

COUNTY OF MONTEREY EMERGENCY MEDICAL SERVICES AGENCY

2024 ANNUAL REPORT TO THE BOARD OF SUPERVISORS

COUNTY OF MONTEREY | HEALTH DEPARTMENT

EMS AGENCY MISSION STATEMENT

The mission of the Monterey County Emergency Medical Services (EMS) Agency is to lead the Monterey County EMS System through establishing highest standards of emergency medical care, system operations, and medical disaster preparedness for the benefit of the people of Monterey County.

OUR VISION

To maintain a model EMS system that uses research, best practices, and quality improvement processes to equip providers of pre-hospital emergency medical care to provide compassionate and clinically appropriate care for the residents and visitors of the County of Monterey.

VALUE STATEMENTS

The Monterey County EMS Agency is committed to:

- Advocating for the patient in all that we do.
- Personal, professional, and organizational integrity.
- Treating people with dignity, respect, honesty, and fairness.
- Working collaboratively in an environment of trust, transparency, safety, and teamwork.
- Leadership that brings accountability, responsibility, and success to our organization.
- Maintaining a working environment that fosters passion, creativity, and enjoyment.
- Striving to achieve excellence through expertise, innovation, and continued learning.

EMS AGENCY DIRECTOR'S MESSAGE

Honorable Chair and Members of the Board of Supervisors,

I am pleased to present the 2024 County of Monterey EMS Agency Annual Report. This report provides a window into the larger body of work that the EMS Agency accomplishes on a regular basis to fulfill our mission of leading the EMS system through activities related to planning, implementation/operations, evaluation, and quality improvement.

As indicated in our 2023 report to this Board, much of the EMS Agency's work in 2024 centered around the drafting and release of the Request for Proposals (RFP) for an ambulance services provider for the County of Monterey's Exclusive Operating Area (EOA). We focused our efforts on designing an efficient, clinically sound, and fiscally responsible EMS system for the County of Monterey. To accomplish this goal, our efforts in 2024 included research and data collection, an assessment of various potential EMS system delivery models, numerous meetings with stakeholders to listen and gather input, and multiple revisions of and edits to the draft Scope of Work and the RFP as a whole. Throughout these efforts, we worked closely with the Director of the Health Department, County Counsel, Contracts and Purchasing, and the State of California EMS Authority to ensure that the final documents complied with each group's strict requirements for RFPs. Our stated goal was to develop an RFP that not only met all of these requirements, but that also would result in a model EMS system consistent with the EMS Agency's Vision of providing compassionate and clinically appropriate care for the people of the County of Monterey. The EMS Agency believes that the RFP released in January 2025 has positioned us well to accomplish these goals.

As we look ahead, the selected proposer will be a key partner as we work together to ensure that the ambulance services provider is prepared to implement the requirements set forth in the RFP and assume responsibility for the delivery of ambulance services on February 1, 2026. EMS is an essential service and serves as a healthcare safety net for many. Communities place a substantial amount of trust in their ambulance service provider to deliver consistent high-quality care. The successful proposer will bear a significant obligation to the County of Monterey. Likewise, we take very seriously our obligation to ensure that the contractor fulfills its duties in a timely and high-quality manner and that the EMS system continues to progress and improve. The EMS Agency's hard work and efforts on an ongoing basis and throughout this RFP process have left us well positioned to lead the EMS system into the new agreement and resulting even higher level of performance standards.

Respectfully submitted,



Teresa Rios
EMS Bureau Chief

EMS AGENCY MEDICAL DIRECTOR'S MESSAGE

The County of Monterey EMS System has had a busy and productive year. Our contracted Ambulance Service Provider responded to 41,725 EMS calls during 2024, an increase of 230 calls from the previous year. The EMS System received 2,713 requests for interfacility transports, and the EMS Agency developed and coordinated medical plans for 65 special events within the county, including the Sea Otter Classic, Big Sur International Marathon, California Airshow, AIDS LifeCycle, AT&T Pebble Beach Pro-Am, and Laguna Seca Raceway events.

Communication was an important part of our 2024 initiative. We worked with County of Monterey IT Radio Communications to successfully install six new radio repeaters throughout the county. We collaborated with Salinas Valley State Prison through a committee that evaluated and improved medical protocols and emergency response strategies within the prison. The EMS Agency continued to coordinate our Tri-County Buprenorphine Program with Santa Cruz and San Benito Counties, initiating life-changing treatment in the pre-hospital environment for patients with opioid use disorder.

Our Health Data Exchange (HDE) Program made significant progress in 2024, achieving bi-directional data sharing between hospitals and EMS providers. By December 2024, 92% of transporting agencies had successfully linked their electronic health records (EHRs) to the records of participating hospitals, representing a major achievement for the program. In 2024, the EMS Agency partnered with Health IT to revamp the intake process for Unusual Occurrence (UO) reports, developing a digital system in which EMS providers and members of the public can report concerns or request incident reviews in a secure and efficient manner.


The EMS Agency devoted much time and effort toward crafting and preparing for the release of a request for proposals (RFP) for the provision of ambulance services to the County of Monterey exclusive operating area (EOA). It was a lengthy and technical process that provided opportunities for stakeholder input and worked to ensure compliance with state and county statutes and regulations, requirements of the County of Monterey Contracts and Purchasing Department, as well as approval by the state EMS Authority (EMSA).

This year we focused particular attention on our ability to deliver EMS services to the County's rural and less populated areas. While much attention continues to be focused on urban and suburban areas, the EMS Agency recognizes the importance of ensuring that all residents have access to timely medical care in the event of an emergency.

Such an emergency occurred in King City in March of 2024, in which a drive-by shooting resulted in multiple fatalities and seven critically injured patients. Successfully managing an incident of this magnitude required a coordinated response from numerous agencies. The courage, organization, communication, and professionalism of the EMS and fire department personnel, law enforcement officers, medevac crews, 911 dispatchers, and hospital providers that day represents a stellar example of how an EMS System should work.

It continues to be an honor to work with the EMS Agency and our many stakeholders in the coordination and delivery of excellent EMS services to the residents and visitors of the County of Monterey. Every year presents new challenges and new opportunities for ongoing progress. It is a joy to be part of that, to continue to work together on this important mission.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Beuerle", with a long horizontal flourish extending to the right.

John Beuerle, M.D.
EMS Medical Director

INTRODUCTION

Over the past several years, the County of Monterey Emergency Medical Services Agency has worked to develop and improve our Annual Report to the Board of Supervisors. In 2022 the EMS Agency transitioned our report to a format that we believe will help readers more easily navigate the content and identify the topics of interest to them. This year's report utilizes this format and is divided into three sections based upon the following structure:

1. County of Monterey EMS System Overview – This section provides background information regarding the EMS Agency and the EMS System. It describes the structure of the EMS Agency and the variety of roles that we play in managing and leading the EMS System. The section also explains the various components of the EMS System from dispatch to prehospital personnel through to the emergency department and specialty care centers located within the County of Monterey.
2. 2024 EMS System Data – This section provides data for 2024 related to several key components of the EMS System including EMS student training programs, processing of applications for certification and accreditation, emergency medical dispatch operations, ambulance call volume, disaster response efforts, finances, and quality improvement. The section also explains the EMS Agency's role in each of these areas.
3. 2024 Accomplishments and Highlights – This section provides the reader with an overview of some of the EMS Agency's key accomplishments throughout the course of 2024. While the items discussed are but a small fraction of the improvements made to the EMS System, we feel that they represent significant strides towards our overall vision of creating and continuously improving a model EMS System for the people of Monterey County.

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COUNTY OF MONTEREY EMS SYSTEM OVERVIEW

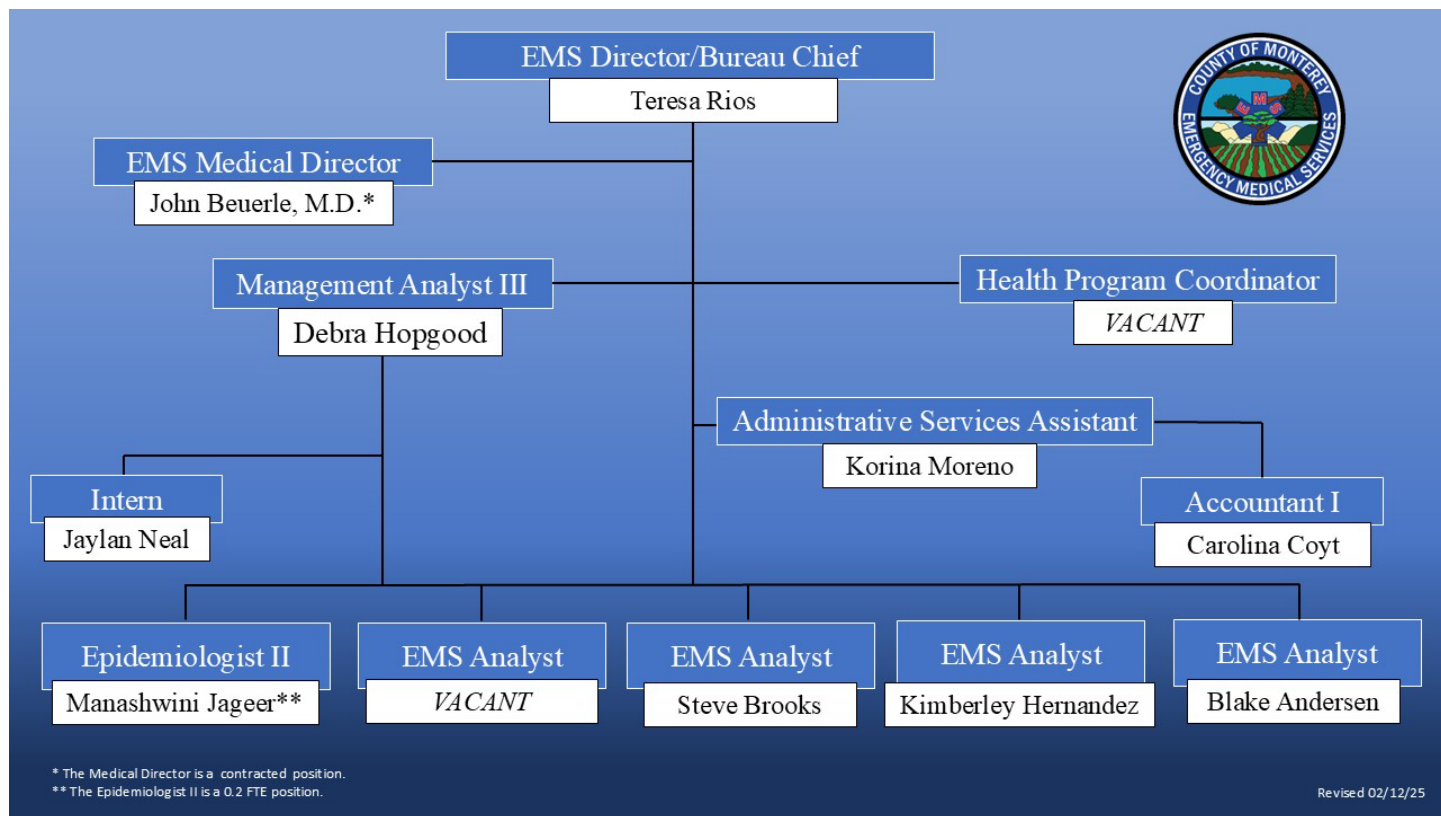
The County of Monterey Emergency Medical Services (EMS) System is comprised of ground and air ambulance providers, dispatch/communications centers, fire and rescue service providers, hospital emergency departments, specialty care centers for trauma, stroke, and heart attack patients, and the County of Monterey EMS Agency. The purpose of the EMS System is to provide high quality, patient-centered Emergency Medical Services with integrity, equity, dedication, expertise, effectiveness, efficiency, and collaboration at the forefront. The collaborative efforts of these EMS System partners strengthen our ability to provide emergency medical services to residents of and visitors to the County of Monterey.



THE COUNTY OF MONTEREY EMS AGENCY

The Emergency Medical Services Agency is a Bureau within the County of Monterey Health Department and is designated by the Board of Supervisors as the local Emergency Medical Services Agency (LEMSA) that oversees the delivery of emergency medical services (pre-hospital care) within the County of Monterey pursuant to California Health and Safety Code, Section 1797 et seq. The LEMSAs ensure that regulations pertaining to the EMS system are carried out as intended by the California Emergency Medical Services Authority (EMSA). The role of the County of Monterey EMS Agency is defined by California statute to plan, implement, and evaluate the EMS System. Additionally, the statute requires the EMS Agency to have a licensed physician who serves as a medical director to provide medical control and to ensure medical accountability.

THE COUNTY OF MONTEREY EMS AGENCY ORGANIZATIONAL CHART



THE EMS AGENCY'S ROLE IN THE COUNTY OF MONTEREY EMS SYSTEM

A high performing EMS System consists of multiple organizations with a variety of functions working together to provide care to those suffering from a medical emergency. The EMS Agency is responsible for managing and coordinating these organizations to ensure that patients in our community receive a coordinated and appropriate EMS response when calling 9-1-1 and, ultimately, the best possible care from highly trained EMS professionals. However, the EMS Agency's responsibilities do not stop when a patient reaches the doors of the hospital. The EMS Agency is also responsible for ensuring that our local hospitals are prepared to appropriately receive patients from EMS and, when needed, provide online medical direction to EMS providers in the field. Additionally, the EMS Agency has the responsibility for designation and oversight of specialty care centers for the treatment of trauma, stroke, and ST elevation myocardial infarction (STEMI) patients in the County of Monterey.

We approach our role emphasizing the Triple Aim.

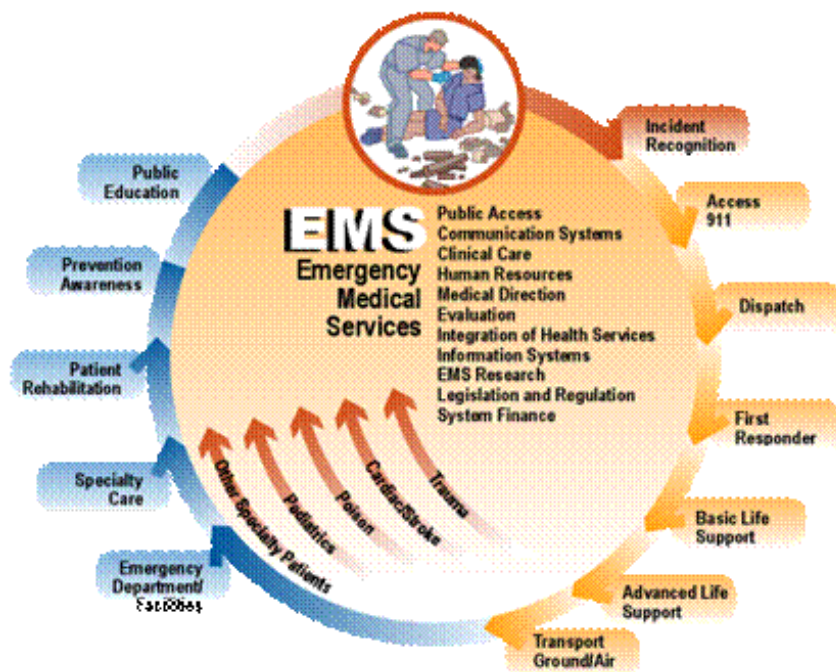


- *Implement efficient and effective structures, processes, and outputs.*
- *Measure clinical, operational, and financial performance indicators.*
- *Engage in continuous Quality Improvement.*
- *Embrace Just Culture concepts.*
- *Maintain transparency.*
- *Ensure equity.*

EMS SYSTEM MANAGEMENT

Essential functions performed by the County of Monterey EMS Agency include:

- Serving as an advocate for patients.
- Collaborating with other health officials to ensure a unified, coordinated approach in the delivery of health care.
- Ensuring equity in the provision of emergency medical services.
- Carrying out regulations relative to the EMS system.
- Certifying, accrediting, and authorizing EMS field personnel.
- Authorizing and approving local EMS training programs.
- Developing and approving medical treatment protocols and policies for local EMS service providers (EMTs, Paramedics, and Dispatchers) to assure medical control of the EMS system.
- Developing EMS dispatch and communication standards, including medical dispatch protocols.
- Collaborating with the Health Department's Public Health Bureau, to develop local medical and health disaster plans and coordinate medical and health response to disasters (natural and man-made).
- Designating trauma centers, base hospitals, and other specialty care centers.
- Coordinating activities and communications between various agencies that provide EMS System services so that care appears seamless to the patient.
- Coordinating community education programs regarding injury prevention, CPR, public access defibrillation, etc.
- Collecting, analyzing, and reporting on EMS data.
- Establishing the Exclusive Operating Area (EOA) and contracting for the provision of emergency ambulance services.
- Providing oversight for EMS quality improvement and quality assurance activities.
- Resolving consumer complaints.
- Providing information to public officials.
- Advocating for sufficient and stable funding for emergency medical services.



COUNTY OF MONTEREY EMS SYSTEM PROVIDER AGENCIES

Our dispatchers, first responders, Emergency Medical Technicians (EMTs), Paramedics, and hospital staff provide thorough, timely, compassionate care at all times for all people in need. They are trained, caring professionals who have chosen to help others, often at their most dire time of need, and at any hour of the day or night. This dedicated service has been exemplary especially throughout the additional challenges of the COVID-19 pandemic, storms, wild fires, and other disasters. The County of Monterey EMS Agency thanks our EMS Providers and everyone at their agencies who work hard to support them and make it possible for them to perform their work.

Communications Centers

- ❖ County of Monterey Emergency Communications
- ❖ American Medical Response

Ground Ambulance Service Providers

- ❖ American Medical Response (AMR)
- ❖ City of Carmel Fire Ambulance
- ❖ Fort Hunter Liggett Fire Department
- ❖ Monterey County Regional Fire District

Air Ambulance Service Providers

- ❖ CALSTAR Air Medical Services
- ❖ Mercy Air Services

Fire Departments

- ❖ Big Sur Fire
- ❖ Cachagua Fire Protection District
- ❖ CAL Fire
- ❖ CTF Fire Department
- ❖ Fort Hunter Liggett Fire Department
- ❖ Gonzales Fire Department
- ❖ Greenfield Fire District
- ❖ King City Volunteer Fire Department
- ❖ Marina Fire Department
- ❖ Mid Coast Fire Brigade
- ❖ Monterey County Regional Fire District
- ❖ Monterey Fire Department
- ❖ North Monterey County Fire District
- ❖ Presidio of Monterey Fire Department
- ❖ Salinas Fire Department
- ❖ Seaside Fire Department
- ❖ U.S. Forest Service

Hospitals and Medical Centers

- ❖ Community Hospital of the Monterey Peninsula
- ❖ Mee Memorial Hospital
- ❖ Natividad
- ❖ Salinas Valley Health

Law Enforcement Agencies

- ❖ California Highway Patrol – Monterey
- ❖ Carmel Police Department
- ❖ Del Rey Oaks Police Department
- ❖ Gonzales Police Department
- ❖ Greenfield Police Department
- ❖ King City Police Department
- ❖ Marina Police Department
- ❖ Monterey County Sheriff's Office
- ❖ Monterey Police Department
- ❖ Pacific Grove Police Department
- ❖ Salinas Police Department
- ❖ Sand City Police Department
- ❖ Seaside Police Department
- ❖ Soledad Police Department



EMS OPERATIONS

EMS operations include many of the logistical and practical considerations involved in ensuring that appropriately trained EMS personnel reach patients in need of medical assistance in a timely and safe manner. Ensuring the availability of highly trained EMS responders begins with the initial training received, continues with certification and accreditation processes, and is maintained through continuing education and training. Two key components of EMS operations are dispatch operations and field operations. Dispatch operations ensures that the needed resources arrive expeditiously while field operations involve the actual response to an incident by EMS System field personnel.

EMS System Personnel

Artificial Intelligence (AI) has been a hot topic in 2024. AI promises to bring changes into every area of our lives. AI is even working its way into the practice of healthcare where AI is proving adept at making difficult diagnoses fairly quickly. But, AI can't provide the human factor of compassion and caring that should be the hallmark of healthcare systems. This is probably no more true than in the realm of emergency medical services where our personnel provide care for people in crisis who are often having the worst day of their lives.

It is these dedicated professionals who have decided to respond to the emergency medical needs of our community. Not every patient encounter is a struggle between life and death. It may be, but it may also be a response to a patient who is overwhelmed by his/her situation, sometimes medical, sometimes behavioral health related, sometimes a combination of things that have built up to the point that he/she is in need of help. Each person in the EMS system, whether in administration or at the patient's side, has a role to play in this response depending on the level of training and position within the EMS system.

Emergency Medical Responder (EMR)

Most EMS personnel who function at the EMR level are volunteers in the rural areas of the county. EMR training continues in these areas as a way to utilize people in a first responder role who would otherwise not volunteer with the local fire agency due to the time and other requirements to become an EMT.

Due to the time it may take for an ambulance to arrive in a rural area, EMRs have significant responsibility for patient care. EMRs are provided the greatest amount of tools permitted under State regulation. This exceeds the usual training for those at the EMR level. One example of this is that in the County of Monterey, EMRs are allowed to provide an auto-injector based antidote for organophosphate poisoning to other responders who may have been contaminated. Training in, and the use of, traction splints is also permitted under the scope of practice for EMRs functioning within the Monterey County EMS system as another example.

Currently, there is not a certification in California for EMRs. EMR is a training course that provides a course completion certificate to document the training. The EMS Agency is responsible for approving the training program, course content, and testing materials. It is through this approval process that the EMS Agency ensures that EMR-trained responders are capable of providing the level of care in which they have been trained.

Emergency Medical Technician (EMT)

EMTs working within the County of Monterey EMS system are authorized to provide care at a higher level than the basic statewide scope of practice. While functioning as part of the EMS system, EMTs are trained and equipped to provide treatment for severe allergic reactions through the use of an

epinephrine auto-injector. They can also check the patient's blood sugar with a glucometer and administer naloxone for suspected opioid overdose. EMTs employed by AMR and some fire districts have also been trained and are authorized to provide CPAP for breathing difficulty and place a supraglottic airway to help maintain an open airway for the unconscious patient that cannot maintain their own airway.

Paramedic

Paramedics have the greatest scope of practice and responsibilities. They provide care at the advanced life support (ALS) level. Paramedics are entrusted with assessment of the patient at an advanced level using their training and experience to assess the patient's condition and to properly use the tools provided to them such as a 12-lead EKG for assessing a patient's heart rhythm, end-tidal CO2 monitor for assessing a patient's respiratory status, and a glucometer for measuring the patient's blood sugar. After performing an assessment of the patient, the Paramedic is able to treat the patient with multiple medications, provide advanced airway placement to ensure a clear path to assist the patient's breathing, and even provide external cardiac pacing when the patient's heart beat is too slow.



EMT Certification

Certification of the EMT provides verification that the individual has completed the training requirements for certification and passed a criminal and medical background check to ensure that they have met the statutory and regulatory requirements for EMT certification. The EMS Agency requires each EMT to complete the California Department of Justice Live Scan criminal background check. The EMS Agency also performs a check with the National Practitioner Data Bank for potential concerns related to the provision of medical care and healthcare licenses and certificates. The EMS Agency is diligent in completing these tasks to fulfill our obligation to protect the health and safety of the public.

Paramedic Accreditation

Accreditation is an authorization for an individual who is licensed or certified to perform specific tasks and procedures which are included in the individual's scope of practice. This is different than licensure which generally ensures that the individual possesses the knowledge and competency for the level of licensure described. The California EMS Authority licenses Paramedics. Authorization to practice as a Paramedic in the County of Monterey is the accreditation process provided by the EMS Agency.

Initial accreditation requires the Paramedic to pass a written test on his/her knowledge of EMS policies and protocols and, while being evaluated by a field training officer, demonstrate his/her ability to capably and competently function in the prehospital environment. The EMS Agency also requires the Paramedic to have completed several nationally recognized courses. These include Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS) or equivalent, and Prehospital Trauma Life Support (PHTLS) or equivalent.

To maintain continued accreditation, Paramedics must meet specified requirements which include annual EMS policy review, annual skills demonstration of specified procedures, and maintenance of current training in CPR, ACLS, PALS, and PHTLS or equivalent courses. The EMS Agency reviews each paramedic every two years from his/her initial accreditation to ensure that he/she continues to meet the training, skills maintenance demonstration, and policy review requirements.

Emergency Medical Technician (EMT) Training Programs

EMT training has come a long way in the last 50 or so years. What started out as a way to standardize training and skills for ambulance attendants in an 81-hour course is now a training course of at least 170 hours. While still holding on to the basics such as patient assessment and first aid practices, EMT training programs are teaching the life-saving skills of epinephrine auto-injector for severe allergic reactions, naloxone for drug overdose, tactical casualty care, and blood sugar monitoring. Not so long ago, this was the domain for paramedics. We have come a long way.

The two training programs in the County of Monterey have highly qualified instructional staff teaching our EMT programs. Not only are the instructors clinically proficient, but all primary instructors have completed a 40-hour course in teaching methods.

Both EMT programs are making use of technology to enhance the student experience. High-fidelity manikins provide amazing realism. Many people, new students and visitors alike, often mistake the manikins for people when they first enter the classroom.

The EMS Agency is responsible for approving and monitoring EMT training programs held within the County of Monterey. Training program approval is granted for up to four (4) years for programs that meet State and local requirements. Monterey Peninsula College (MPC) and Hartnell College offer EMT training programs. The EMS Agency conducted reviews of the two training programs in 2023.

In addition to conducting periodic reviews of the EMT training programs, EMS Agency staff often ask the new EMT applicants what they thought of their EMT training program. Invariably, the response is highly positive and the EMT applicants feel that their EMT training program gave them the foundation they need to function as an EMT.

Paramedic Training Program

The paramedic training program started its fourth cohort in 2024. The first cohorts have produced capable paramedics who are now part of the County of Monterey EMS system and other local EMS systems.

Due to EMS Agency leadership, the paramedic training program has been able to ensure placement of its students in the required hospital and field clinical rotations in a timely manner. These clinical rotations are in the local region. This contrasts with many paramedic training programs that have had to locate clinical sites, especially field training sites in other areas of the State or even in other states.

Emergency Medical Call Dispatch

9-1-1 Call Receipt

Calling 9-1-1 is the first connection between the person needing emergency medical services and the EMS System. Monterey County Emergency Communications Department (MCECD) receives the majority of 9-1-1 calls placed in the County of Monterey. The California Highway Patrol (CHP) also maintains a dispatch center in the County of Monterey and receives a portion of 9-1-1 calls made by cell phone within the County of Monterey. Most of the 9-1-1 callers reporting a medical emergency are transferred to the EMS Dispatch Center, operated by AMR, the County's contracted ambulance service provider, for further processing. However, 9-1-1 calls such as those involving an active shooter or other dangerous situations may be retained by MCECD personnel as they gather information necessary for the safety of all emergency responders.

EMS Dispatch

The EMS Dispatch Center (EMS Dispatch) is operated by AMR, the County's ambulance services provider. The EMS Dispatch Center is staffed with dispatchers who are certified Emergency Medical Dispatchers (EMDs) that have been trained in the Medical Priority Dispatch System (MPDS). MPDS is a well-researched and unified system used to prioritize medical calls and dispatch appropriate aid to medical emergencies. The goal of MPDS is to prioritize the highest acuity medical emergencies so they receive the fastest response from the closest available resources. EMDs use MPDS for caller interrogation to ensure that the proper pre-arrival instructions are given to assist the patient or reporting party until responders arrive. This may be through guidance in performing cardiopulmonary resuscitation (CPR), control of serious bleeding, childbirth, choking, or assistance with other types of medical emergencies.

The image shows two side-by-side screenshots of the Emergency Medical Dispatch (EMD) Protocol interface. The left screenshot displays the 'ENTRY QUESTIONS' section of the protocol, which includes a list of questions for the dispatcher to ask the caller. The questions are numbered 1 through 6, and each question has a corresponding set of possible answers. The right screenshot shows the 'THE NATIONAL ACADEMY™ EMD PROTOCOL' interface, which is a web-based application. It features a top navigation bar with various icons and a main content area with a list of questions and answers. The interface is designed to be user-friendly and easy to navigate, with clear instructions and a logical flow of questions.

ENTRY QUESTIONS

- What's the address of the emergency?
House/Apartment/Business/Intersection/Landmark/Jurisdiction/GPS
- What's the phone number you're calling from?
- Okay, tell me exactly what happened.
a. (Not obvious) Are you with the patient now?
b. (Not obvious) How many (other) people are hurt (sick)?
c. (Choking) Is s/he breathing or coughing at all? (You go check and tell me what you find.)
d. Do not slap her/him on the back.
- How old is s/he?
a. (Unsure) Tell me approximately, then.
- Is s/he awake (conscious)?
a. (Hasn't checked - 2nd party caller) You go check and tell me what you find.
- Is s/he breathing?
a. (Hasn't checked - 2nd party caller) You go check and tell me what you find.

THE NATIONAL ACADEMY™ EMD PROTOCOL
Medical Priority Dispatch System™

POST-DISPATCH INSTRUCTIONS

- (ECHO) I'm sending the paramedics (ambulance) to help you now. Stay on the line.
- (Hanging and not OBVIOUS DEATH) Cut her/him down immediately, loosen the noose, then tell me if s/he's breathing.
- (Underwater) Do not go in the water unless it's safe to do so.
- (Strangulation and not OBVIOUS DEATH) Loosen anything around the neck, then tell me if s/he's breathing.
- (Self-suffocation) Remove anything covering the face or in the mouth, then tell me if s/he's breathing.
- (Person on fire) Tell her/him to stop running, drop to the ground, cover her/his face, and roll around. If water is available, douse her/him with it immediately until the fire is completely out. (Water not available) Get a blanket, rug, or large jacket and use it to wrap her/his body and smother the flames.
- (Critical Caller Danger) (If it's too dangerous to stay where you are, and you think you can leave safely) get away and call us from somewhere safe.

DLS * Link to CC unless:
Suspected MEDICAL Arrest — ABC-1
Hanging/Strangulation/Suffocation (INEFFECTIVE BREATHING and Not OBVIOUS DEATH) — ABC-1

36: Pandemic / Epidemic / Outbreak (Surveillance or Triage)

3:26

Entry KQ PD/CEI DLS Summary

3. Select the most prominent complaint:

Caller Statement: Sick and can't get out of bed

KQ Answers Additional Info Problem Suffixes Deter

- This is a coronavirus (COVID-19) outbreak.
- The locally designated Triage Level is 2 (mod)

Difficulty breathing
Flu-like illness
Sore throat (no difficulty breathing or swallowing)
Cough (recent onset)
Fever
Chills
Sweats
Chest pain (including discomfort)
Nasal congestion/Stuffiness
Runny nose
Fatigue/Weakness
Muscle or body aches
General illness/Sick (other symptoms):

Ambulance Services

A primary function of the EMS Agency is to ensure there are adequate and effective ambulance services throughout County of Monterey. The current agreement with the designated ambulance services provider is effective until the end of January 2026. The ambulance services provider contract covers response to 9-1-1 calls, interfacility transports for patients who need continued medical monitoring during transport from one medical facility to another, and medical standby services at special events within the county.

Contract Compliance

The current agreement for ambulance services requires a high level of performance by American Medical Response (AMR). The EMS Agency meets with AMR to monitor performance and to

address issues that could hinder performance. A Contract Compliance Working Group (CCWG) comprised of citizen representatives, EMS Agency staff, and AMR leadership, monitors AMR's performance by reviewing a wide range of metrics to maintain a system that delivers vital pre-hospital emergency medical services to the community.

QUALITY ASSURANCE AND IMPROVEMENT

EMS is a dynamic and ever-evolving field that requires the LEMSA and its partner agencies to collaborate closely. This teamwork ensures that the communities we serve not only receive the highest quality care today but are also prepared for the changes that lie ahead. To achieve this, it's essential for the EMS Agency to have strong Quality Assurance (QA) and Quality Improvement (QI) programs in place. The goal is to make decisions based on data-driven evidence that prioritize the best interests of our patients. These principles guide everything the EMS Agency does, from reviewing EMS policies and protocols annually to creating local optional scope of practice (LOSOP) programs that enhance care options for the residents of Monterey County. Our QA and QI initiatives are vital in ensuring that the county's residents and visitors receive the best possible patient care and that our EMS providers are fully supported.

The EMS QA/QI program ensures that EMS professionals follow policies, regulations, and protocols and meet performance metrics that enable the best patient outcomes. The EMS Agency achieves this through case reviews during QI committee meetings, consistent data monitoring, and unusual occurrence reports. QA is about ensuring that EMS professionals are doing things the right way. For any QI program to be effective, a solid QA system must be in place to provide confidence that performance is at the expected level before any improvements are made.

The QI program focuses on assessing the impact of existing systems rather than evaluating individual actions. It challenges the EMS Agency to ask: "What are we doing now?" and "Is there room for improvement?" This ongoing evaluation ensures that the services provided by the EMS Agency and our allied agencies meet not only the public's needs and expectations but also clinical standards and best practices. Our Health Data Exchange (HDE) program provides in-field patient care information to hospitals and allows EMS providers to have access to patient outcomes from the hospital. With this project, hospitals can now better understand the work field providers do, while EMS providers can accurately evaluate the care they provide, all while the EMS Agency evaluates the effectiveness of our policies, protocols, and guidance and the impact it has on patient care in the County of Monterey. Moving forward, the EMS Agency will take advantage of other programs like HDE to continue to lead the EMS system in our effort to continue to improve the EMS system.

Unusual Occurrence Reports

An important component of the EMS Agency's quality assurance and improvement programs involves identifying improvement opportunities, whether individual or system-wide. The EMS Agency has established a process by which anyone can submit a report regarding an incident, situation, or concern relating to the EMS System. These submissions are known as Unusual Occurrence (UO) reports. EMS Agency personnel review all available information pertinent to the UO report, compile a summary of the UO, and draft recommendations for any needed actions based on their review.

Depending on the findings, actions may include identifying individual educational opportunities, performance improvement plans, disciplinary action, system-wide changes or training, or some combination of these items. Some reviews do not result in a need for action or may result in a recognition of clinical excellence.

Unusual Occurrence Reports are reviewed within a “Just Culture” framework, which focuses on evaluating the system surrounding individual actions to identify opportunities for improving processes and design. “Just Culture” refers to a system of shared accountability, where the EMS Agency is responsible for the systems we’ve put in place and for addressing EMS provider behaviors in a fair and just manner. In turn, EMS providers are accountable for the quality of their decisions and for reporting both errors and system vulnerabilities. The aim is to create an environment that prioritizes learning from mistakes to drive continuous quality improvement.

POLICY AND PROTOCOL DEVELOPMENT

It is the policies and treatment protocols that provide structure within the EMS System. These documents set standards for the medical care of the patient, direction for transport destination decisions, coordination and interactions between the various providers and organizations, and the management and coordination of the EMS System itself.

To ensure policies and protocols remain current, the EMS Agency, in collaboration with agency partners, reviews all existing policies and protocols regularly. The EMS Agency also develops new policies and protocols to ensure compliance with new, or changes in existing regulation, and to reflect best practices.

The EMS Agency has also continued updating the treatment protocols into a flow-chart format wherever possible to make it easier for EMS providers to follow the directions included.

SPECIALTY CARE SYSTEMS

Within every EMS System, there are systems of specialty care designed to get patients with specific, serious conditions to a hospital capable of treating their condition. In the County of Monterey, the specific conditions addressed with specialty care systems are: ST Segment Elevation Myocardial Infarction (STEMI), Stroke, and Trauma.

EMSA, through its regulations, tasks the EMS Agency with:

- Developing plans addressing the provision of specialty care services within the County of Monterey.
- Designating facilities to provide specialty care services. This designation process consists of the creation and adoption of standards for facilities related to topics such as staffing, personnel qualifications, facility and equipment availability, internal hospital written policy and procedure requirements, and quality improvement processes. Additionally, the EMS Agency conducts a review of written documentation and a site survey of the hospital. Once the EMS Agency has verified that a facility meets the established standards for a given specialty care service, the Agency works with the facility to implement a designation agreement. Specialty Care Centers must apply for redesignation on an established timeline.
- Ensuring that EMS providers are trained in the specialty care patient identification criteria, patient care methodologies, and treatment protocols.
- Developing a process for early notification of the facility of the impending arrival of a specialty care patient.
- Developing policies that provide a clear understanding of the structure of the specialty care system and the manner in which it utilizes the available resources.
- Collecting and analyzing data related to each specialty care service.
- Developing a process for periodic performance evaluation of each specialty care system.
- Developing and overseeing quality assurance/improvement (QA/QI) processes and committees for each specialty care system.

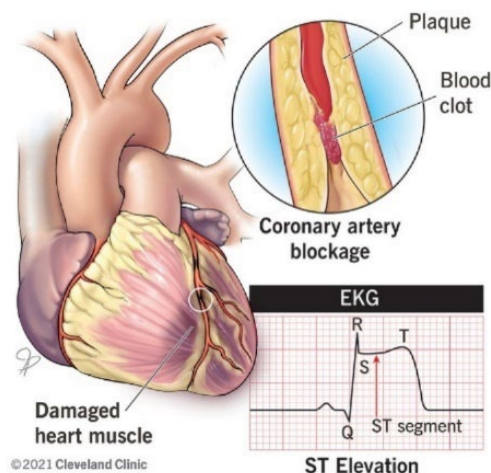
- Ensuring that specialty care service providers and other hospitals that treat specialty care patients participate in quality improvement processes.

The EMS Agency oversees QA/QI for the County of Monterey specialty care systems. Each specialty care system has its own QA/QI committee. Representatives from the STEMI, Stroke, and Trauma systems collaborate together in their respective committees to identify systemic issues and develop solutions to enhance system performance. The committees bring together representatives from the EMS system such as the MCECD, EMS Dispatch Center, first responder agencies, ground and air ambulance providers, law enforcement, the Coroner's Office, and representatives from the various specialty care and non-specialty care hospitals in the County of Monterey, to help improve the system and streamline communication among organizations. Each group reviews data specific to its specialty care area, provides input regarding policies, assists in the development of effective treatment protocols, serves as a forum for education, and functions as a peer review group by conducting regular case reviews. Information and improvements gleaned from the QA/QI meetings are communicated back to stakeholders throughout the EMS System.

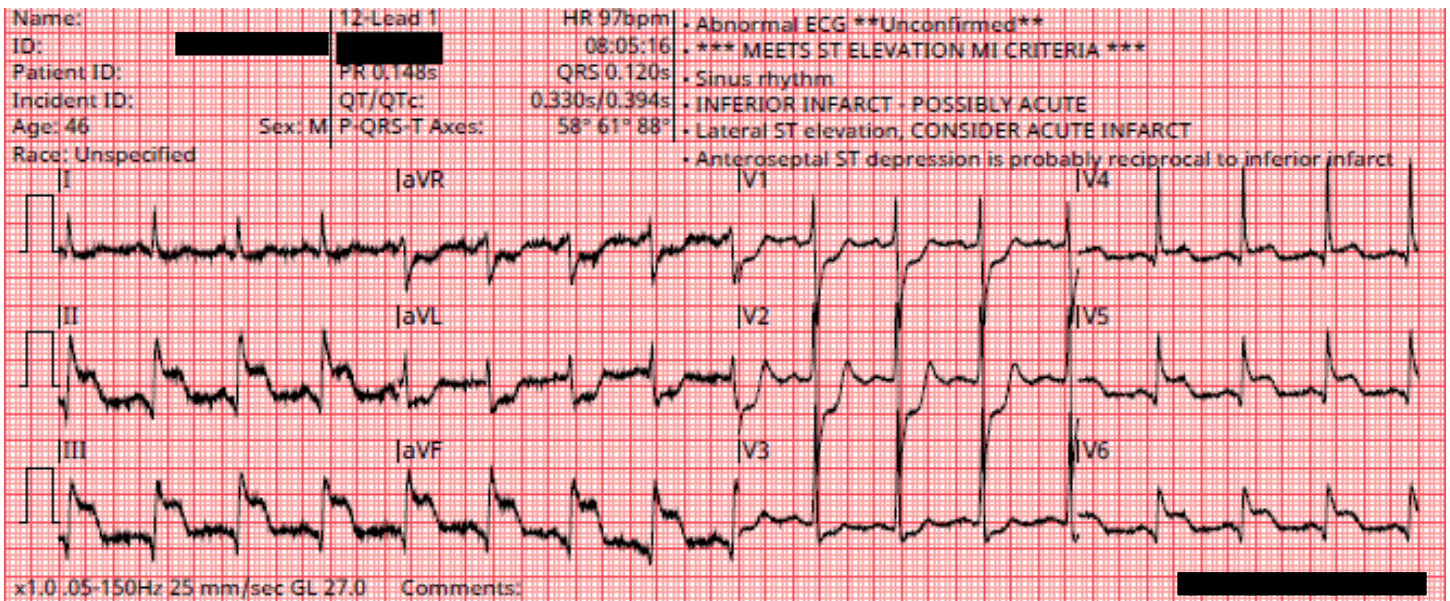
The specialty care systems in the County of Monterey are described below.

STEMI System of Care

STEMI is an acronym for S-T Elevation Myocardial Infarction (STEMI). A "STEMI" is a particular type of heart attack (The technical term is Myocardial Infarction) where the blockage of one or more arteries in the heart needs to be opened quickly. The heartbeat of the STEMI system is in quick recognition of the STEMI by the Paramedic, rapid transport of the patient, early notification to the hospital by the Paramedic, and prompt treatment in the Catheterization (Cath) Lab at the hospital.



Each of these components of the STEMI system are critical to obtaining the best outcome for the patient. Each component of the system must be performed quickly and acted upon promptly. Early recognition of a potential heart attack by the Paramedic will lead to the early application of the 12-Lead EKG, a machine for obtaining and monitoring the patient's heart rhythm. A 12-Lead EKG that shows STEMI must lead to early transport of the patient. The patient must be transported to a designated STEMI Center that has the staff and facilities to care for this patient. The Paramedic will transmit the EKG to the hospital and also contact the hospital to provide a "STEMI Alert". At the designated STEMI Center, the ED physician needs to activate the Cath Lab team and interventional cardiologist so that the patient may be brought to the Cath Lab as soon after arrival as possible to have the blockage cleared.



Stroke System of Care

Stroke is a time-critical illness that occurs because the blood supply to part of the brain is interrupted resulting in the loss of brain cells that cannot be replaced. Stroke is a condition that directly affects the most critical area of a person. Therefore, time is critical to restore blood flow to prevent death of brain cells and to give the patient the best chance for recovery and ability to function as they did before the stroke. Most strokes are caused by the blockage of a blood vessel, multiple blood vessels, or by a blood clot. Some strokes are caused by a blood vessel breaking which both prevents blood flow beyond the break and causes bleeding into the brain. There are other causes of stroke such as a brain tumor, but they are less common.

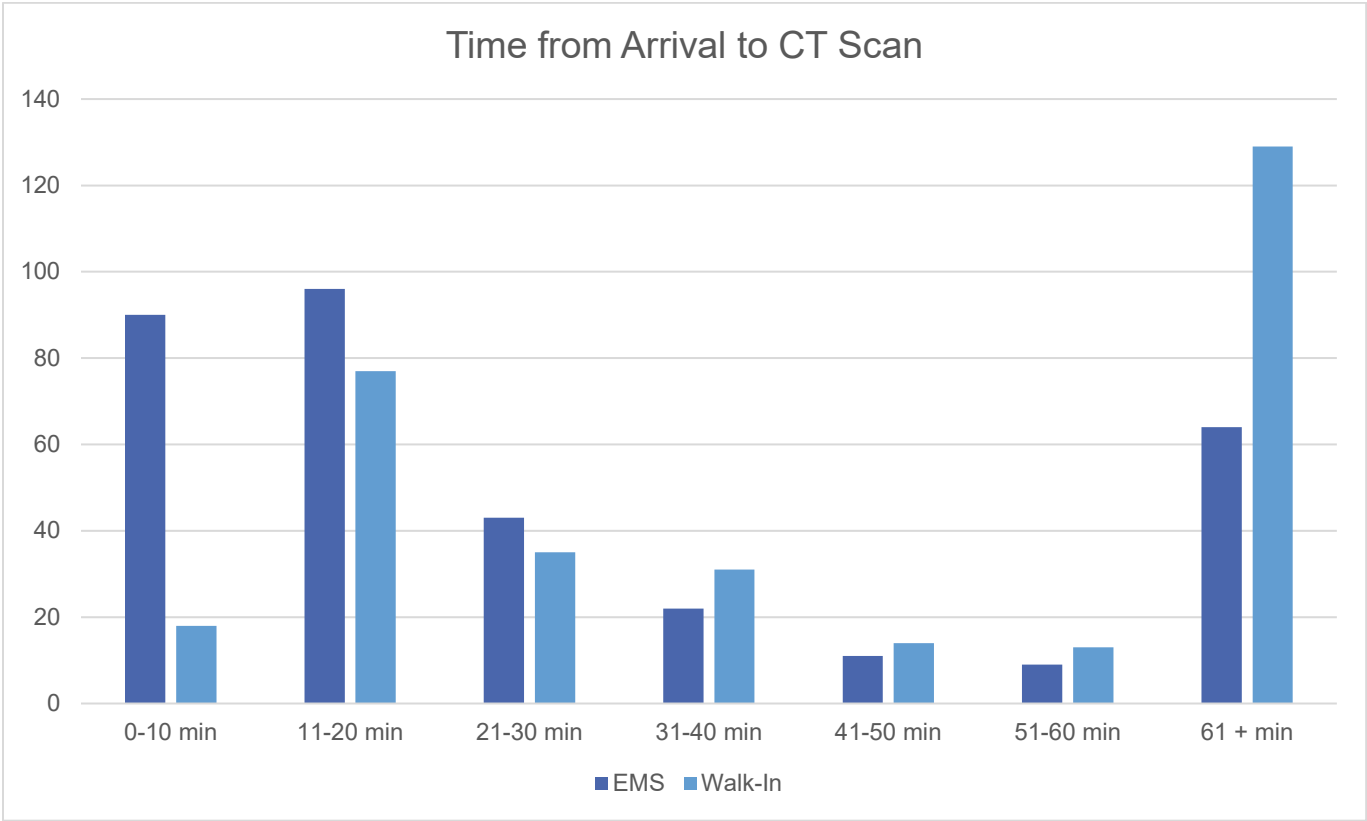


In order to save brain cells after a stroke, the patient must be identified as having a stroke and receive the necessary care. This sounds easy, but many people wait to see if the symptoms go away before seeking assistance. Others will recognize that something is wrong and either contact their own physician or go to the hospital by private car. By going to the hospital by car, the patient risks

going to a hospital where the patient may not receive the optimum care that a designated stroke center can provide.

EMS personnel are trained to recognize stroke using the acronym BEFAST to assess the patient for signs and symptoms of stroke. Balance disturbances, facial droop, and slurred speech are a couple of things EMS looks for to assess for a potential stroke. When a stroke is identified, the patient is usually transported emergently with lights and siren activated to get the patient to the hospital quickly. EMS will also ensure that the patient is transported to a designated Stroke Receiving Center that is prepared to rapidly move the patient to the CT scan for brain imaging. This is to help determine the cause of stroke. If the patient is determined to have a blockage as the cause of stroke, and the patient doesn't have another condition that precludes treatment, a medication that dissolves the clot is administered. A patient transported to a designated stroke center also receives the advantage of a continuum of care that includes multiple types of rehabilitation services to assist the patient in regaining as much functionality as possible.

Another benefit that EMS brings to the patient with stroke is the early notification provided to the Stroke Receiving Center so that the hospital is ready for the patient. The chart below highlights the benefit to the patient in getting into the CT scan by using EMS transport over self-transport.



Trauma System of Care

The County of Monterey's trauma system of care was initiated in January 2015. Since that time, the County has provided specialty trauma care to thousands of patients with traumatic injuries. The County's system of EMS Dispatch and pre-arrival instructions, EMS field triage, rapid transport to a Trauma Center, and care by a dedicated and specially trained trauma team has resulted in lives saved and a reduction in disabilities associated with traumatic injuries.

Natividad is the Trauma Center designated by the EMS Agency to serve the County of Monterey. Natividad is accredited by the American College of Surgeons (ACS) as a Level II Trauma Center for adult patients. The EMS Agency is tasked with ensuring that Natividad provides care in a manner consistent with EMSA and ACS requirements.



Pediatric patients with critical or serious injuries are usually transported by air ambulance to a Pediatric Trauma Center in Santa Clara County.

The EMS Agency bases our trauma triage criteria on the National Guideline for the Field Triage of Injured Patients published by the ACS. This system categorizes the severity of the patient's injuries and helps ensure that patients with life-or-limb threatening injuries are rapidly identified and triaged to the closest, most appropriate Trauma Center. A similar triage system helps emergency department physicians at non-trauma center hospitals rapidly triage patients who arrive by means other than an ambulance and immediately transfer patients meeting trauma triage criteria to an appropriate Trauma Center.

DISASTER MANAGEMENT

California's disasters often have an impact on public health and the medical system. EMS is a key part of the countywide disaster management system. EMS providers are usually the first medical care teams to arrive at the scene of a disaster. Thus, EMS must be prepared to successfully respond to the public health and medical consequences of disasters.

The EMS Agency's Role in Disaster Management

The EMS Agency takes the lead in ensuring that EMS service provider agencies are prepared to respond to disasters and mass casualty incidents (MCIs) involving multiple patients. Advance preparations include building a robust system of mutual aid partners, regulating medical supply

inventories, participation in training and exercise opportunities, and drafting and editing various disaster-related plans.

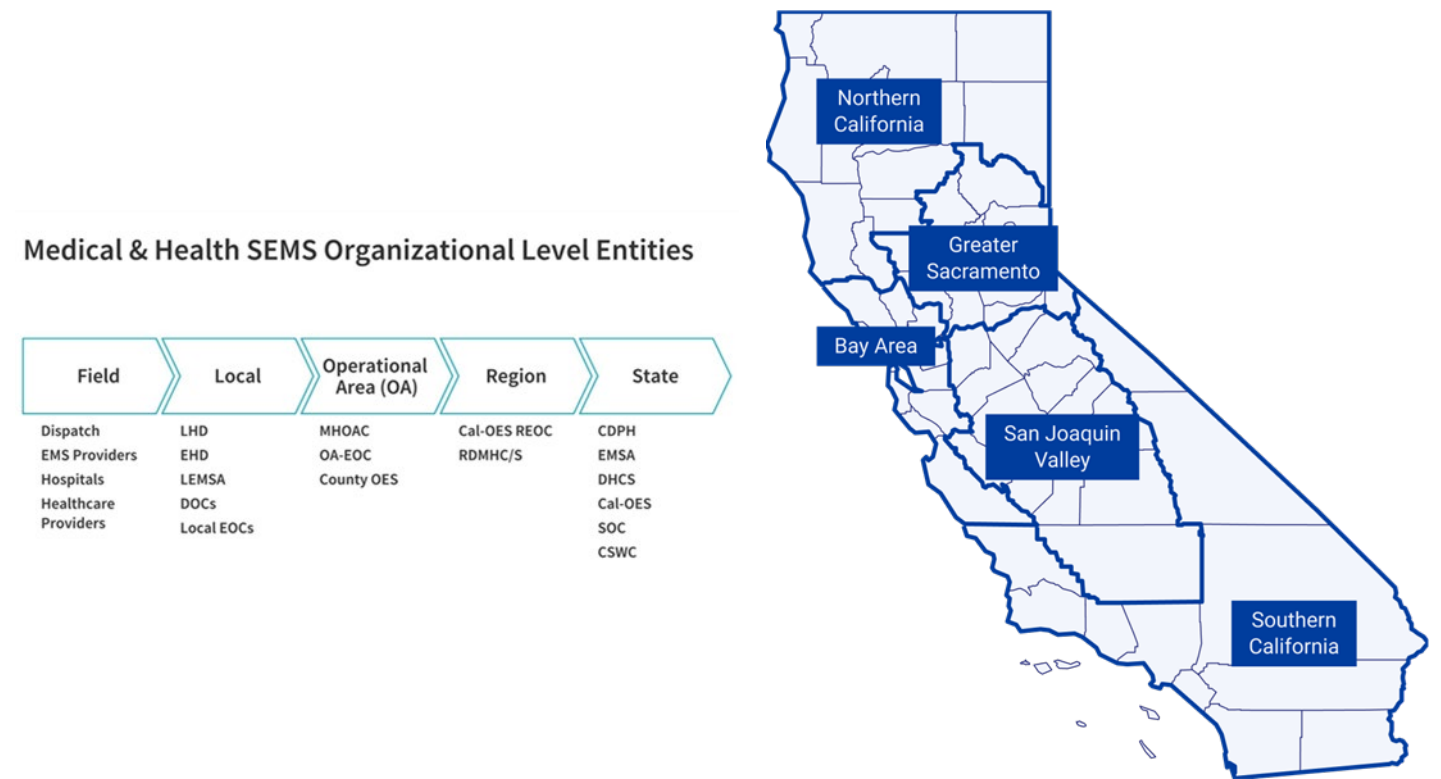
The EMS Agency provides staff to serve as an EMS Duty Officer. This position is on-call 24 hours per day, every day of the year. EMS Communications notifies the EMS Duty Officer of significant incidents providing the EMS Agency with situational awareness. The EMS Duty Officer confers with responding agencies and provides guidance as needed.

Depending on the scope and scale of the incident, the EMS Duty Officer may also decide to activate the Medical Health Operational Area Coordinator or MHOAC.

Medical Health Operational Area Coordinator (MHOAC)

The Medical Health Operational Area Coordinator (MHOAC) is a role with a set of duties defined by California Health and Safety Code Section 1797.153. These regulations task the MHOAC with responsibility for seventeen essential functions related to health and medical needs. During normal operations, the MHOAC is responsible for collaborating with local and regional emergency planners to develop and maintain medical and health disaster plans. In the County of Monterey, the EMS Agency staffs the MHOAC position and maintains a 24-hour-per-day, 365-days-per-year single point of contact for the program.

When the local Department of Emergency Management (DEM) activates the Emergency Operations Center (EOC) due to a declared emergency, the MHOAC role becomes one of heightened significance. In the event of a local, state, or federal declaration of emergency, the MHOAC performs essential functions within the Operations Branch of the EOC and becomes a primary point of contact for the coordination of medical and health resources between local, regional, and state authorities. 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.

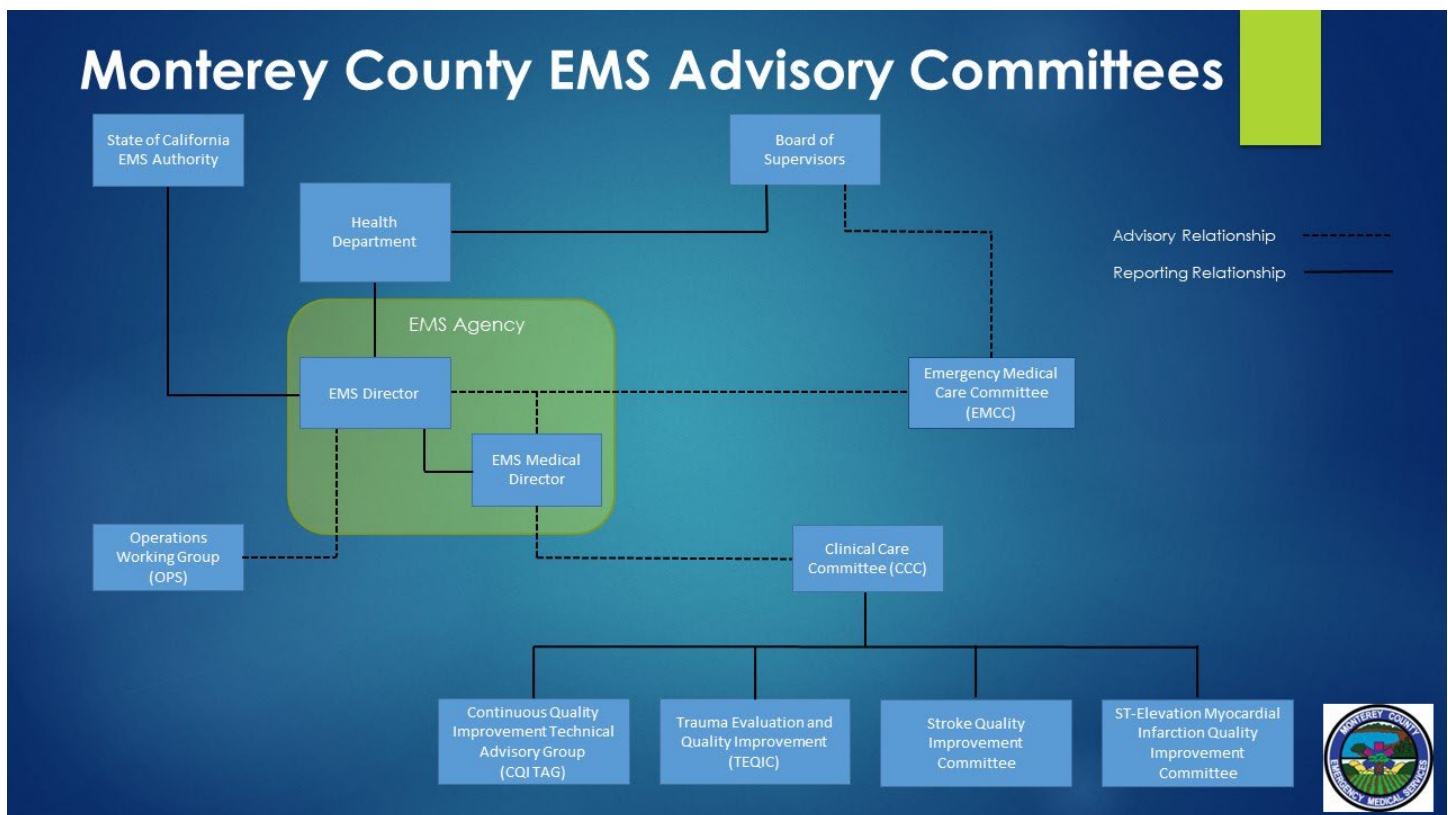


EMS ADVISORY COMMITTEES



There is one primary advisory committee to the EMS Agency, the Emergency Medical Care Committee (EMCC). Additionally, there is a clinical advisory committee, the Clinical Care Committee (CCC) and an operational advisory group, the Operations Working Group (OPS). These committees and working group are made up of members from various components of the EMS System, and in the case of the EMCC, members of the public. The EMS Agency seeks out the wisdom, knowledge, and experience of those individuals who provide the care, directly manage the response and care provided by their organizations, and those who live within the County of Monterey. Each member provides a unique perspective on EMS issues as a representative of his/her constituency. The varied viewpoints from our committee members help ensure that the EMS Agency makes effective decisions with regards to policies, treatment protocols, and system function. The members of our committees and working group play an additional vital role in communicating system changes to other members of their constituencies.

The graphic below illustrates the relationships between EMSA, the Board of Supervisors, the EMS Agency, and the EMS Advisory Committees.



Emergency Medical Care Committee (EMCC)

The EMCC is a Board of Supervisors appointed committee whose purpose is to advise the Board of Supervisors and the EMS Director on EMS system issues. The EMCC receive regular reports regarding ambulance contract compliance, fire-based ambulance response times, ambulance patient off-load times, MHOAC activities, the EMS Plan, EMS training program reviews, and the Health Data Exchange.

The EMCC is comprised of individuals representing a broad constituency including hospital administrators, ED physicians, ALS and BLS fire agencies, law enforcement, County of Monterey Parks Department, the ambulance services contractor, Paramedics and EMTs, law enforcement, city managers, and the public. It is desired to have the three public representatives be from different areas of the County to represent the Monterey Peninsula, Northern Salinas Valley, and the South County area. Additionally, the Directors of the Department of Emergency Management and the Monterey County Emergency Communications Department serve as ex-officio, non-voting members of the EMCC.

The EMCC also provides an annual report of its activities to the EMS Agency and to the County of Monterey Board of Supervisors.

Clinical Care Committee (CCC)

The CCC has a clinical focus and serves as an advisory group to the EMS Medical Director and the EMS Director on medical control and other medical issues. This committee includes representatives from County of Monterey hospitals, first-responder agencies, ground and air ambulance providers, and law enforcement agencies. The CCC is where treatment protocols and policies are reviewed and our EMS stakeholders from the field and hospitals are able to provide their viewpoints and advice so that policies and protocols comply with regulations and reflect best practices. All of this is undertaken to ensure that patients receive the best possible care from the EMS System.

Operations Working Group (OPS)

The OPS Working Group focuses on operational issues, along with system strategy and coordination, and serves as an advisory group to the EMS Agency Director. OPS is comprised of first-responder agencies, ground and air ambulance providers, law enforcement, a County 9-1-1 Communications representative, a representative from a Paramedic Base Hospital, and Paramedic and EMT representatives from the Monterey County EMS System. The EMS Medical Director serves as an ex-officio, non-voting member.

2024 EMS SYSTEM DATA

EMS SYSTEM PERSONNEL TRAINING

2024 EMT Student Training		
Training Program Name	Initial Training	Refresher Training
Hartnell College	52	0
Monterey Peninsula College	84	2
TOTAL	136	2

2024 Paramedic Student Training	
Training Program Name	Students Completing the Course
Monterey Peninsula College – South Bay Regional	19

CERTIFICATION AND ACCREDITATION APPLICATIONS PROCESSED

Certification of EMTs and accreditation of paramedics are core functions of the EMS Agency. On average, the EMS Agency processes almost 10 applications for EMT certification or paramedic accreditation each week. Each application is carefully reviewed to ensure each applicant has fulfilled the requirements to receive certification or accreditation. The EMS Agency received about 50 fewer applications for EMT certification and recertification in 2024 than in 2023. The decrease mostly came from the category of EMTs seeking to transfer their certification to Monterey from a different EMS Agency. The decrease in this category was partially offset by an increase of approximately 20 in the number of EMTs seeking initial certification in 2024 as compared to 2023. The number of paramedic applications for both initial accreditation in Monterey and continuing accreditation both increased in 2024.



Applications Processed by the EMS Agency in 2024			
EMT		Paramedic	
Initial EMT Certification	87	Initial Paramedic Accreditation	32
EMT Certification Renewal	219	Continued Paramedic Accreditation	91
Transfer of EMT Certification	14	Reinstatement of Paramedic Accreditation	0
Reinstatement of EMT Certification	27		
Applicant did not complete the application process	16		
Total EMT Applications	363	Total Paramedic Applications	123

Health Department Performance Measure – Application Processing Times

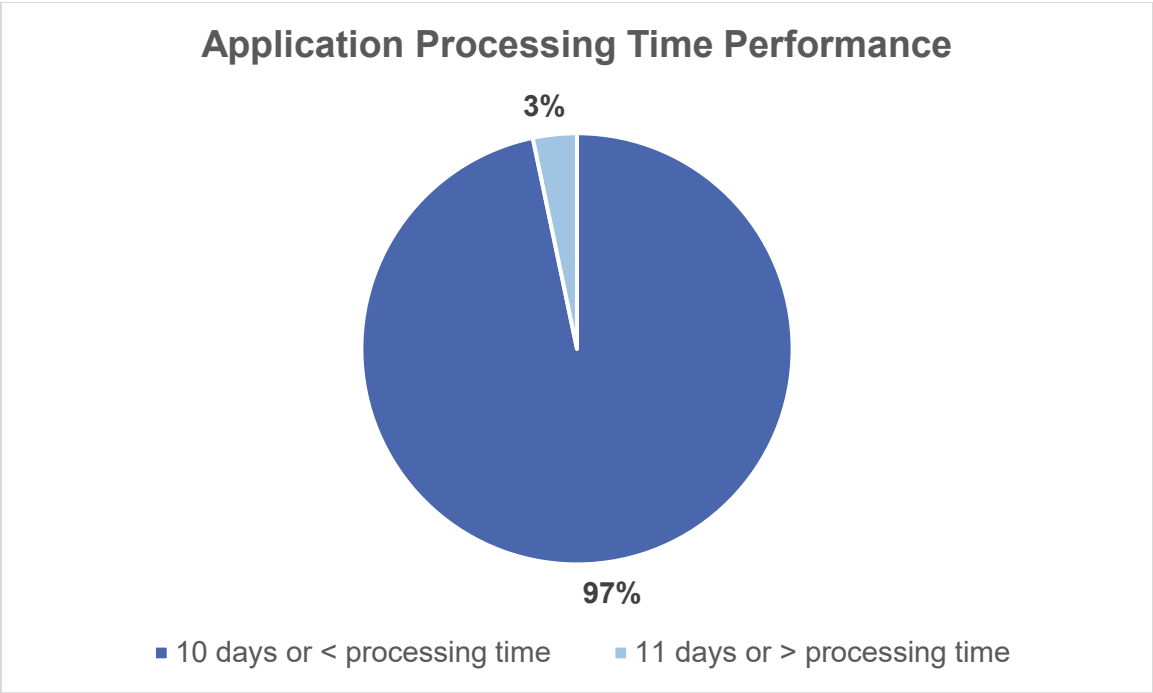
State regulations require the EMS Agency to process applications for initial or continued EMT certification within 14 calendar days from the date of receipt of a completed application. EMSA has not instituted a time requirement for the processing of applications for paramedic accreditation. Internally, the EMS Agency utilizes 10 business days as our application processing standard for applications from both EMTs and Paramedics.

The EMS Agency established application processing time as one of our Performance Measures for the Health Department.

The EMS Agency has performed well in completing EMT application processing as illustrated in the following chart. In this chart, the EMS Agency has set a self-imposed standard of 10 business days from receipt of the application. Those applications that were processed in longer than 10 days usually were missing required documents that prevented prompt processing of the application.

The table and chart below demonstrate the EMS Agency’s success in meeting this goal.

	Q1 2024	Q2 2024	Q3 2024	Q4 2024	2024
Total Applications	133	153	116	84	486
10 days or < processing time	127	146	114	83	470
11 days or > processing time	6	7	2	1	16



AMBULANCE SERVICES PROVIDER CONTRACT ADMINISTRATION

Factors that makes an ambulance services contract successful include establishing and maintaining consistent monitoring of key performance measures, as well as strong, close collaboration between the EMS Agency and the ambulance services provider. In this section, we highlight three of the key performance measures. These measures were selected because they are critical to ensuring timely and appropriate response to emergency medical calls to meet the needs of our community.

EMERGENCY MEDICAL CALL DISPATCH

In the County of Monterey, the contracted ambulance service is responsible for providing the dispatch services for emergency medical calls. The current contract for ambulance services requires the contractor's Emergency Medical Dispatchers to process calls for emergency medical services in 60 seconds or less. In that time, Dispatchers utilizing MPDS, perform the call interrogation to prioritize calls and dispatch ambulances according to the acuity of the calls, thus ensuring that the highest acuity medical emergencies receive the fastest response from the closest available resources.

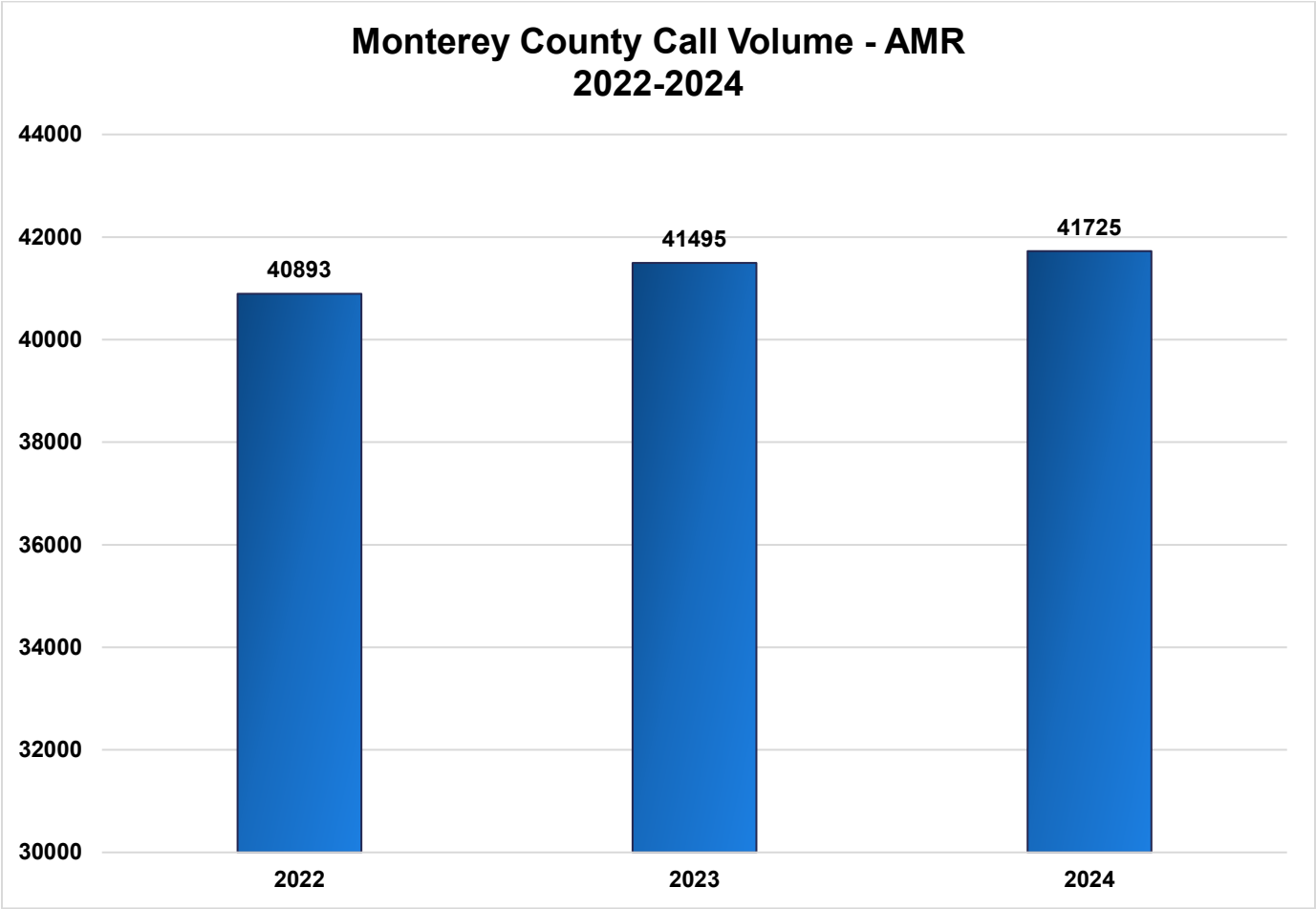
In 2024, Emergency Medical Dispatchers "EMD'd" 74% of emergency medical calls for service. In order for a call to be considered "EMD'd," it must have a determinant code. Determinant codes are assigned to calls after the dispatcher finishes questioning the caller. The determinant code indicates the type of medical emergency reported by a caller and categorizes the level of urgency based on the reported signs and symptoms. It helps dispatchers determine the appropriate response and resources needed.

Year	Total Calls	Number of Calls EMD'd	Percentage of Calls EMD'd
2021	31,740	21,690	68%
2022	33,377	23,904	72%
2023	35,293	25,436	72%
2024	34,676	25,515	74%

AMBULANCE SERVICES
Ambulance Call Volume

For the purpose of the provision of timely ambulance services, the county of Monterey has been divided into zones and specific performance requirements have been put in place to ensure timely response to emergency medical calls. The zones and their corresponding response time requirements take into consideration the acuity of the calls, the large geographic area that must be covered, and the difficulty in providing the services in the more remote, hard-to-serve areas. Given that changes such as population increases/decreases can directly affect the provision of emergency medical services (e.g., an increase in call volume/number of transports), the EMS Agency works with the contracted ambulance services provider to monitor the data regularly to ensure that, as local communities in different parts of the county change, the ambulance services continue to meet the needs of the community.

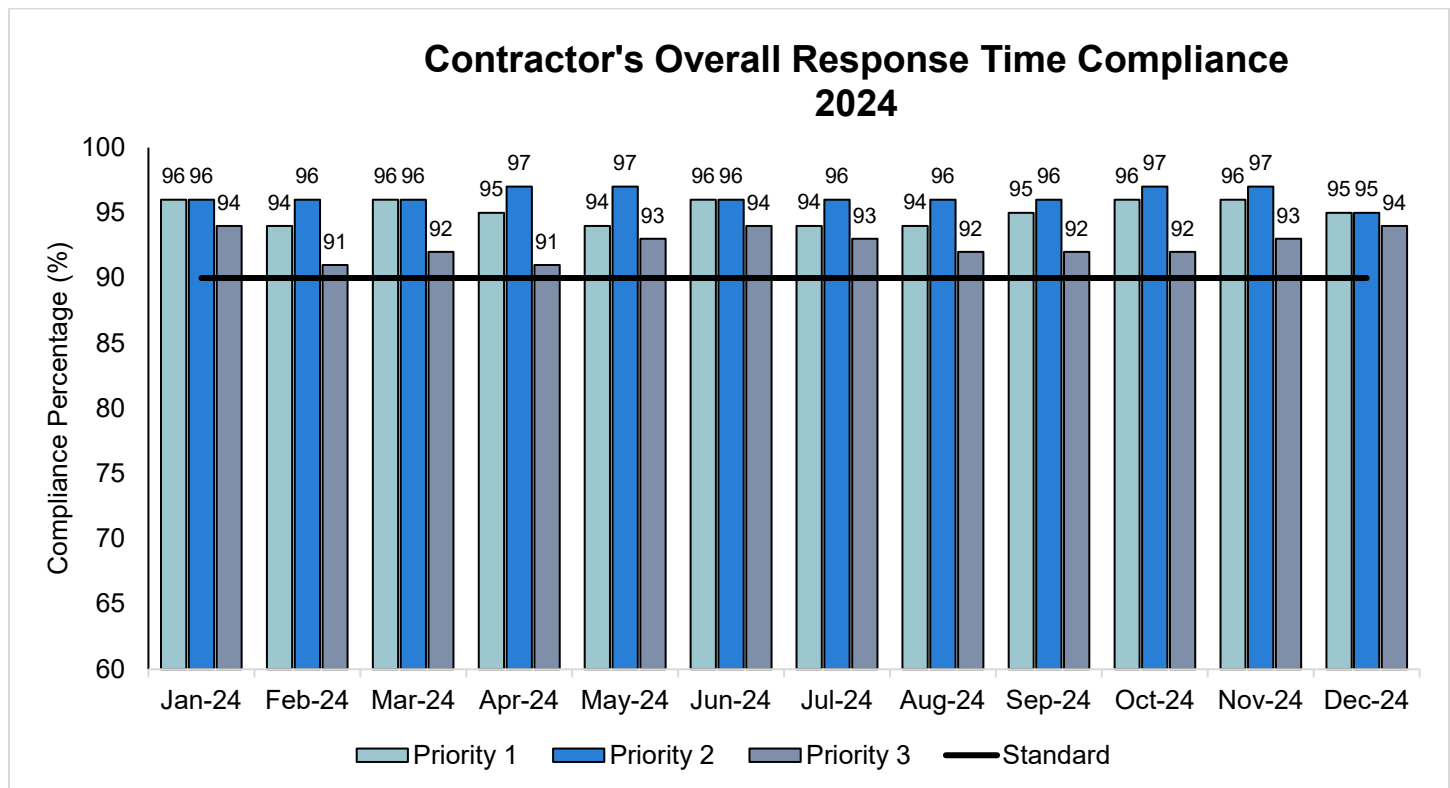
The chart below illustrates the total number of calls for emergency medical assistance received by AMR, the County’s ambulance service provider, from 2022 to 2024. The chart shows that there has been a minor increase in call volume. Between 2022 and 2023, call volume increased by 602 calls or 1.47%. Similarly, between 2023 and 2024, call volume increased by 230 calls or 0.55%



Ambulance Response Times

The current agreement requires the ambulance services provider to achieve a 90% or higher response time compliance for each priority within each zone in order to be deemed compliant. The table below illustrates the ambulance service provider's overall response time compliance by month for all Priority 1, 2, and 3 calls (definitions below) in 2024. The Emergency Medical Dispatch caller interrogation process through the Medical Priority Dispatch System (MPDS) determines most response priorities. The data below show that AMR met or exceeded overall response time compliance in 2024, which is the direct result of the close collaboration between the EMS Agency and AMR, the current ambulance services provider, to make improvements to the EMS system that allow for a more efficient use of ambulance resources.

Priority	Definition
1	Life-threatening emergencies, e.g., cardiac arrests, choking, major hemorrhage, etc. Require the closest ambulance with a red lights and siren response. The ambulance is <u>not</u> divertible.
2	Non-life-threatening emergencies. Require an urgent red lights and siren response. The ambulance is divertible to a Priority 1.
3	Non-life-threatening emergencies. Require an immediate response with <u>no</u> red lights or siren. Ambulances assigned to a Priority 3 call may be diverted to a higher priority call.



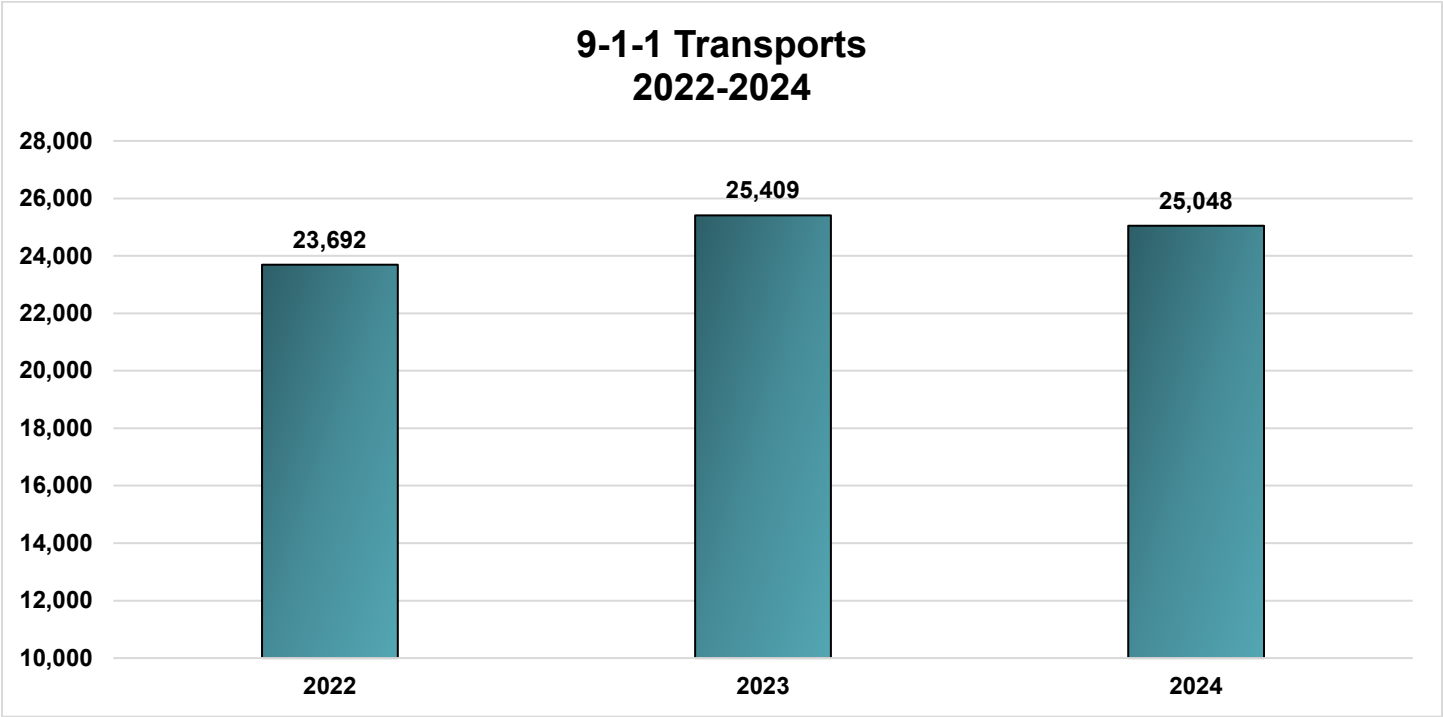
Ambulance Transport Volume

Not every call for emergency medical services results in a trip to the hospital for a variety of reasons. For example, the patient could be treated on site and not need to go the emergency department. Sometimes, the patient chooses to not go to the emergency department.

The chart below depicts the number of calls for emergency medical assistance that originated through the 9-1-1 system and resulted in patient transport to the hospital from 2022 through 2024.

In 2024, based on the 41,725 emergency medical calls received by the ambulance services provider, approximately 60% of all calls placed to 9-1-1 for medical assistance resulted in transport to the hospital via ambulance.

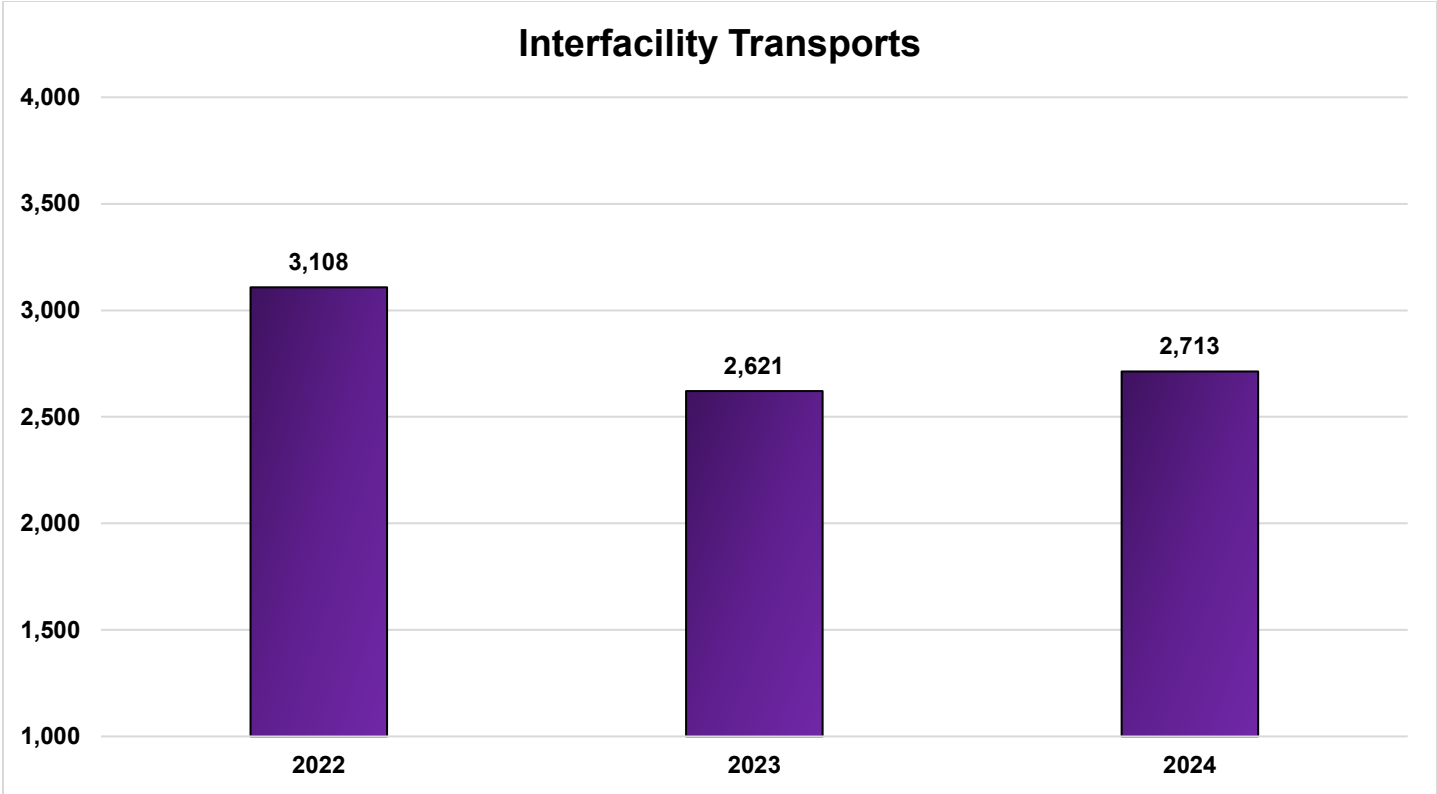
The chart below also shows that between 2022 and 2023, the number of transports increased by 1,717 transports, a 7.25% increase, and between 2023 and 2024, the number of transports decreased by 361 transports or a 1.42% decrease.



In addition to transporting patients encountered through 9-1-1 calls to hospitals, the ambulance services provider is also responsible for transporting patients who need continued medical monitoring from one medical facility to another. For example, a patient being seen in the emergency department due to behavioral health issues who needs to be transferred to a behavioral health facility for continued care or a patient who is being released from the emergency department to go to a skilled nursing facility (SNF), which is a facility that provides high-level medical care and rehabilitation services, often after a hospital stay. These types of transports are referred to as Interfacility Transports (IFTs).

The chart below includes the number of IFTs from 2022 through 2024.

The data show that, between 2022 and 2023, the number of IFTs decreased by 487 transports or 15.37% and between 2023 and 2024, the number of IFTs increased by 92 transports or 3.51%.



SPECIAL EVENT PLANNING

Given the high number of special events that are held in the County of Monterey and that emergency and non-emergency medical incidents can occur at these events, to ensure that special events within Monterey County are properly prepared to address potential medical incidents and needs, the EMS Agency works closely with Housing and Community Development (HCD) and the Parks Department to collect medical plans from event coordinators and review the plans to ensure sufficient medical resource availability for each event. This process begins when HCD or the Parks Department notifies the EMS Agency about upcoming events, this notification prompts the EMS Agency to reach out to event organizers and request that the organizers complete and submit comprehensive medical plans. Some of the most prominent events that the EMS Agency reviews include the Sea Otter Classic, Big Sur International Marathon, Laguna Seca Raceway events, California Airshow, AIDS LifeCycle, AT&T Pebble Beach Pro-Am, and Concours D'Elegance. The ambulance services provider is responsible for providing standby ambulance services at special events.

In 2024, the EMS Agency successfully processed a total of 65 medical plans for these and other events. In addition to collecting medical plans in advance, the EMS Agency also requests After Event Reports. These reports provide valuable insights into the actual medical needs that arose during each event, allowing the Agency to identify trends and potential challenges. This information is critical for shaping future event preparedness and ensuring that the EMS Agency can adjust policies and protocols to address emerging medical requirements effectively.

QUALITY ASSURANCE AND IMPROVEMENT

In order to achieve robust and viable quality improvement, it is imperative that the EMS Agency engages in data-driven decision-making. That is why on a regular basis the EMS Agency reviews data and information gathered during its specialty care QI committees, unusual occurrence reviews, and annual Policy and Protocol Development Cycle. During each of these programs, stakeholders can voice their perspectives and realities within the County of Monterey EMS system, and the EMS Agency has the ability to compare this information with strategic data reviews with the overall aim of making the county's EMS system high-performing and patient-focused.

Policy and Protocol Development

The EMS Agency seeks to review, and update as necessary, one third of our policies and protocols every year. Research and data, changes in clinical practice, stakeholder input, and information gleaned from our QA/QI processes all contribute to the update processes. This helps ensure that we use the latest data to guide patient care and EMS operations.

As a part of our 2024 Policy and Protocol Review Cycle, the EMS Agency updated 49 policies and field treatment protocols. The changes made to these policies and protocols went into effect on July 1, 2024.

Some highlights of the 2024 review and update include:

1. Updates to the field trauma triage criteria to conform to the latest American College of Surgeons guidelines. The field trauma triage criteria is used to help determine which patients would benefit from transport directly to a trauma center and those who can safely be treated at a local community hospital.
2. Additional guidance related to treatment of life-threatening tension pneumothorax (collapsed lung). The policy for needle chest decompression, used to remove air from outside of the lungs so the lungs can expand, was updated to provide more clear guidance on needle placement sites.

3. Language update to the protocol for seizure management to ensure rapid medication delivery to stop seizures as quickly as possible.

In 2024 the EMS Agency also started the review and update process for the 2025 Policy and Protocol Review Cycle. The changes resulting from this cycle will go into effect on July 1, 2025. This update will be fairly large due to the reintroduction of a last-ditch treatment for a patient who has a completely blocked airway and the adoption of a new method to manage patients with very low blood pressure that have not responded to other treatments.

Unusual Occurrence (UO) Case Reviews

In 2024, the EMS Agency received 86 UO reports. This number represents an increase of 11 case reviews or 15% from 2023. These reports present opportunities for EMS system quality improvement and have led to system-wide changes including changes in EMS aircraft utilization, mutual aid implementation, hospital requests for Critical Care Transport units, bariatric patient care, and EMS prearrival notifications to receiving hospitals.

Along with these system changes, our Unusual Occurrence Reporting system has provided important insight to challenges that our allied agencies experience when working together on complex and multifaceted situations. The EMS Agency plans on working with our partners to ensure an EMS system that is sustainable and effective in providing the best patient care.

In 2024 the EMS Agency implemented a new electronic system for submission, processing, and tracking of UOs. Section 3 of this report provides details about this new system.

SPECIALTY CARE SYSTEMS

A significant benefit of a well-organized EMS system is in its ability to ensure that the patient receives appropriate care in a timely manner. Not only is the care rendered by EMS providers important, but so are their decisions as to where to transport the patient. There are some conditions where the decision on which hospital to go to can be lifesaving.

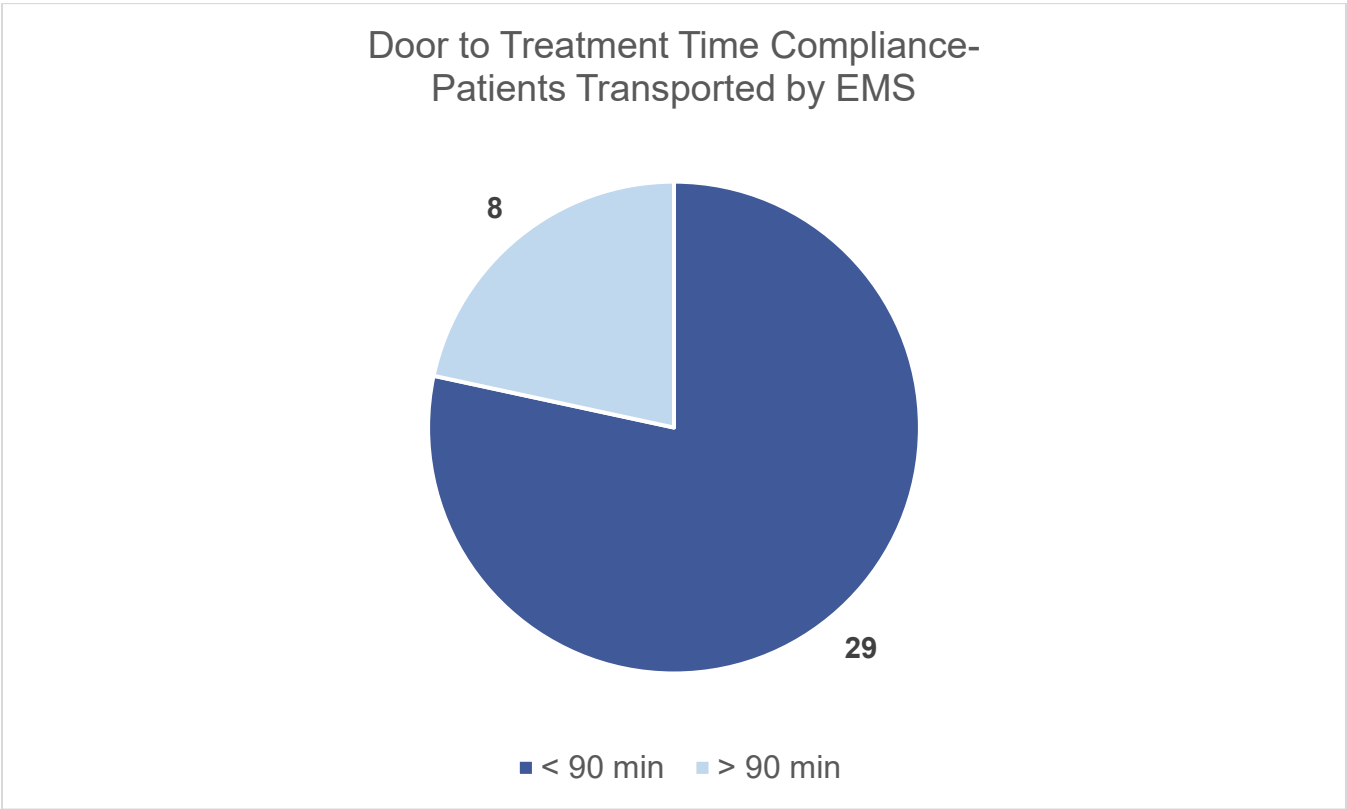
Within the EMS system, there are specialty care systems to ensure prompt recognition of the patient's need for specialized care, rapid movement of the patient to the specialty care center, and early notification to the specialty care center to ensure certain life threatening conditions are quickly treated. The EMS Agency is charged with the responsibility to designate and oversee STEMI, stroke, and trauma specialty care systems. The EMS Agency is also responsible for developing and maintaining QA/QI programs for these systems.

As part of the EMS Agency's QA/QI program, we complete reviews of STEMI, stroke, and trauma care and data to ensure that these highly critical patients receive the most appropriate care and treatment. Each one of these systems has its own QI committee which consists of EMS service providers, local hospital coordinators, and other relevant patient care providers. Each of these groups meets at least three times a year to discuss current data trends, case reviews, areas of success, and opportunities to enhance the system. Below we present some of the data trends identified in each of the three specialty care systems.

STEMI System of Care

The STEMI system of care starts with the policies and treatment protocols put in place by the EMS Agency. The system involves the training of our paramedic providers to obtain a 12-Lead ECG. This ECG is transmitted to a designated STEMI Receiving Center where it is reviewed by an ED physician and made available to the interventional cardiologist. In addition to electronically transmitting the 12-Lead ECG, the paramedic contacts the emergency department at the STEMI Receiving Center by phone and provides a verbal report on the patient’s condition. This is the STEMI Alert that is used to trigger the STEMI Activation at the STEMI Receiving Center. The STEMI Activation brings the interventional cardiologist and cardiac cath lab team together so that the patient can be treated as soon as possible.

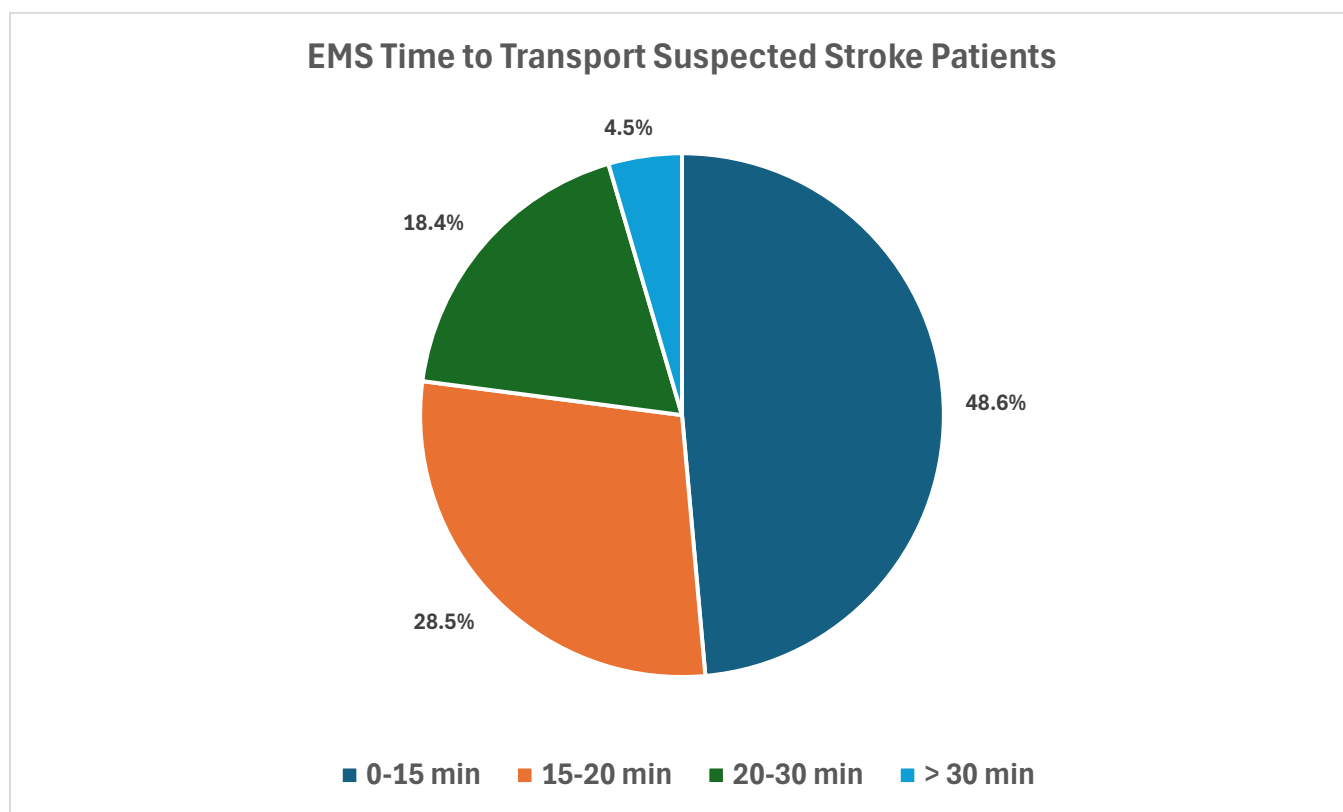
The benchmark time for the patient to receive treatment for STEMI is 90 minutes. This benchmark is measured from the time the patient enters the hospital to the time the blockage in the patient’s heart is treated. In 2024, 78.4% of EMS transported patients with STEMI met this benchmark. This is remarkable as about one third of EMS transported patients had a significant delay factor such as needing other treatment like CPR or advanced airway management before they could go to the cardiac cath lab.



Stroke System of Care

When it comes to the best possible treatment of stroke patients, we must remember that “time equals brain.” That is why the goals of the Stroke system of care include early recognition of stroke, rapid transport of the stroke patient to a designated Stroke Center, early notification to the Stroke Center of the patient’s pending arrival, and rapidly obtaining a CT scan to help confirm the presence of stroke and establish the type of stroke. One type of stroke is caused by a blockage in an artery that provides blood and nutrients to the brain. The treatment for this type of stroke is medication that works to dissolve the blockage allowing blood to flow to the brain again. The hospital must administer this treatment within a narrow window of time.

To ensure that patients have the best possible opportunity to receive this treatment, the EMS Agency has established a benchmark for EMS providers to initiate the transport of stroke patients within 15 minutes of their arrival on scene. In 2024, the EMS system transported 48.6% of stroke patients within this time. Another 28.5% of stroke patients were transported within 20 minutes of EMS arrival on scene.



The EMS Agency, as part of its regular data review within the Stroke Quality Improvement Committee, found that in the first half of 2024, the EMS scene time for stroke patients was significantly shorter when the EMS dispatcher, through the call inquiry process identified the patient as possibly having a stroke. The EMS Agency plans to explore this data further to determine if there is a true correlation.

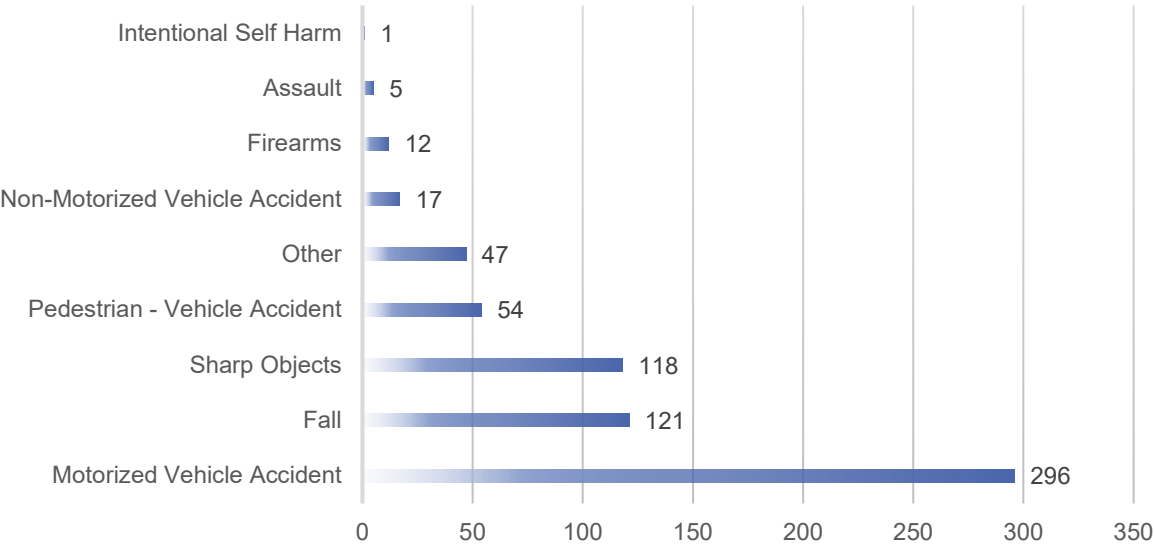
Trauma System of Care

Traumatic injuries constitute one of the most commonly encountered reasons for calls for EMS service. The injuries evaluated by EMS may range from a minor laceration to significant trauma impacting multiple organs or systems within the body. Because of the range of injuries encountered and difficulty evaluating the extent of internal injuries, the EMS Agency has adopted a policy regarding Field Trauma Triage Criteria to give EMS providers a framework by which to determine the potential severity of a patient’s injuries. The Field Trauma Triage Criteria assigns patients to a different “Step” in an algorithm based on their vital signs, injuries, mechanism of injury, or other factors that may affect the patient’s response to their injuries. This same framework also helps guide EMS providers to select the appropriate destination for patients who have sustained traumatic injuries and thus helps to ensure that patients most in need receive the specialized care available at a trauma center.

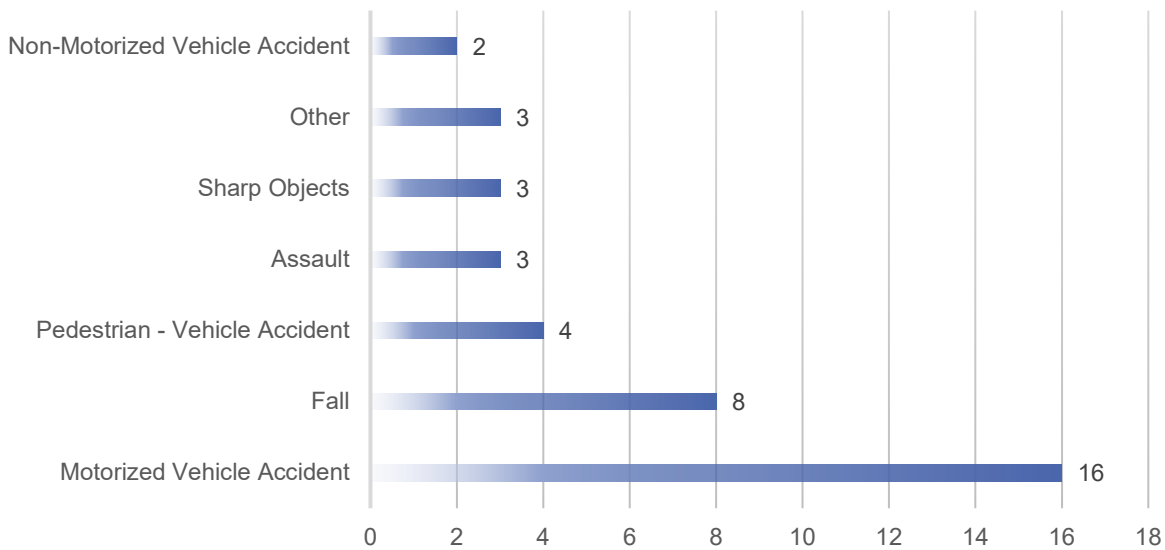
It is critical that patients who have sustained significant traumatic injuries receive care at a trauma center where they benefit from a variety of specialized resources all focused to ensure they have the greatest chance of survival and best possible longterm outcome. Our local EMS providers do a commendable job of recognizing the potential for significant injuries and transporting patients to the appropriate hospital. It is also a great advantage that the EMS Agency has designated a Level II Trauma Center in the County of Monterey; therefore, many patients who have suffered a traumatic injury do not have to go to a trauma center outside the county. Natividad, the Level II Trauma Center in the county, has a proven-record of providing highest quality of care for trauma center as evidenced by the results of the external reviews by the American College of Surgeons (ACS) Verification Review and Consultation (VRC).

In 2024, the first and second mostly commonly encountered mechanism of injury encountered did not vary between adult and pediatric patients. All patients were most likely to need EMS services for injuries resulting from motorized vehicle accidents (44.1% of adult patients and 41.0% of pediatric patients). The second most common mechanism of injury was falls (18.0% of adult patients and 20.5% of pediatric patients). The two most frequent causes of injury for adults remained constant from the 2023 data.

2024 ADULT PATIENTS - PRIMARY MECHANISM OF INJURY



2024 PEDIATRIC PATIENTS - PRIMARY MECHANISM OF INJURY



Health Department Performance Measure – Transport of Trauma Patients to a Trauma Center

The EMS Agency identified the transport of trauma patients to a trauma center as one of our Performance Measures for the Health Department. We established a goal of transporting 90 percent or greater of patients who meet trauma criteria directly to a trauma center.

It is critical that patients who have sustained significant traumatic injuries receive care at a trauma center where they benefit from a variety of specialized resources all focused to ensure they have the greatest chance of survival and best possible longterm outcome. Our local EMS providers do a commendable job of recognizing the potential for significant injuries and transporting patients to the appropriate hospital.

The table below demonstrate the EMS Agency’s success in meeting this goal.

	Q1 2024	Q2 2024	Q3 2024	Q4 2024	2024
# of Patients who Met Trauma Triage Criteria (TTC)	146	177	202	179	704
# of Patients Meeting TTC Transported to a Trauma Center	132	162	190	165	649
% of Patients Meeting TTC Transported to a Trauma Center	90.4%	91.5%	94.1%	92.2%	92.2%

TRI-COUNTY BUPRENORPHINE PROGRAM



In 2024 the County of Monterey EMS Agency continued its partnership with San Benito and Santa Cruz Counties to collaborate on the Tri-County EMS Buprenorphine Program as a way to address the opioid-addiction crisis within our region. The purpose of the program is to permit EMS providers to administer the medication to patients suffering with either opioid-related withdrawals or a nonfatal overdose. It not only provides initial treatment for patients struggling with addiction, but also provides access to long-term treatment and a network of support providers.

Along with support from the EMSA, CA Bridge, and several other community-based partners, this program has provided patients struggling with addiction the opportunity for treatment access and a network support providers.

In 2024,

- 622 patients presenting with possible opioid use disorder and/or withdrawal symptom were seen by EMS personnel. Of these,
- 10 patients were administer buprenorphine, transported to the hospital by EMS personnel where they received further treatment, navigation to connect these patients to additional services, and follow up.

The EMS Agency implemented several changes to the policy and treatment protocol for the EMS Buprenorphine program. These changes stemmed from the EMS Agency's quality improvement processes, recommendations from the CA Bridge, and feedback from EMS providers. The changes allow providers to administer the medication to patients without having to first consult a physician, treat patients experiencing pregnancy, and extending the inclusion criteria to patients 16 years or older.

<div><div><div><div><div></div><div>County of Monterey EMS System Policy</div></div><div><div>Protocol Number: E-5</div><div>Effective Date: 11/1/2024</div><div>Review Date: 6/30/2027</div></div></div></div><div><div>OVERDOSE AND POISONING</div><div><div><div>BLS CARE</div><div>Routine Medical Care</div><div>Identify and locate the substance. Protect self and consider contacting California Poison Control at (800) 222-1222.</div><div>Prevent additional contact with the substance, as warranted. Prevent further access to the substance by the patient.</div><div>Do not induce vomiting. Give nothing by mouth.</div><div>Substance-Specific Treatment (in addition to Routine Medical Care):</div><div>Suspected Opioid Overdose</div><div>Naloxone, up to 4 mg intra-nasal (IN), if respirations are less than 10/minute. Assess for improved respiratory rate and quality. May repeat one time if respirations remain less than 10/minute.</div></div><div><div>ALS CARE</div><div>Routine Medical Care</div><div>Substance-Specific Treatment (in addition to Routine Medical Care):</div><div>Suspected Opioid Overdose</div><div>Naloxone, up to 2 mg IV/IM/IN/IO, if respirations are less than 10/minute. Titrate to improve respiratory rate and quality. May repeat up to 8 mg if respirations remain less than 10/minute. May be administered IM by an EMT working under the supervision of a paramedic.</div><div>Naloxone 4 mg IN if using a single-dose IN device.</div><div>Buprenorphine 16 mg SL may be administered to patients with symptoms of opioid withdrawal or for patients who have been successfully resuscitated with naloxone following a near-fatal opioid overdose. If symptoms worsen or persist, may repeat 8 mg SL (for a total maximum dosage of 24 mg SL).</div><div>See EMS System Policy #4520 for inclusion and exclusion criteria and further details.</div><div>Ingestion of Non-Petroleum Based Substance or Non-Caustic Substance</div><div>Activated Charcoal 1 gm/kg PO should be considered if the time of ingestion was less than one (≤1) hour prior to EMS arrival and if the patient is alert and able to safely swallow liquid.</div></div></div></div></div>	<div><div><div><div><div></div><div>County of Monterey EMS System Policy</div></div><div><div>Policy Number: 4520</div><div>Effective Date: 11/1/2024</div><div>Review Date: 6/30/2027</div></div></div></div><div><div>OPIOID WITHDRAWAL TREATMENT (BUPRENORPHINE)</div><div><div>I. PURPOSE</div><div>To provide guidance for treating patients who are (a) exhibiting signs or symptoms of opioid withdrawal and/or (b) who have been successfully resuscitated following an opioid overdose, including the administration of naloxone. ALS providers may activate a prehospital-based MAT program, which allows paramedics to administer buprenorphine AND link the patient with a hospital treatment program.</div><div>Offering buprenorphine treatment to individuals experiencing opioid withdrawal or to those who experience a nonfatal opioid overdose provides an opportunity to reduce opioid overdose fatalities.</div><div>This optional scope of practice item is currently limited to AMR paramedics only, although we anticipate extending this project to all ALS 9-1-1 transport providers in the future. This limited roll-out will allow us to study cost, utilization, and overall effectiveness before considering whether to expand the local optional scope of practice (LOSOP) authorization to all ALS providers.</div></div><div><div>II. ASSESS FOR EXCLUSION CRITERIA</div><div>A. Patients with any of the following exclusion criteria should not receive buprenorphine:</div><div><ul style="list-style-type: none">• No opioid withdrawal signs of symptoms• Under 16 years of age• Any methadone use within the last 10 days• Severe medical illness (sepsis, respiratory distress, etc.)• Altered mental status and unable to give consent or comprehend potential risks and benefits of receiving buprenorphine• Clinical Opioid Withdrawal Scale score (COWS score) < 8</div></div></div></div>
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FINANCES

County Service Area (CSA) 74

In 1988, the County of Monterey 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, whose purpose is to fund “the countywide Paramedic EMS System, which will provide advanced life-savings support of victims in response to emergency calls,” is administered by the EMS Agency.

The special tax for CSA 74 is assessed in accordance with the County of Monterey Land Use Codes. The basic unit is a single-family dwelling. The current rate per parcel is \$12.00. 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 based on billed parcels for FY23-24 is as follows:

CSA Units	120,464	\$1,724,136
Trailer spaces and hotels rooms	<u>412</u>	<u>\$184,2172</u>
Total	121,092	\$1,908,353

In addition to supporting operations of the EMS Agency to comply with its responsibility to oversee the EMS System, CSA-74 funds are also used to supplement the countywide EMS training efforts and equipment acquisition of emergency first responders. The amount disbursed to each participating agency is calculated using the methodology established in the MOU dated June 17, 2011.

During FY23-24, the EMS Agency continued to use CSA-74 monies to pay for the costs of the countywide, integrated electronic patient care reporting (ePCR) system 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 County of Monterey 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.

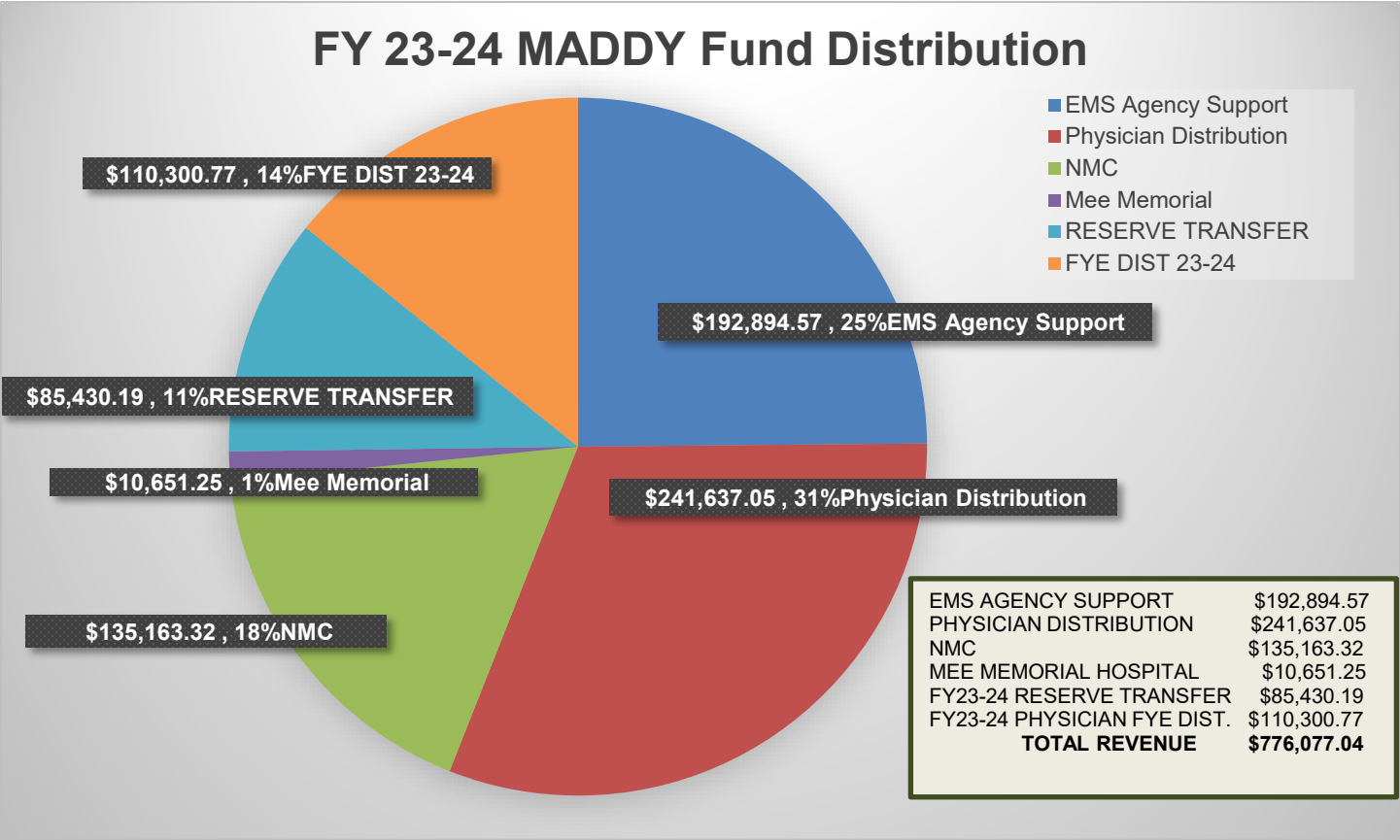
Pursuant to state law, the money in the fund is disbursed and utilized in the following manner:

- Up to 10% of the proceeds are available for 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 as follows:
 - 58% to reimburse physicians for a portion of unreimbursed indigent services;
 - 25% to reimburse hospitals which provide a disproportionate share of unreimbursed emergency medical care; and
 - 17% for Health Department's Emergency Medical Services Agency discretionary activities.

Maddy funds are distributed on a quarterly basis to physicians and on an annual basis to the hospitals.

Health & Safety Code Section 1797.98(b) (4) also allows each administering agency to maintain a reserve fund of up to 15% of the amount of the fund reimbursable to physicians and hospitals. The purpose of the reserve is to ensure that physicians and hospitals continue to receive reimbursement for a portion of their services. In FY2022-23, the EMS Agency established a reserve fund in accordance with State law. The reserve fund is equivalent to 15% of the portion available for hospitals and physicians.

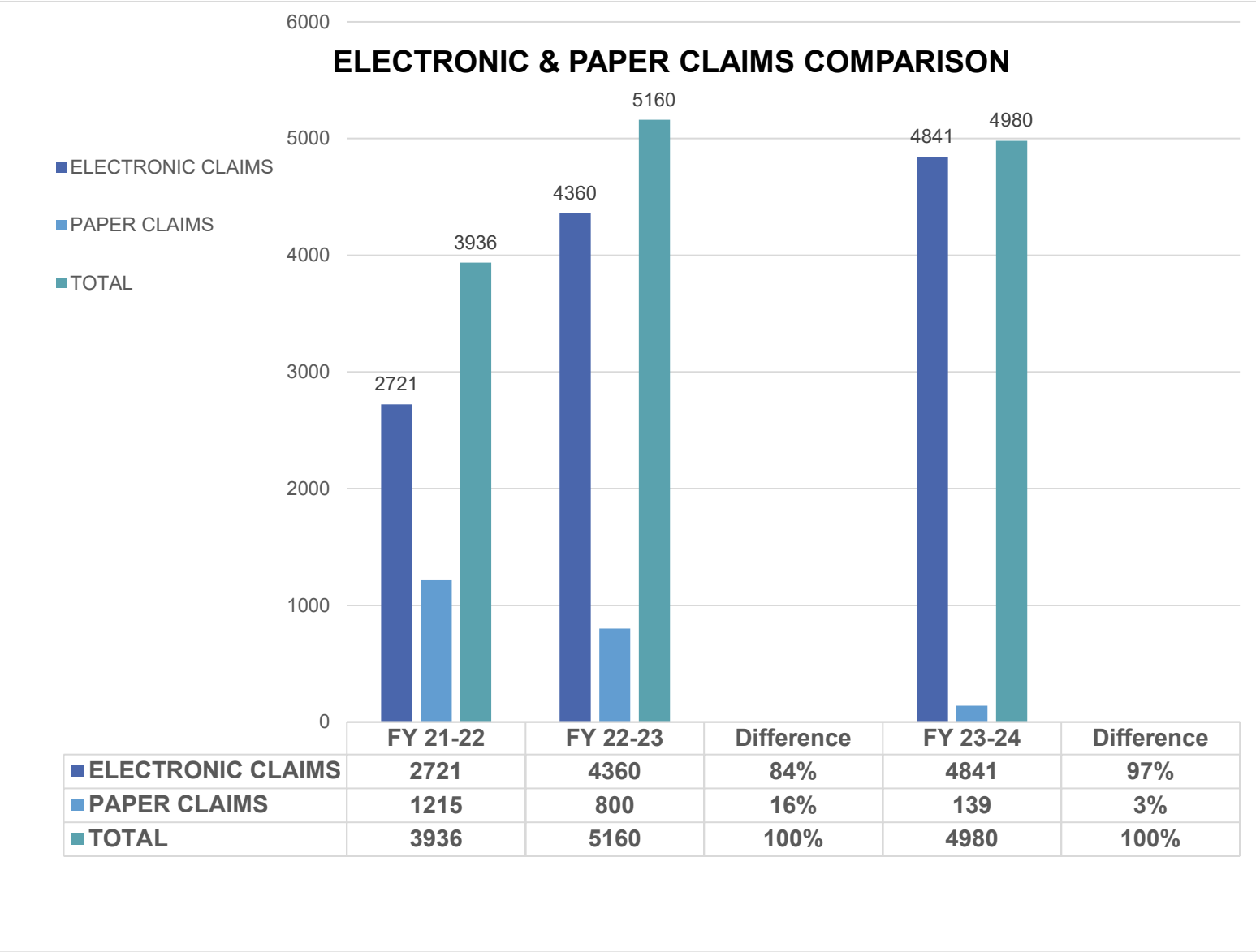
A chart showing the disbursement of Maddy Funds in FY23-24 appears below:



In FY23-24, the EMS Agency received and processed a total of 4,980 claims. The number of claims received and processed electronically increased by 11% compared to the previous year. In FY23-24, only 3% of all claims are submitted on paper and processed manually, while 97% of all claims are received and processed electronically. This significant increase in the number of claims that are submitted electronically is evidence that the EMS Agency’s goals to 1) become more efficient and 2) improve accuracy have been achieved as the paper claims require manual data entry into the system, which is time-consuming, and manual data entry increases the changes for human error when processing the claims.

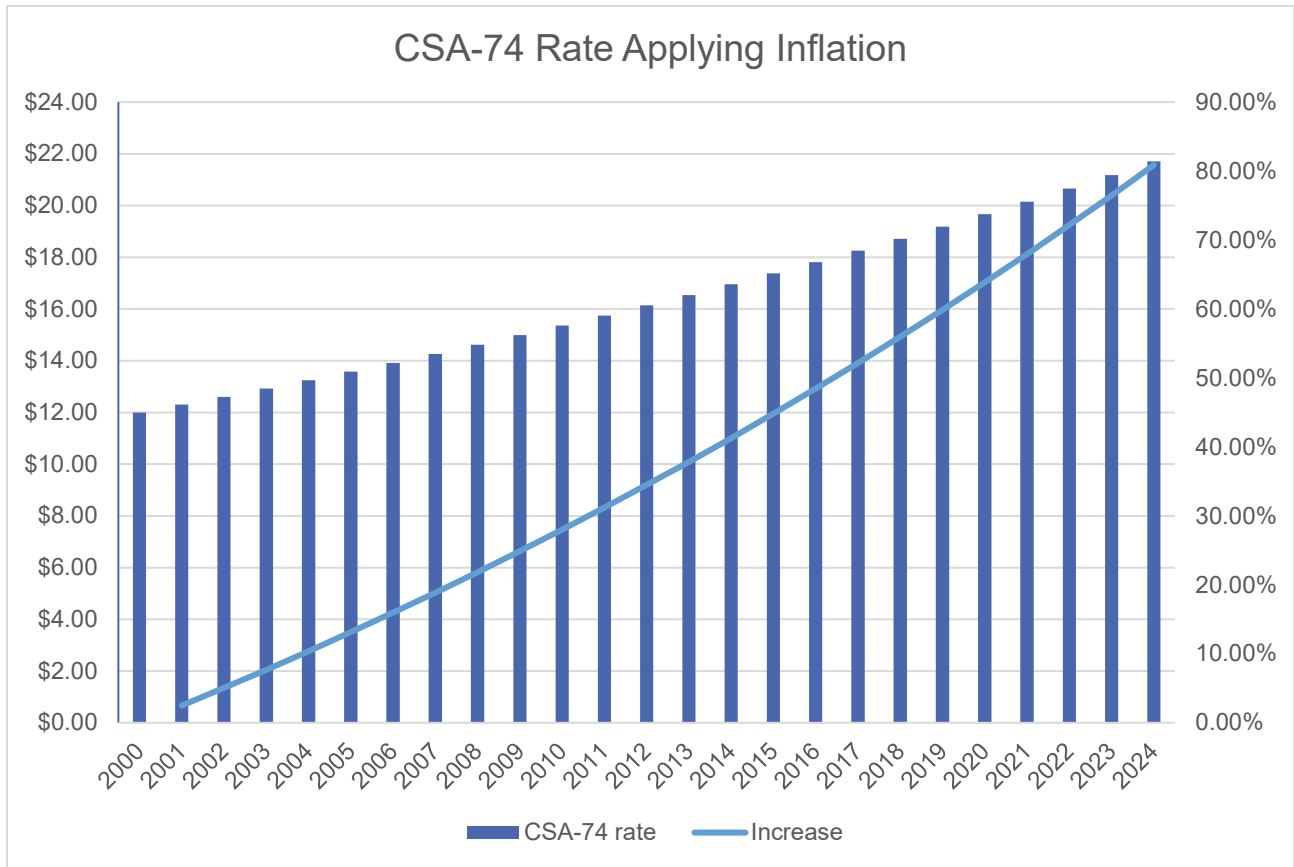
In FY23-24 the EMS Agency saw a decrease of 3.5% in overall claims submitted. We will continue to monitor the trend with the transition to electronic submittal of claims.

A table showing the number of claims received in FY23-24 appears below:



It is worth noting that there has been no change in the per parcel rate since FY 2000-01 and therefore, the revenue generated from CSA-74, the EMS Agency’s primary source of funding, has not kept up with the continued rise in costs. Applying an average inflation rate of 2.50% per year between 2001 and 2024, the per parcel rate today would have increased to \$21.70, or a cumulative 81% increase.

A table showing what the CSA-74 Special Tax rate would be in today’s value appears on the following page:



Furthermore, Maddy fund revenue has decreased in the last five (5) years. In 2022, revenue decreased by \$104,124. In FY2022-23, we experienced a decrease of \$45,248 from \$842,019 to \$796,771. In FY 23-24, the EMS Agency continued to see a decrease in Maddy revenue. The CSA-74 special tax and the Maddy Fund are the EMS Agency’s primary sources of funding.

A table showing the Maddy fund revenue for the past five years appears below:

Maddy Fund	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24
Revenue	\$867,209	\$946,143	\$842,019	\$796,771	\$776,077
Change in Revenue	(7,056)	78,934	(104,125)	(45,248)	(20,694)
Percentage	-1%	9%	-11%	-5%	-3%

Given the downward trend in Maddy revenue in the last five years, coupled with a CSA-74 special tax that has not changed since FY2000-01, it has become imperative for the EMS Agency to explore ways to generate increase and diversify its revenue such as the implementation of fees to ensure the fiscal stability of the EMS Agency.

In FY23-24 the Board of Supervisors approved the implementation of an annual license fee in the amount of \$25,000 for Air Ambulance Services Providers providing service in the County of Monterey. The annual fee will allow the County to recover costs associated with the classification and authorization of EMS aircraft and will generate additional revenue of \$50,000 annually. Despite the additional revenue, expenses are continuously increasing. In FY23-24 the EMS Agency saw an increase of 30.92% in expenses in comparison to FY22-23. The additional \$50K in new revenue does not cover the increase in expenses.

2024 ACCOMPLISHMENT HIGHLIGHTS

RESPONSE TIME EQUITY IN NORTH AND SOUTH MONTEREY COUNTY JURISDICTIONS

The EMS Agency has embarked on an initiative to evaluate response time equity across the County's more suburban and rural areas, mainly focusing on the North and South County jurisdictions. While there are no established response time requirements specific to city or community levels, the Agency recognizes the importance of ensuring that all residents, regardless of their geographical location, have equitable access to timely emergency medical services. This initiative is driven by the need to deliver consistent and reliable care throughout the County, especially in areas that may experience unique challenges due to geography.

In conducting this evaluation, the EMS Agency has been gathering and analyzing response times in North and South County jurisdictions and to determine whether potential disparities between suburban and rural services exist. This focus on response time equity is crucial for improving patient outcomes and reinforcing the Agency's responsibility to foster trust and confidence within the community. Reviewing the data allows us to address any discrepancies and implement effective solutions. The EMS Agency seeks to ensure that all citizens feel secure knowing that help is always just a call away, no matter where they reside in the county. Ultimately, this initiative represents a proactive approach to emergency medical services that prioritizes equity and accessibility for every individual throughout the County of Monterey.



DEVELOPMENT AND IMPLEMENTATION OF AN UNUSUAL OCCURRENCE REPORT DATABASE

In 2024, the EMS Agency partnered with Health IT to revamp the intake process for Unusual Occurrence (UO) reports, enhancing efficiency and tracking capabilities. This collaborative effort has led to the development a specialized database designed specifically for the collection of information and analysis of UOs. With the new system, EMS system participants and members of the public can easily input data related to unusual incidents within the EMS system, streamlining the reporting process and significantly reducing the time it takes to submit these critical reports in a secure manner.

The transition to a digital platform facilitates quicker submissions and provides the Agency with powerful tools to monitor trends and patterns in UOs over time. By expanding analytics capabilities, the EMS Agency can identify recurring issues or anomalies, enabling proactive measures to mitigate risks and improve overall EMS system performance. This strategic upgrade underscores the Agency's dedication to continuous improvement and enhances the quality of care provided to the community.



PARTICIPATION IN SALINAS VALLEY STATE PRISON'S EMERGENCY MEDICAL RESPONSE REVIEW COMMITTEE

The EMS Agency has taken a significant step towards enhancing its community collaboration by initiating and fostering a relationship with Salinas Valley State Prison. This partnership has led to the Agency's active participation in the Emergency Medical Response Review Committee at the prison, a committee tasked with evaluating and improving medical protocols and emergency response strategies within the facility. By engaging directly with prison healthcare staff and administration, the EMS Agency is not only sharing best practices used within the EMS system but also gaining valuable insights into the unique medical needs and challenges of the inmate population. This collaboration underscores the Agency's dedication to comprehensive emergency medical services, ensuring that all community members, including those in secure facilities, receive timely and effective care.



INSTALLATION OF NEW RADIO REPEATERS

Throughout 2024, the EMS Agency worked with the County of Monterey IT Radio Communications to successfully install six new radio repeaters. This marks a significant milestone in enhancing our communication infrastructure as the previous repeaters were outdated and no longer supported by their manufacturer. This upgrade not only improves the reliability of radio communications among emergency medical response units, but also ensures better coordination during critical incidents. This accomplishment reflects the Agency's commitment to adopting modern technology to enhance operational efficiency and ultimately serve the community during times of need.

HEALTH DATA EXCHANGE EXPANSION

The EMS Agency's Health Data Exchange (HDE) program experienced significant progress in 2024. At the beginning of the year, only one local hospital had fully integrated bi-directional data sharing, and just 60-70% of patient transports had outcome reports interfaced with the EMS provider's electronic health record (EHR). To address these gaps, the EMS Agency actively collaborated with both hospital and EMS stakeholders through ongoing EMS Data Working Group meetings. These meetings provided a platform for guidance, feedback, and problem-solving on the challenges faced by each system.

In addition, the EMS Agency worked closely with its EHR vendor, ESO, and the hospitals that had not yet fully integrated into the bi-directional data-sharing program. As a result of these efforts, the three largest hospitals in the county became fully operational within the HDE program, and the final hospital made significant progress, completing more than half of its technological build in 2024.

Throughout 2024, the EMS Agency not only increased the number of participating hospitals but also improved the match rate between hospital records and EMS EHRs. Initially, only transporting agencies had access to patient outcomes, excluding other first responders. However, in early 2024, the EMS Agency began renegotiating its agreement with ESO Solutions, the EMS Agency's vendor for the countywide database system. ESO introduced a new program called eMPI (enterprise Master Patient Index). This program was designed to streamline connections between EMS providers and hospital systems, and potentially extend access to non-transporting, first-responder records.

Following eMPI's implementation in August and a system upgrade in November, there was a significant increase in the number of outcome reports attached to EMS provider EHRs. By December 2024, 92% of transporting agencies had successfully linked their EHRs to the records of participating

hospitals, representing a major achievement for the program.



This progress reflects the ongoing collaboration and innovation within the EMS, ESO, and healthcare systems, enhancing patient care through improved data-sharing and connectivity.

MASS CASUALTY INCIDENT RESPONSE IN KING CITY



In March of 2024, a drive-by shooting occurred at a residence in King City. The shooting resulted in multiple fatalities and seven critically injured patients. Successfully managing an incident of this magnitude requires a coordinated response from a multitude of the various components of the EMS system. This type of coordination comes about through ongoing system planning, joint training opportunities, and day-to-day efforts to establish and maintain positive working relationships between and amongst EMS system participants.

The initial 9-1-1 call was received and processed by the County of Monterey's Emergency Communications Department. American Medical Response's (AMR's) EMS Dispatch Center sent emergency resources to the scene, where EMS providers encountered multiple fatalities as well as four patients requiring emergency care and transport to Natividad, the County's trauma center. AMR's EMS Dispatch Center notified local hospitals of a mass casualty incident and conducted bed polling to assist with patient distribution. An additional three patients

left the scene by private vehicle, presented to Mee Memorial Hospital, and required stabilization, rapid re-triage, and transfer to Natividad. Three AMR ambulances and an AMR Field Supervisor were dispatched within two minutes of the call. First responders from the King City Fire Department and the South Monterey County Fire Protection District responded and assisted with scene management, patient care, and incident command. Officers from the King City, Soledad, Greenfield, and Gonzales Police Departments worked alongside Deputies from the Monterey County Sheriff's Office to secure the scene and assist EMS responders. An ambulance from the Fort Hunter Liggett Fire Department, an air ambulance from CALSTAR, and additional ambulances from AMR also responded.

In our review of the incident, the Monterey County EMS Agency found the EMS Dispatcher's efforts to ensure a timely response and coordination of resources appropriate and commendable. This was especially noteworthy given the location and magnitude of the incident as well as the added complexity of patients leaving the scene by private vehicle to seek care at the closest hospital. EMS responders triaged patients quickly and appropriately and delivered high-quality care to the wounded. Emergency Department staff at Mee Memorial Hospital provided medical stabilization and rapidly re-triaged patients to the nearest trauma center for specialized trauma care. Natividad accepted and provided excellent trauma care to multiple severely injured patients.



The coordination and response to this mass casualty incident represents a stellar example of how an EMS System should work. The different members of the EMS System came together and carried out their roles with an exceptional level of efficiency, professionalism, clinical skill, and teamwork. The EMS Agency prepared and distributed commendation letters for each of the provider agencies involved in the response to this tragic incident. We commend the organizations and individuals who demonstrated excellence in meeting the many demands of this challenging incident, providing life-saving EMS service to the injured.



DRAFTING AND RELEASE OF A REQUEST FOR PROPOSALS FOR AN AMBULANCE SERVICES PROVIDER FOR THE COUNTY OF MONTEREY EXCLUSIVE OPERATING AREA

In 2024, the EMS Agency spent a significant amount of time crafting and preparing for the release of a request for proposals (RFP) for the provision of ambulance services to the County of Monterey exclusive operating area (EOA). The process to draft and prepare the RFP for release to potential bidders was lengthy and technical in order to provide opportunities for stakeholder input and to ensure compliance with not only statutes and regulations, but also the requirements of the County of Monterey Contracts and Purchasing Department as well as those of the state EMS Authority (EMSA).

The agreement with our current provider of ambulance services was scheduled to end on June 30, 2025, but we have extended the agreement through January 31, 2026. This extension will ultimately benefit the EMS system as it allowed the EMS Agency to devote a sufficient amount of time to crafting an RFP that meets the needs of stakeholders and will provide an adequate amount of time for the chosen provider to prepare to function under the requirements of the new RFP and the subsequent agreement.

LOOKING AHEAD

The EMS Agency will experience a year of transition in 2025 as the Request for Proposals (RFP) process for an ambulance services provider for the County of Monterey's exclusive operating area (EOA) reaches its conclusion. Proposers will submit their proposals by the end of April. The goal of the EMS Agency is to have an agreement in place by late June or early July. This timeline allows for a six-to-seven-month transition period before the contractor assumes responsibility for the provision of ambulance services to the EOA on February 1, 2026.

The RFP itself is poised to bring significant changes and improvements to the EMS system. The RFP includes system improvements such as enhanced ability to track response time compliance across both emergency calls and interfacility transfers, and the introduction of a clinical scorecard to help ensure that the contractor provides the best possible clinical care to those utilizing the EMS system. The transition period will be a very busy time for the EMS Agency as we work alongside the contractor to ensure that they are successful in completing tasks in a timely manner and that all of the many pieces necessary to implement ambulance services are in place. These efforts are geared towards ensuring that the residents of and visitors to Monterey County receive progressive, evidence-based care from the moment the contractor begins providing ambulance services.

While much of the EMS Agency's efforts in 2025 will undoubtedly focus on the RFP and the process of transitioning to a new contract for ambulance services, other important projects directed at improvements to the EMS system will continue as well. In 2025 the EMS Agency expects to bring the fourth and final hospital Monterey County hospital online in the health data exchange (HDE) system. As the HDE implementation process winds down, we will look to transition our Data Working Group to a new focus – standardization of data collection to ensure consistency in the way EMS providers complete quality documentation of the patient care they deliver. This will help ensure quality reliable data needed to support the EMS Agency's ongoing effort to evaluate and to identify ways to improve the delivery of EMS in the county.

Quality improvement training for not only our staff, but also EMS provider agencies across the county will be another significant undertaking for the EMS Agency this year. Over the past year to 18 months, the EMS Agency has worked to update our own quality improvement plan to make sure that it is not only compliant with the state's regulations, but also accurately represents our current areas of focus. We have also worked with the provider agencies to bring their individual plans up to date. This year, we intend to work with a consultant who specializes in EMS and quality improvement to obtain additional training for our staff before bringing the training to all EMS system stakeholders. Our goal is to train and equip our staff to develop a unified approach to QI systemwide and to better serve as the leaders needed to guide the EMS system through continuous improvements in the delivery of care to our patients.

CONCLUSION

The EMS Agency would like to thank the Board of Supervisors for the opportunity to present the 2024 EMS Annual Report to highlight some of the work the team, along with our agency partners, achieved during 2024, bring attention to of the challenges our system faces today, and outline our goals for 2025. We are proud of what we have accomplished, grateful of the relationship with our partner agencies, and honored and committed to serving our community.

