Dispatch) which is operated by AMR, the County's ambulance services contractor. EMS Dispatch is provided by dispatchers who have been trained in Medical Priority Dispatch and in pre-arrival instruction. Medical Priority Dispatch System (MPDS) is a well-researched and proven method to prioritize medical calls so that the appropriate medical response is sent. The goal of MPDS is to ensure that those people with life-threatening conditions receive the fastest response from the closest available resources. Pre-arrival instructions are given to assist the person calling 911 in helping the person with the medical emergency. This may be through guidance in performing CPR, control of serious bleeding, childbirth, and several other conditions.

In 2020 a new COVID-19 screening tool was introduced to alert responders on potential COVID symptoms or exposure in the patient. This also led the dispatcher to request the patient meet the responders, if possible and without risk to the patient, outside or at least in the doorway in an effort to decrease potential exposure to the responders.

An additional change to benefit the patient was using the Emergency Medical Dispatch (EMD) system to screen calls for a "lift assist". Lift assist calls are often made to 911 by a family member or caretaker of the person who is on the floor or ground. The person on the ground or floor and the person calling are unable to get the person up so they call 911 for a lift assist. The EMS Agency discovered through its QI processes, and confirmed through national reports, that many "lift assist" calls result in transport of the patient to the hospital, either from the call for assistance or from a subsequent call that the patient needs medical attention. This EMD screening tool helps to identify patients who are likely to need ambulance transportation. An ambulance will be dispatched in situations where only the local fire department would have responded previously.

Clinical Care

The EMS Agency has a vision of "leading the Monterey County EMS System to ensure best practices-standards of emergency medical care for the people of Monterey County." EMS providers and the care they deliver to those in need lie at the heart of any EMS System. Providing high quality clinical care encompasses far more than just the traditional image of an ambulance that one typically associates with EMS. Taking care of our patients truly involves an entire system – beginning with community education on recognizing and responding to emergencies, continuing into the communications center as trained personnel answer calls for assistance and provide potentially life-saving assistance over the phone; moving on to the first responder, specialized rescue, and ambulance service providers; and finally culminating with the nurses, physicians, and other care providers in our local hospitals. The EMS Agency plays a role in helping to ensure excellence at each of these links in the system.

To help combat the pervasive problem of narcotic overdoses and related deaths, the EMS Agency has developed policies to allow Monterey County paramedics and EMTs to distribute naloxone to those patients who suffered an overdose and refused transport in an effort to prevent death in a

subsequent overdose. The EMS Agency has worked with Prescribe Safe to assist EMS service providers in obtaining the naloxone for this program at no cost to the EMS service provider.

Specialty Care Systems

A highly functioning EMS system is usually made up of a system of systems. The EMS system, as a whole, functions by bringing a variety of responders together to provide the care and transport needed by the patient. Within the EMS system, are systems of specialty care designed to get the patient with specific conditions to a hospital capable of treating their condition.

Trauma System

A trauma system includes EMS Dispatch and pre-arrival instructions; treatment protocols for the care of injured patients; EMS field triage, treatment and transport to the closest appropriate Trauma Center as necessary; a Trauma Center designated by the local EMS Agency; interfacility transfer agreements for the transfer of patients to Trauma Centers where they can receive the best possible care for their injuries; rehabilitation for those severely injured patients who need it; and injury epidemiology and prevention. Another piece of the trauma system is oversight and quality assurance/quality improvement (QA/QI). Peer review, case reviews and representation by all components of a trauma system in a single committee make communication and identification/resolution of issues within the system more effective to help improve the trauma system and streamline communication between organizations.

Natividad has been the designated Adult Level II Trauma Center for Monterey County since January 5, 2015. Pediatric patients with critical or serious injuries are usually flown to a Pediatric Trauma Center in Santa Clara County. Children with less serious injuries are transported to Natividad for treatment or for stabilization and subsequent transfer to a Pediatric Trauma Center. Agreements exist between Natividad and the Pediatric Trauma Centers closest to Monterey County for the acceptance of these patients. Stanford Medical Center and Santa Clara Valley Medical Center are the two closest Pediatric Trauma Centers. Natividad has policies regarding trauma team activation, interfacility transfers for trauma patients, specialty services for trauma such as interventional radiology and highly trained trauma surgeons. They also have a team of staff dedicated to such things as maintaining a database of all trauma patients seen who meet specific criteria for activating a trauma team, Performance Improvement, an Injury Prevention nurse Trauma Registrars, specially trained physicians, nurses and nurse practitioners who treat the patient from the time they enter the Emergency Department until they are released to go home. Rehabilitation services are available at Natividad for patients who need assistance in regaining their ability to care for themselves. The trauma team follows up on trauma patients once they have been discharged to ensure that appropriate care continues even after they have been sent home.

STEMI System

S-T segment Elevation Myocardial Infarction, or STEMI, is the medical term that describes patients who are suffering from the most immediately life-threatening type of heart attack. Paramedics in Monterey County are trained to read 12-Lead Electrocardiograms, or ECGs, to identify STEMI and to wirelessly transmit ECGs to interventional cardiologists and to STEMI Receiving Centers. STEMI Receiving Centers are hospitals in Monterey County that have been designated by the Monterey County EMS Agency and who have shown that they have the capability of providing complete care for these patients.

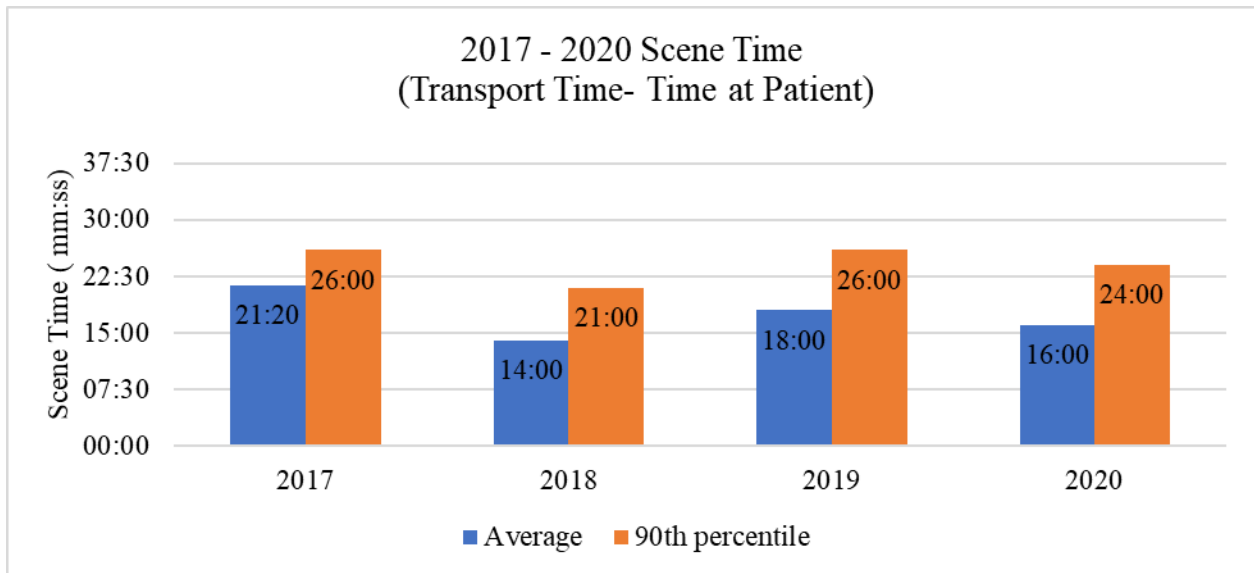
Community Hospital of the Monterey Peninsula (CHOMP) and Salinas Valley Memorial Hospital (SVMH) were designated by the Monterey County EMS Agency as STEMI Receiving Centers in 2010, after demonstrating their capabilities, which are delineated in EMS Agency policies. This designation directs EMS crews to transport suspected STEMI patients to the closest of the two STEMI Receiving Centers, bypassing other hospitals if necessary, that have not been so designated. The Monterey County EMS Agency continues to monitor the care given to patients suffering from a STEMI through data collection and reporting and case reviews at the STEMI QI Committee meetings.

Paramedics can obtain an electrocardiogram (ECG) in the field and transmit it directly to the STEMI Receiving Center and to the interventional cardiologist’s cell phone. This early notification of the critical nature of the patient results in faster activation of the cardiac catheterization lab, and a shorter time to the critical interventions taken there.

Patients identified by EMS personnel are transported to either SVMH or to CHOMP. Both hospitals have achieved accreditation either from the Joint Commission or from the American College of Cardiology as Chest Pain Centers.

Monterey County STEMI System Metrics

STEMI is a specific type of heart attack where minutes truly make a difference. Scene time is one of the variables that EMS crews have control over. Monterey County measures STEMI times in both 90th percentile times and average times. The 90th percentile depicts where 90% of all calculated scene times documented in the system lies. The 90th percentile excludes outliers and gives a more meaningful measure than the average.



In July of 2019, section 7.1 was added to the California Code of Regulations, requiring a STEMI Plan from each local EMS agency. Monterey County wrote and submitted a plan to the California EMS Authority, which was approved in February 2020. Monterey County EMS Agency’s STEMI Plan includes a description of the STEMI system, as well as describing the flow of data, a description of the two STEMI Receiving Centers, policies and protocols in place, communications,

integration with neighboring counties, education and training, metrics, goals and quality improvement.

Stroke System

One of the specialty systems within the EMS system is to manage the patient with stroke. Monterey County has a mature stroke system in place to identify stroke patients quickly and to get them to the appropriate hospital in a timely manner. The EMD process is the first step in assessing for stroke. Field personnel use a standardized assessment tool to identify stroke. SVMH and CHOMP have been designated as primary stroke centers and are the destination for the patients with a stroke.

Fortunately, due to a well-functioning stroke system being in place, stroke patients were assessed appropriately and transported to the hospital best prepared to promptly care for them. This allowed EMS Agency staff to focus more on other areas of the EMS system that needed greater attention and deal with the demands of COVID-19.

We are looking to improve the stroke care system by looking at tools to assist in identifying Large Vessel Occlusion strokes. Patients with this type of stroke often benefit from surgical intervention rather than medical intervention. No local hospital has the necessary number of these patients to be designated to receive these patients. Once they are identified in the local hospital, they are usually flown by EMS aircraft to a designated hospital. We are evaluating several stroke scale tools to determine if one is likely to be effective at identifying these patients so they can be sent directly to the regional stroke center from the field and bypass the local hospital. This will get the patient into surgery faster and likely result in a better outcome with more functionality.

Behavioral Health

Two of the Monterey County hospitals, Natividad and CHOMP, have behavioral crisis teams on site. Behavioral health patients are evaluated by EMS personnel to determine if there is also a medical component to their condition. If there is an acute medical problem, such as an overdose or significant injury, the patient is transported to the closest Emergency Department. If there is no acute medical condition, the patient is transported to either Natividad or CHOMP. This gets the patient to the right facility to provide for their needs.

Behavioral health patients pose a significant challenge to the EMS system. The first challenge is the number of behavioral health patients in crisis who need care. Many of these individuals either seek care from EMS by accessing 911 or 911 is called by well-meaning people who see unusual behavior from these people. EMS responds, assesses the patient, and transports them to a local hospital. CHOMP and Natividad provide the initial assessment and care as needed by the patient. Far too often, the care needed is beyond the capability of our local hospitals. This may be due to the number of patients, the need for a locked facility, or the patient is a child. This leads to the need to transport the patient to a place where they can receive the care they need. Without a viable alternative, EMS is tasked with the transport. Often, these transports are to facilities outside Monterey County. Patients are transported to the Bay Area, Sacramento area, or even as far as San Diego. These out-of-county transports put a strain on the EMS system as the ambulance transporting the patient is lost to the system until it returns.

EMS Advisory Committees

There are three primary advisory committees to the EMS Agency. These committees are made up of members of the EMS system, and in the case of the Emergency Medical Care Committee (EMCC), members of the public. Each person is able to provide a perspective on EMS issues as a representative of their constituency. This varied viewpoint from each member helps the EMS Agency ensure that the decisions made in policy and treatment protocol will be effective and communicated to the constituency.

The primary committees are the EMCC, Medical Advisory Committee (MAC), and EMS Operations Committee (EMS Ops.).

The EMCC advises on larger EMS system issues and includes members of the public to ensure the needs of the public are accounted for.

MAC has a medical focus and is where treatment protocols and policies are reviewed and our EMS providers from the field and hospitals are able to provide their viewpoints and concerns.

EMS Ops focuses on operational issues and system coordination. This committee is made up of a broad representation of field providers.

EMS Personnel

EMS personnel typically have one of three levels of EMS training. These levels of training are discussed below along with EMS Agency actions and responsibilities related to the certification of EMTs and the accreditation of paramedics. We also discuss the status of EMS training in Monterey County. Registered Nurses working on EMS aircraft or on ground Critical Care Transport (CCT) are responsible to the service provider's medical director and their licensing board.

Certification and Accreditation

Emergency Medical Responder (EMR)

Monterey County should be proud of its history in training EMS personnel to the level of EMR. Many years ago, EMS leadership determined that bringing paramedic level services required all EMS responders to be trained to provide EMS care and to assist the paramedics as they had only received very basic first aid training. The EMS Agency took on the responsibility for training and sent instructors to teach EMR courses in the rural areas. The EMS Agency no longer provides this training. Instead, the EMS Agency distributes CSA-74 funds to the fire departments and districts to assist with the cost of training. Some fire districts still provide training at the EMR level. Currently, there is no certification in California for EMR. EMR is a training course that provides a course completion certificate to document the training.

Emergency Medical Technician (EMT)

Most EMS providers have received training at the EMT level of care. The EMS Agency is responsible for ensuring that the EMT has met the training requirement for certification, is free from a criminal history that would preclude the individual from having an EMT certification, and has no background of misconduct as a healthcare provider that would make them unfit to provide care for the people of Monterey County. When this has been verified by EMS Agency staff, the EMS Agency provides EMT certification to the applicant. The EMS Agency processed up to 72

EMT applications in a month. Usually the EMS Agency processes 20-30 applications per month. Each one receives a thorough review to ensure all the requirements are met.

The EMS Agency also receives reports through the Live Scan fingerprint process on the criminal background of the EMTs certified or applying for certification to ensure the public health and safety. The EMS Agency also receives reports from the National Practitioner Data Bank on the healthcare background of each EMT and EMT applicant to ensure that they do not have history of problems related to the provision of medical care or licensure.

Paramedic

Paramedic accreditation ran smoothly. EMS Agency staff prioritized prompt processing of new paramedic accreditation applications due to the paramedic shortage and need to get the paramedics working quickly. Paramedics are licensed through the State EMS Authority. The paramedic's ability to practice in Monterey County is provided through accreditation. The EMS Agency provides accreditation only to paramedics affiliated by employment with a paramedic service provider organization. Monterey County EMS also requires paramedics to have additional training in trauma, cardiac, and pediatric care not required for licensure but required for accreditation to practice in the Monterey County EMS system.

EMS Education and Training

In addition to the regular training programs outlined below, the EMS Medical Director was actively involved in training EMS providers in the use of new medications and procedures through YouTube videos. This brought a consistent training directly from the EMS Medical Director to EMS field providers who would be using the new medications and procedures.

Emergency Medical Responder (EMR)

EMR training continues but is limited. It has found its greatest use in Big Sur and with the Palo Colorado Fire Brigade. Having this level of training available to these remote area fire agencies allows them to provide a higher level of patient care than possible with basic first aid training.

EMR trained personnel receive at least 40 hours of training every two years to maintain their skills.

Emergency Medical Technician (EMT)

COVID-19 brought many challenges to the EMT training programs. Due to the need for social distancing, much of the initial EMT training courses were taught remotely making use of Zoom and other technology. The EMT training programs worked to overcome challenges to learning skills which they creatively mastered either through the use of high-fidelity simulation mannequins or by limiting the number of students in a skills session or testing scenario and practicing the isolation and hygiene practices that they will need to perform when they complete their training and begin working as EMS professionals.

Under direction of the State, some training requirements were waived or altered. One such requirement involved the substitution of high-fidelity simulation in place of actual patient contact during training in the hospital.

Paramedic

The EMS Agency assisted EMS providers throughout the County with gaining access to utilize CALSTAR's (a provider of air ambulance services) simulation laboratory. Simulation-based

training allows our providers to build upon their training and experience by participating in real-time scenarios and practice medical techniques in procedures as often as they need, working to improve technique and avoid errors. It also allows opportunities to practice treating low-frequency, high-risk conditions that they may not regularly encounter in their day-to-day practice. The EMS Agency's Medical Director has also provided training via online platforms and video recordings. This helps make valuable training available to our providers regardless of their location or work schedule.

Disaster Management

Medical Health Operational Area Coordinator (MHOAC)

The Medical Health Operational Area Coordinator (MHOAC) is a role with a set of duties defined by the California Health and Safety Code Section 1797.153. During normal operations, the MHOAC is responsible for collaborating with local and regional emergency planners to develop and maintain medical and health disaster plans. However, in the event of a local, state, or federal declaration of emergency, the MHOAC becomes a primary point of contact for the coordination of medical and health resources between local, regional, and state authorities.

The MHOAC performs essential functions within the Operations Branch of the Emergency Operation Center (EOC). When the local Office of Emergency Services (OES) activates the EOC due to a declared emergency, the MHOAC role becomes one of heightened significance. Largely concerned with the procurement and distribution of necessary resources during emergencies and disasters, the MHOAC becomes increasingly vital to an effective emergency response the longer an emergency persists. The COVID-19 crisis has resulted in an unprecedented situation, a declared public health emergency that has remained in effect for nearly a year. As such, the MHOAC role has never been so thoroughly developed and exercised as it has been in the last year.

The primary activities of the MHOAC during the declared COVID-19 emergency:

COVID-19 Response

- The MHOAC has coordinated over 1,500 resource requests from a wide range of healthcare organizations, governmental agencies, and service providers. The majority of requests are for Personal Protective Equipment (PPE). The MHOAC has procured and distributed gloves, gowns, masks, and numerous other safety products to frontline and essential workers, with aggregate sums in the millions.
- In addition to PPE, the MHOAC is a primary conduit for laboratory supplies necessary for COVID-19 testing; for Monoclonal Antibody infusion products; for N95 fit testing materials; and a range of health products from hand sanitizer to digital thermometers.
- The statewide staffing crisis was felt acutely here in Monterey County during the final months of 2020. The MHOAC responded by assisting three of our local hospitals and several skilled nursing facilities with Cal OES requests for supplemental staffing, including CNAs, LVNs, and RNs. A similar staffing request resulted in several contact tracers and infection control investigators engaging in long-term assignments in Monterey County.
- The MHOAC procured twenty oxygen concentrators and twenty ventilators for use at Natividad.

- In recent months, the MHOAC has received a diverse collection of COVID-related requests, including requests for a refrigerated morgue trailer and concrete barriers to protect the pop-up tent used for testing in the parking lot at SVMH. Requests outside the Medical-Health domain are referred to the appropriate contact.

COVID Vaccination

- The MHOAC was involved in the early phases of COVID-19 vaccine planning, especially in regard to Fire and EMS personnel, facilitating the exchange of information between EMS service providers and key Health Department planners.
- The EMS Agency obtained approval from the CA EMS Authority to establish a process for authorizing EMTs and paramedics to administer the COVID-19 vaccines through an expanded scope of practice. At the time of this writing there are 67 EMTs and paramedics who have been trained and authorized to administer vaccines, with more being presently trained. The total number of EMS personnel authorized to administer vaccines will likely exceed one hundred.

Wildfire

- The summer of 2020 brought a disaster within a disaster when wildfires raged in Monterey County. The MHOAC and the EMS Agency are directly responsible for patient movement and transportation during emergency conditions. As such, the MHOAC was a principal team player in the coordination of the evacuation of Rippling River, a residential complex for seniors.
- A similar role was performed in the evacuation planning for Carmel Valley Manor, a large facility with a skilled nursing unit as well as an assisted living component. This was a complex effort involving other skilled nursing facilities, multiple county agencies and collaborators such as Monterey-Salinas Transit and the Monterey Regional Fire District. Fortunately, the facility did not evacuate. The planning, however, was a valuable live exercise.

In addition to the various actions and accomplishments described above, the MHOAC is a key point of contact between State and local agencies, between operational areas, and between the private healthcare sector and local government.

COVID-19

- Making system modifications in response to COVID-19 – Successful navigation of the COVID-19 pandemic required not only significant resources, but also adaptability. Early in the pandemic, the EMS Agency adopted a new series of 911 call screening questions focused on a patient’s travel history and any symptoms potentially related to COVID-19. Dispatchers passed this information along to responding prehospital providers so that they could take additional precautions and help ensure their own safety. Treatments and procedures were also reviewed to help our providers provide the best possible care while minimizing exposure risk. Isolation requirements for suspected COVID-19 positive patients soon proved to be another challenge as our prehospital providers faced a variety of different procedures when delivering a patient to a hospital. The EMS Agency worked with the hospitals to develop a standardized procedure. We also assisted in the notification

of providers who had potentially been exposed to COVID-19. Finally, the EMS Agency again looked to expand the scope of practice of our prehospital providers to allow their participation response efforts to COVID-19. We obtain authorization from the State for providers to obtain nasal swabs for COVID-19 testing as well as to administer COVID vaccinations.

EMS Funding

Community Service Area (CSA) 74

In 1998, Monterey County sponsored a ballot measure for the establishment of the CSA-74 benefit assessment on real property within the county to finance a countywide paramedic emergency medical services (EMS) program. On March 7, 2000, Monterey County voters approved Measure A, replacing the former CSA-74 benefit assessment with an equivalent special tax, in compliance with Proposition 218. The special tax is collected and administered by the EMS Agency and is used "for the purpose of funding the countywide paramedic EMS system, which will provide advanced life-saving support to victims in response to emergency calls."

The (now) special tax for CSA 74 is assessed in accordance with the Monterey County Land Use Codes. The basic unit is a single-family dwelling. All other land uses are either a percentage or multiple of that basic unit. Trailer Spaces and Hotel Rooms are calculated differently as there may be many of them on a single parcel.

The break down for fiscal year 2019-20 is as follows:

CSA units	118,948	1,622,526
Trailer spaces and hotel rooms	<u>349</u>	<u>86,854</u>
Total	119,297	\$1,709,380

During FY19-20, the EMS Agency used CSA-74 monies to continue to pay for the costs of the single integrated electronic patient care reporting (ePCR) system county-wide to ensure compliance with Assembly Bill 1129, which revised the California Health and Safety Code, Section 1797.227 to require local emergency medical care providers to submit electronic data.

Maddy Fund

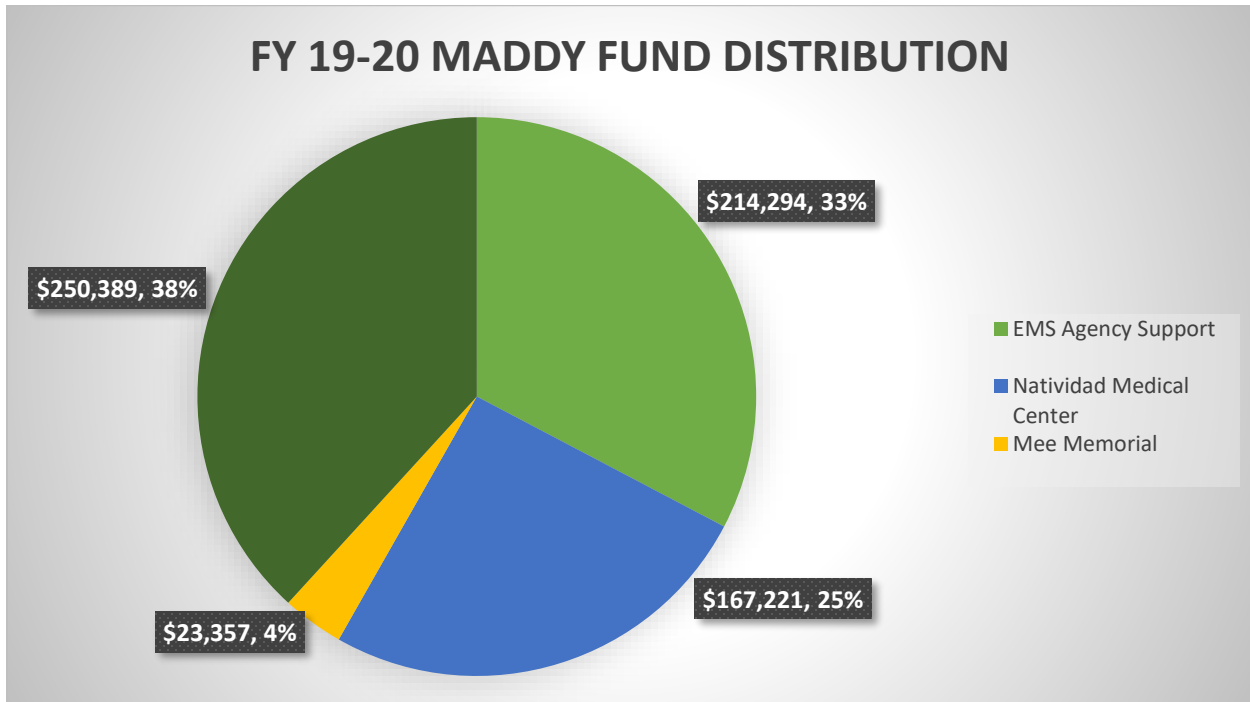
In 1989, the Monterey County Board of Supervisors established the County Emergency Medical Services Fund (EMSF) under Section 1797.98 of the Health and Safety Code (Maddy Fund) to provide for collection and distribution of fine proceeds authorized by the California State Legislature adopting of Senate Bill 612 and 1773. These laws allow counties to levy an assessment of \$4.00 per \$10.00 of fines for specified traffic violations.

Pursuant to State Law, the money in the fund is disbursed and utilized in the following manner:

Up to 10% of the proceeds are available to fund the program's administration. The remaining 90% compensates health care providers for emergency medical services provided to individuals who do not have healthcare insurance and cannot afford to pay for emergency medical care and for discretionary EMS purposes. The distribution breakdown is as follows: 58% (or 52.2% of total collections) to reimburse physicians for a portion of unreimbursed indigent services/bad debt costs; 25% (or 22.5% of total collections) to reimburse hospitals which provide a disproportionate share

of unreimbursed emergency medical care; and 17% (or 15.3% of total collections) for Health Department's Emergency Medical Services Agency discretionary activities. The distributions from the fund to hospitals and the Health Department are made during the fiscal year. Distributions of the physician reimbursement are made on a quarterly basis.

During FY19-20, EMS Agency continued to work with providers to transition to a secure, electronic submittal of claims to increase data accuracy. A table showing the disbursement of Maddy Funds appears below:



Looking Ahead

Even though it looks like COVID-19 will be letting up a little bit, there is still much for the EMS Agency to do as we move into 2021.

The EMS Agency will be evaluating many areas of the EMS system through the QI program seeking to move past data development to utilizing the data to bring about effective change and improve patient care.

The EMS Agency is working with EMS aircraft providers to create a unified scope of practice for the paramedics who work on their aircraft. These paramedics may work from several air bases in multiple counties which all have different policies and treatment protocols and limitations on their scope of practice. This unified scope of practice is being developed to limit the potential for treatment errors by the paramedic caused by the responsibility to know multiple scopes of practice. This unified scope of practice should help mitigate these errors.

The EMS Agency is also working to revise the EMS aircraft request matrix for scene calls. There are new EMS aircraft based in Watsonville and Paso Robles. The matrix was developed to make

it easier for the 911 dispatcher to know which EMS aircraft to request first or the subsequent aircraft should the previous aircraft not be available. The matrix helps ensure the closest aircraft is requested. With new aircraft in the local region, the matrix needs to be updated to account for these aircraft.

By the time this report is submitted for your review, EMTs will have been trained in vaccinations to assist in providing COVID-19 vaccinations. This is another Local Optional Scope of Practice procedure requiring application to the State EMS Authority for approval.

The current MCI Plan has served us well for almost a decade. The EMS Agency will be looking to improve care for multiple patients from a single incident, manage multiple patients from simultaneous incidents, and assist field providers in determining patient destination through revision of the MCI Plan.

The EMS Agency will be making a concerted effort to standardize patient care reporting through the electronic patient care record (PCR) system. This is necessary for QI activities as standardized entries in the PCR allow for data development as well as more accurate reporting.

Transportation of behavioral health patients, especially those being transferred from a Monterey County hospital to a treatment center in other areas of California has been a significant drain on ambulance resources. The EMS Agency is working to find alternate methods of transport that are safe and humane for long distance transfers of behavioral health patients who do not need medical care but are in need of secure, safe, and humane transport to the facility that can provide the care they need. This will, by freeing up ambulance resources, provide a better response to 911 calls.

The EMS Agency is also working with AMR to better use EMT staffed BLS ambulances for interfacility transports which would also keep the paramedic ambulances available for 911 responses.