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

December 17, 2024

Jeff Fariss, EMS Program Manager
Kern County Emergency Medical Services Agency
1800 Mount Vernon Ave.
Bakersfield, CA 93306

Dear Jeff Fariss,

This letter is in response to Kern Emergency Medical Service (EMS) Agency's 2023 EMS, Trauma, St-Elevation Myocardial Infarction (STEMI), Stroke, and Quality Improvement (QI) plan submissions to Emergency Medical Service Authority (EMSA) on October 1, 2024.

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

EMSA has also reviewed the Trauma, STEMI, Stroke, and QI plans based on compliance with Chapters 7, 7.1, 7.2, and 12 of the California Code of Regulations, Title 22, Division 9, and has been <u>approved</u> for implementation.

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

Your 2024 EMS plan will be due on or before December 17, 2025. Concurrently with the EMS plan, please submit an annual Trauma, STEMI, Stroke, and QI plan.

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

Sincerely,

Tom McGinnis

Tom McGinnis, MHA, EMT-P
Chief, EMS Quality and Planning Division

Enclosure:
AW: rd

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Kern 2023 EMS Plan EMS Areas and Subareas	Non-Exclusive	Exclusive	Method to Achieve Exclusivity	Emergency Ambulance	ALS	LALS	All Emergency Ambulance	9-1-1 Emergency Response	7-digit Emergency Response	ALS Ambulance	All CCT Ambulance Services	IFT	Standby Service with Transport Auth.
ZONE	**EXCLUSIVITY**			**TYPE**			**LEVEL**						
OA 1		X	Competitive	X			X	X	X	X	X	X	X
OA 2		X	Non-Competitive	X			X	X	X	X	X	X	X
OA 3		X	Non-Competitive	X			X	X	X	X	X	X	X
OA 4		X	Non-Competitive	X			X	X	X	X	X	X	X
OA 6		X	Non-Competitive	X			X	X	X	X	X	X	X
OA 7		X	Competitive	X			X	X	X	X	X	X	X
OA 8		X	Non-Competitive	X			X	X	X	X	X	X	X
OA 9		X	Non-Competitive	X			X	X	X	X	X	X	X
OA 11		X	Competitive	X			X	X	X	X	X	X	X

KERN COUNTY EMERGENCY MEDICAL SERVICES AGENCY

EMERGENCY MEDICAL SERVICES SYSTEM PLAN

2023

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Kern County EMS Plan – 2023

Executive Summary

Kern County Emergency Medical Services (KCEMS), a program of the Kern County Public Health Department is the designated Local EMS Agency for the county of Kern. The Kern County Board of Supervisors assigned the responsibility for fulfilling the operational requirements of the LEMSA to Kern County EMS, as per Ordinance No. G-8006,§ 2, (1-26-10). This plan is intended to provide an update of the current structure of EMS for Kern County and reflects the update from 2023 of the Agency's EMS Plan. The Agency's primary responsibility is to plan, implement, and evaluate an emergency medical services (EMS) system that meets the minimum standards developed by the California EMS Authority. Historically, many contributing factors, including major wildland fires and a worldwide pandemic, have impacted Kern's ability to provide annual EMS plan updates. We appreciate the California Emergency Medical Services Authority's (EMSA) understanding in allowing us to communicate how Kern County EMS has and will continue to meet state requirements as an EMS agency.

State law requires EMS agencies to develop plans for the delivery of emergency medical services (paramedic treatment, ambulance transport, trauma services, etc.) to the victims of sudden illness or injury within the geographic area served by the EMS agency. These plans must be consistent with state standards and address the following components:

- System organization and management
- Staffing and training
- Communications
- Response & Transportation
- Facilities and critical care
- Data collection and evaluation
- Public information and education
- Disaster medical response
- Quality improvement

Kern County spent most of 2023 evaluating and making significant changes to our system because of the lingering effects of COVID-19. While various outside forces have impacted Kern, we have continued ensuring high-quality emergency medical care delivery to those accessing the EMS system through 911 or the safety net of EMS providers, hospital emergency departments, and specialty care centers identified in this plan.

The changes made following the evaluation brought about significant improvements in the EMS system. Several components of the EMS system remain target areas and opportunities for system improvements. The goals and objectives listed in the Plan identify the areas system stakeholders agree to focus improvement activities for the coming year.

Accomplishments Since Our Last Report

1. In 2023, Kern County EMS completed a comprehensive review of Emergency Medical Dispatch Code response which led to the downgrading of 89 responses from lights and sirens to no lights and sirens along with upgrading 27 response codes to lights and sirens from no lights and sirens.

2. The County oversaw the introduction of rapid response vehicles into the system. While providing the same level of response to 911 calls, this change to the system resulted in improved response times along with improved return to service times for ALS units in the system.

3. Working with FirstWatch and ReddiNet , EMS developed a redirect system that automatically redirects ambulances from Hospitals that are showing specific signs of increasingly delayed patient offload times. Additionally, this system also allows for the hospital staff to time stamp when the patient transfer of care occurred.

4. EMS hosted a mandatory, systemwide, paramedic update training. This training updated all paramedics operating within the county on all local policies, procedures and protocols assuring they were all operating at current best practice levels.

5. EMS worked with our providers in an effort to increase the use of Tele911 to prevent unnecessary transports to already overloaded hospitals.

6. Kern County EMS participated in 2 events designed to attract people to the field of prehospital medicine. In April, EMS worked with Bakersfield College on their Public Safety Open House. And in August, EMS hosted a job fair in response to a grand jury recommendation.

7. Working with Kern County Public Health and the county Emergency Operations Center, we monitored water levels in our Kern River and surrounding areas due to massive runoff from the snowpack. We worked with 2 large medical facilities that were in danger of flooding should the water crest the riverbank.

8. Kern County EMS secured funding to purchase some large items for county emergency preparedness. This included 2 100kw generators and a mobile command unit that will be deployed to incident locations and large events.

Medical Disaster Planning and Response

Health and Safety Code 1797.152, &1797.153, Kern County EMS supports the 17 MHOAC functions during a medical/health emergency and/or disaster response. Kern county has the capability to support the MHOAC functions at the local, regional, state, and federal response levels.

The MHOAC program is maintained through plan development, training, and exercises that is supported and coordinated by the RDMHC/S program, Local Healthcare Coalition, Federal Hospital Preparedness Program Grant, and Local Public Health Preparedness Department. Through these programs, Kern is represented on several committees that includes Public Health, Behavioral Health, Department of Emergency Management (OES), local Law/Fire/EMS departments, and regional partners. Disaster and preparedness plans are developed in coordination with KCEMS through representation on the forementioned committees.

Notification, Activation, and Response is supported/accomplished through a MHOAC/EMS duty officer program that can be activated by contacting 661-379-0885. KCEMS acknowledges that the EMS Administrator, Jeff Fariss, and the Public Health Officer, Kris Lyon, as the official MHOAC representatives and support their respective designees to carry out the functions of the MHOAC program.

Information sharing during an emergency/disaster response to local, regional, state, and federal entities follows SEMS and NIMS.

1. KCEMS staffed the EOC and DOC as the MHOAC, ensuring all medical and public health considerations were addressed and coordinated with system stakeholders.
2. KCEMS responded to the COVID-19 pandemic with all staff engaged in response activities.
3. KCEMS completes a Hazard Vulnerability Assessment identifying the top 20 hazards for the region.
4. KCEMS maintains preparedness continuity in Kern County through trainings and exercises with healthcare partners.
5. KCEMS meets regularly with Kern County’ Office of Emergency Management to mitigate, coordinate, and plan for future response needs.
6. KCEMS maintains healthcare alert and warning systems that is tested monthly to ensure operability across the healthcare system.

Goals and Objectives

The Goals and Objectives listed below will guide KCEMS in monitoring and improving the EMS system over the next year. A highlight of the primary objectives of the Kern County EMS System Plan include:

1. Implement clinical performance standards and measures as part of Kern County's EOA ambulance agreements.

2. Provide an opportunity for all system providers to utilize the clinical performance standards and measures as developed for EOA 1 as part of their own CQI program.

3. Identify opportunities to expand ALS service in Kern County where appropriate.

4. Implementation of incident-specific response protocols with EMD centers and EMS responders based on 2-year data review.

5. Utilize data tools (FirstWatch) to provide enhanced and transparent system performance reporting.

6. Revise and update EMT and Paramedic field treatment protocols through stakeholder input process as necessary to meet the operational and clinical needs of the system.

7. Identify sustainable funding for KCEMS to ensure adequate staffing to accomplish all EMS Agency requirements and system enhancements identified through the comprehensive stakeholder input process.

8. Continue to support and encourage stakeholder engagement and input in the EMS system.

System Assessment Narrative

1. EMS System Organization and Management

A. KCEMS is compliant with all State statutes, regulations and local laws that govern emergency medical service systems.

B. KCEMS has a qualified emergency physician under contract as the EMS Medical Director who authorizes the clinical practice of EMS personnel and has established standards of care through policies, procedures and provides oversight through the CQI process.

C. KCEMS has qualified staff to ensure the ongoing oversight of the EMS system. KCEMS continues to identify resources required to maintain and increase staffing level to provide the appropriate system coordination, oversight, and opportunities for system enhancements.

D. KCEMS has established a fee schedule approved by the Board of Supervisors for Kern County. This fee schedule includes EMT certifications and accreditations, paramedic accreditation, MICN accreditations, and EMD accreditations, hospital-based designations and receiving and specialty care centers.

E. KCEMS provides staff support for various EMS committees to promote active provider participation and coordinate Emergency Medical Care Committee's.

F. Policy and Procedure manuals are updated through an internal process to meet the needs of the system.

2. Staffing and Training

A. KCEMS Medical Director authorizes EMS personnel to operate within Kern County. This authorization is based on EMS personnel successfully completing all training requirements and following established KCEMS policies, procedures, and treatment protocols.

B. KCEMS has processes in place to collect and submit fees established by California EMS Authority (EMSA) to support the EMS Personnel registry. KCEMS submits all EMS personnel data into the EMSA EMS Registry system. Up to date information regarding KCEMS system personnel can be found on the state's registry. This includes the number of certified EMTs, accredited paramedics, and any action taken

on certification and accreditation.

C. KCEMS follows state requirements for the oversight of EMS Continuing Education providers within the LEMSA jurisdiction.

3. Communication

A. KCEMS has one approved 911 receiving Emergency Medical Dispatch Center, ECC, that utilizes EMD protocols approved by the KCEMS EMS Medical Director. KCEMS also has one approved Ambulance Dispatch Center (OCD), operated by Hall Ambulance Service. Both EMD centers use the I A E D . Medical Priority Dispatch System that has been approved by KCEMS and is compliant with Health and Safety Codes 1797.223 and 1798.8 and California Code of Regulations ("CCR") 100170.

B. Radio communications systems are operational in Kern County and provide for two-way communication between dispatch to field providers and field providers to hospitals. This includes aircraft providers as we are in compliance with Title 22 Article 5. § 100306.

4. Response and Transportation

A. KCEMS has established response time requirements for system Contracted providers.

B. Policies and procedures are in place to review and monitor response time compliance.

C. Contracts are in place with exclusive operating providers established through the statutory requirement of HSC, 1797.224.

D. KCEMS has a process in place to authorize EMS air transport providers.

E. Policies to direct ambulance transport destination are in place.

F. KCEMS complies with EMSA's requirement to submit all response and transport data into the California EMS Information System (CEMSIS) database.

5. Facilities and Critical Care

A. KCEMS has established eight base hospitals to provide medical guidance to field

providers. The base hospitals are actively involved in quality improvement activities and support the KCEMS system in the provision of day-to-day system oversight and medical control.

B. The Trauma Care system in KCEMS system is designed to ensure severely injured patients have access to coordinated comprehensive trauma and critical care services. KCEMS has designated one level II Trauma Center and one level IV Trauma Centers following State regulatory requirements and ACS guidelines.

C. The regions Trauma Centers submit trauma data through Get With the Guidelines which is then sent to CEMSIS.

D. KCEMS continues to evaluate the care provided to trauma patients originating in Kern County across the continuum via the various quality care committees, routinely evaluating trauma care policies, procedures, and trauma volume to ensure processes are current and reflect the needs of KCEMS system.

E. The goal of the STEMI program developed by KCEMS, is to ensure early recognition and transport to a hospital capable of performing percutaneous coronary intervention (PCI) in a timely manner. There are three designated STEMI centers in Kern County. Policies and procedures for early recognition and identification have been established and CQI processes are in place for all levels of providers and coordinated by KCEMS staff.

F. KCEMS has designated seven (7) primary stroke centers. KCEMS has policies and procedures in place for early recognition and identification of stroke and CQI processes are in place for all levels of providers coordinated by KCEMS staff.

G. Get with The Guidelines is also the system used to collect data on STEMI and Stroke programs.

H. KCEMS has 5 pediatric receiving centers which includes 2 advanced, 2 general and 1 basic. Memorial Hospital has its own pediatric emergency room and Kerns only picu.

I. KCEMS works with area hospitals to ensure every hospital is capable of receiving pediatric patients.

J. The Richie Fund provides KCEMS with the resources to support hospitals with pediatric equipment.

K. KCEMS has 1 Burn Receiving Center.

6. Data Collection and System Evaluation

A. California Health and Safety Code 1797.227 requires all emergency medical care providers to collect and submit data to the local EMS Agency. KCEMS has implemented ImageTrend as the EMS patient care record and made the system available to all EMS providers in the county at no cost.

B. KCEMS submits data to CEMSIS and participates in the EMSA Core Measures program.

C. KCEMS participates in the Cardiac Arrest Registry to Enhance Survival (CARES) program and works with their providers to gather all required data for submission.

D. KCEMS has established the Emergency Medical Care Advisory Board (EMCAB), which has broad systemwide participation from all areas of the county including, The Kern County Board of Supervisors, Kern County Hospital Administrators, Kern County Ambulance Association, Kern County Fire Chiefs Association, Kern County Police Chiefs Association, Kern County Medical Society, Kern Mayors and City Managers Group, City Selection Committee, Urban and Rural Consumer, and the Kern County Medical Director.

E. EMCAB meetings operate with staff support from KCEMS and the KCEMS Medical Director. The EMS Agency Medical Director actively participates in all KCEMS medical oversight.

F. EMCAB is in compliance with (Health and Safety Code, Article 3, Section 17973274 and 1797.276), and maintains an advisory role between the Board of Supervisors and KCEMS.

7. Public Information and Education

A. Prevention of illness and injury strategies are key components and have the greatest impact in reducing mortality and morbidity. KCEMS works closely with hospitals, EMS providers, the Kern County Public Health department, as well as other county agencies and community organizations to coordinate injury and illness prevention

programs throughout Kern County. These activities include:

- Placement of public access Automatic external defibrillators (AED)
- Hands-only CPR classes
- Opioid overdose recognition and care
- Stop the Bleed classes
- Public education activities include but are not limited to fall prevention, knowing the signs and symptoms of cardiac events and strokes, when and how to access 911.

8. Disaster Medical Response

A. KCEMS has primary responsibility for the Medical Health Operational Area Coordination (MHOAC) functions and works in tandem with the County Public Health Officer to ensure all 17 MHOAC functions identified in Health & Safety Code 1797.153, are accomplished.

B. KCEMS has plans and procedures and has exercised these plans during the various local disasters. The plans address:

- Assessment of immediate medical needs
- Coordination of disaster medical and health resources
- Coordination of patient distribution and medical evaluations
- Coordination with inpatient and emergency care providers
- Coordination of out-of-hospital medical care providers
- Coordination and integration with fire agency personnel, resources, and prehospital medical services
- Coordination of providers of non-fire-based prehospital emergency medical services
- Coordination of the establishment of temporary field treatment sites

C. KCEMS has updated their MCI plan considering the lessons learned responding to recent fires and the pandemic. The plan is exercised with system stakeholders to ensure all providers understand the plan, when to activate it and their role and responsibility within the plan.

D. KCEMS works closely with the Office of Emergency Services in Kern County and KCEMS staff are trained in ICS and are compliant with all county training requirements to operate with the emergency operation center and or the department operations center.

Summary of System Status: 2023

This section provides a summary of how the Kern County Emergency Medical Services System meets the State of California's EMS Systems Standards and Guidelines. An "x" placed in the first column indicates that the current system does not meet the State's minimum standard. An "x" placed in the second or third column indicates that the system meets either the minimum or recommended standard. An "x" is placed in one of the last two columns to indicate the time frame the agency has established for either meeting the standard or revising the status. A complete narrative description of each standard along with the objective for establishing compliance is included in the System Needs and Plan Objectives Section of this plan.

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

1.23 Interfacility Transferer		x	n/a		
Enhanced Level: Advanced Life Support:					
1.24 ALS Systems		x	x		
1.25 On-Line Medical Direction		x	x		
Enhanced Level: Trauma Care System:					
1.26 Trauma System Plan		x	n/a		
Enhanced Level: Pediatric Emergency Medical and Critical Care System:					
1.27 Pediatric System Plan		x	n/a	x	
Enhanced Level: Exclusive Operating Areas:					
1.28 EOA Plan		x	n/a	x	

KCEMS System Assessment Table

A. STAFFING/TRAINING

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short- range plan	Long-range plan
Local EMS Agency:					
2.01 Assessment of Needs		x	n/a	x	x
2.02 Approval of Training		x	n/a		
2.03 Personnel		x	n/a	x	
Dispatchers:					
2.04 Dispatch Training		x	x	x	x
First Responders (non-transporting):					
2.05 First Responder Training		x	x		
2.06 Response		x	n/a		
2.07 Medical Control		x	n/a		
Transporting Personnel:					
2.08 EMT-I Training		x	x		
Hospital:					
2.09 CPR Training		x	n/a		

2.10 Advanced Life Support		x	x		
Enhanced Level: Advanced Life Support:					
2.11 Accreditation Process		x	n/a		
2.12 Early Defibrillation		x	n/a		
2.13 Base Hospital Personnel		x	n/a		

B. COMMUNICATIONS

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

C. RESPONSE/TRANSPORTATION

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
4.01 Service Area Boundaries		x	x	x	x
4.02 Monitoring		x	x	x	
4.03 Classifying Medical Requests		x	n/a	x	
4.04 Prescheduled Responses		x	n/a		
4.05 Response Time		x	x		
4.06 Staffing		x	n/a		
4.07 First Responder Agencies		x	n/a		
4.08 Medical & Rescue Aircraftt		x	n/a		
4.09 Air Dispatch Center		x	n/a		
4.10 Aircraftt Availability		x	n/a		
4.11 Specialty Vehicles		x	x		
4.12 Disaster Response		x	n/a		
4.13 Intercounty Response		x	x		
4.14 Incident Command System		x	n/a		
4.15 MCI Plans		x	n/a		
Enhanced Level: Advanced Life Support:					
4.16 ALS Staffing		x	x		
4.17 ALS Equipment		x	n/a		
Enhanced Level: Ambulance Regulation:					
4.18 Compliance		x	n/a		
Enhanced Level: Exclusive Operating Permits:					
4.19 Transportation Plan		x	n/a	x	
4.20 “Grandfathering”		x	n/a		

4.21 Compliance		x	n/a	x	
4.22 Evaluation		x	n/a	x	

D. FACILITIES/CRITICAL CARE

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

F. DATA COLLECTION/SYSTEM EVALUATION

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

G. PUBLIC INFORMATION AND EDUCATION

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

H. DISASTER MEDICAL RESPONSE

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

Enhanced Level: Advanced Life Support:					
8.17 ALS Policies		x	n/a		x
Specialty Care Systems:					
8.18 Specialty Center Roles		x	n/a		
Enhanced Level: Exclusive Operating Areas/Ambulance Regulations:					
8.19 Waving Exclusivity		x	n/a		

System Operations and Management

County: **Kern**

Reporting Year: **2023**

1. Percentage of population served by each level of care in the county:

Level of Care	Kern
Basic Life Support (BLS)	30%
Advanced Life Support (ALS)	70%

2. Type of agency:

☒Public Health Department
☐County Health Services Agency
☐Other (non-health) County Department
☐Joint Powers Agency
☐Private Non-Profit Entity
☐Other: ______________________________

3. The person responsible for day-to-day activities of the EMS agency reports to:

☒Public Health Director
☐ Health Services Agency Director/ Administrator
☐Board of Directors
☐Other: ______________________________

4. Indicate the non-required functions which are performed by the agency:

☒ Implementation of exclusive operating areas (ambulance franchising)

☒ Designation of trauma centers/trauma care system planning

☒ Designation/approval of pediatric facilities

☒ Designation of STEMI centers

☒ Designation of stroke centers

☒Designation of other critical care centers

☒ Development of transfer agreements

☒ Enforcement of local ambulance ordinance

☒ Enforcement of ambulance service contracts

☐ Operation of ambulance service

☒ Continuing education

☒ Personnel training

☒ Operation of oversight of EMS dispatch center

☐ Non-medical disaster planning

☒ Administration of EMS Maddy and Richie Fund

☐ Other: ___________________________

5. KCEMS Budget

	Expenses
Salaries and Benefits	$ 1,159,446.00
Services and Supplies	$ 794,581.14
Indirect	$ 289,861.50
Total Program Costs	$ 2,243,888.64

6. Fee Structure

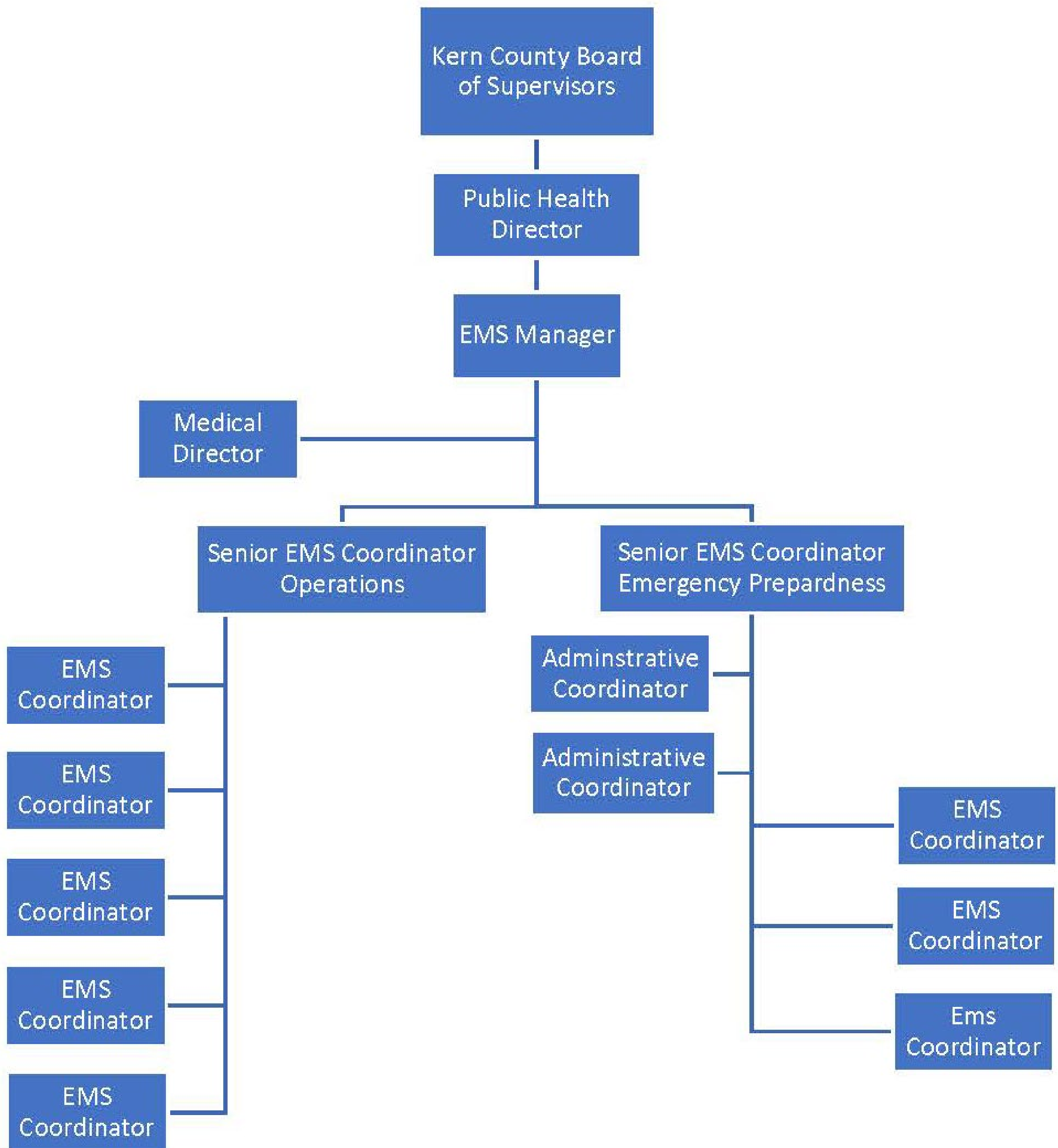
	Amount
EMS dispatcher certification	$111
EMT certification	$111 + state
EMT recertification	$111 + state
Paramedic Accreditation	$111
Mobile Intensive Care Nurse (MICN) certification	$111
MICN recertification	$111
Designation Application + 1st Year	$27,737
Trauma center designation Level II	$140,113
Trauma center designation Level IV	$21,433
STEMI center designation	$21,433

Stroke Center designation	$21,433
Pediatric facility designation	$21,433
Burn Designation	$21,433
Ambulance Contract EOA 1 – Wasco/Lost Hills	$22,189
Ambulance Contract EOA 2 – Shafter/Buttonwillow	$22,189
Ambulance Contract EOA 3 – Delano/McFarland	$22,189
Ambulance Contract EOA 4 – Bakersfield	$22,189
Ambulance Contract EOA 6 – Lake Isabella/Kernville	$22,189
Ambulance Contract EOA 7 – Ridgecrest	$22,189
Ambulance Contract EOA 8 – Pine Mountain Club/Frazier	$22,189
Ambulance Contract EOA 9 – Taft/Maricopa/McKittrick	$22,189
Ambulance Contract EOA 11 – Mojave/California City/North	$22,189

7. KCEMS Staff Positions

Category	Actual Title	FTE Positions	Top Salary by hourly	Benefits (%of Salary)	Comments
EMS Admin/Coord. /Director	EMS Program Manager	1	51.31938	85.90%	
Asst. Admin/Admin Asst/Admin Mgr.	Senior EMS Coordinator	2	41.59775	85.90%	
ALS Coord/Field Coord/Training Coord	EMS Coordinator	9	37.64875	85.90%	2 assigned to RDMHS Region V duties
Medical Director	EMS Medical Director	1	$100,000/year	N/A	Contract position without benefits
Disaster Medical Planner	Admin Coordinator	2	31.14863	85.90%	

Kern County EMS Agency



Communications

County: **Kern**

Reporting Year: **2023**

1. Number of primary Public Service Answering Points (PSAP)	9
2. Number of secondary PSAPs	1
3. Number of dispatch centers directly dispatching ambulances	1
4. Number of EMS dispatch agencies utilizing EMD guidelines	2
5. Number of designated dispatch centers for EMS Aircraft	1
6. Who is your primary dispatch agency for day-to-day emergencies?	ECC
7. Who is your primary dispatch agency for a disaster?	ECC
8. Do you have an operational area disaster communication system?	Yes
a. Radio primary frequency:	462.9500/467.9500
b. Other methods:	Med Channels, Cell, Reddinet
c. Can all medical response units communicate on the same disaster communications system?	Yes
d. Do you participate in the Operational Area Satellite Information System (OASIS)?	Yes
e. Do you have a plan to utilize the Radio Amateur Civil Emergency Services (RACES) as a back-up communication system?	Yes
f. Within operational area, region, and the State	Yes

Response Time Requirements

Reporting Year: **2023**

Response Time Requirements

Response Priority Code	Response Time Definition	EMD Response Level	Minimum Time Compliance Standard	Time Zone (minutes)	Response Mode
1	**Life-Threatening Pre-hospital Emergencies** – All prehospital life-threatening emergency requests, as determined by the dispatcher in strict accordance with Program authorized EMD protocol.	As specified by the Program	Not less than ninety percent (90%) per month by EOA.	Closest ALS Metro – 8 Urban – 15 Suburban – 25 Rural – 50 Wilderness – 75	Hot, Code-3
2	**Time-sensitive Pre-hospital Emergencies** – All prehospital non-life-threatening emergency requests, including emergency standby requests, as determined by the dispatcher in strict accordance with Program authorized EMD protocol.	As specified by the Program	Not less than ninety percent (90%) per month, by EOA	Closest ALS Metro – 10 Urban – 15 Suburban – 25 Rural – 50 Wilderness – 75	Hot, Code-3
C3AF	**Urgent Pre-hospital** – Emergency medical call where ambulance provider takes immediate steps to dispatch a response, as determined by the dispatcher in strict accordance with Program authorized EMD protocol. These include public safety standby requests.	As specified by the Program Committed ALS/Fire		Closest ALS Metro – 15 Urban – 25 Suburban – 30 Rural – 50 Wilderness – 75	Cold, Committed Code-2
C3A	**Time-sensitive Interfacility Emergencies** – medically necessary requests from an acute care hospital for a hot response for an emergency interfacility transfer	All acute care hospital emergency transfer requests for hot response		Closest ALS Metro – 15 Urban – 25 Suburban – 30 Rural – 50 Wilderness – 75	Cold, Committed Code-2
C3B	**Urgent Pre-hospital** – Emergency medical call where ambulance provider takes immediate steps to dispatch a response, as determined by the dispatcher in strict accordance with Program authorized EMD protocol. These include public safety standby requests.	As specified by the Program Committed BLS Only		Closest BLS Metro – 15 Urban – 25 Suburban – 30 Rural – 50 Wilderness – 75	Cold, Committed Code-2
3	**Urgent Pre-hospital** – Emergency medical call where ambulance provider takes immediate steps to dispatch a response, as determined by the dispatcher in strict accordance with Program authorized EMD protocol. These include public safety standby requests.	As specified by the Program		Metro – 20 Urban – 25 Suburban – 30 Rural – 50 Wilderness – 75	Cold, Code-2

5	**Urgent Interfacility -** medically necessary requests from an acute care hospital for an emergency interfacility transfer, based on patient acuity/condition.	All acute care hospital urgent transfer requests for cold response		Metro – 60 Urban – 60 Suburban – 60 Rural – 60 Wilderness – 75	Cold, Code-2
6	**Scheduled Transfer or Long-Distance Transfer** – All prescheduled patient transfer requests, including long distance transfer requests, as requested by caller.	4-hour advanced notification to ambulance provider is required		On-Time, as mutually agreed	Cold, Code-2
7	**Unscheduled Transfer** – All non-emergency patient transfers, as requested by the caller. These may include transfer directly off- the-floor to SNF, home, etc.	Non-emergency transfers **not** scheduled 4 hours in advance		On-Time, as mutually agreed	Cold, Code-2
8	**Special Event Stand-by** – paid special event stand-by requests	24-hour advanced notification to ambulance provider is required		On-Time, as mutually agreed	Cold, Code-2
9	**Miscellaneous – ambulance responses that are requests for service outside Kern County (Mutual Aid)**	N/A	N/A	N/A	N/A
10	**Any response to "stage"**	N/A	N/A	N/A	Cold, Code 2 unless scene is declared safe, and a request is made to upgrade

Kern County EMS has established various response times based on a study of the previous two (2) years data utilizing Kern County approved EMD Codes. In addition, KCEMS used local policies and population density based on State recommendations, that best meet the needs of the communities served. The table above represents the majority of the population served within the KCEMS system.

Facilities and Critical Care

Reporting Year: **2023**

Kern County has ten (10) hospitals, eight (8) are designated as base hospitals providing medical direction to EMS in the field. KCEMS has written agreements with all hospitals and all hospital specialty care data is uploaded to the CEMSIS database.

Hospitals	Emergency Department Level	Base Hospital	Burn Center	Pediatric Critical Care	Trauma Center	STEMI Center	Stroke Center
Adventist Health Bakersfield 2615 Eye Street Bakersfield, CA 93303 661-395-3000	Basic	X		EDAP2		X	X
Adventist Health Tehachapi Valley 115 W. “E” Street Tehachapi, CA 93581 661-822-3241	Basic						
Adventist Health Delano 1401 Garces Hwy. Delano, CA 93216 661-725-4800	Basic	X		EDAP2			X
Bakersfield Heart Hospital 3001 Select Ave. Bakersfield, CA 93308 661-316-6000	Basic	X				X	
Bakersfield Memorial Hospital 420 34th Street Bakerfield, CA 93303 661-327-4647	Basic	X	X	EDAP2 PICU3		X	X
Kern Medical 1830 Flower Street Bakersfield, CA 93306 661-326-1000	Basic	X		EDAP2	X Level II		X
Kern Valley Healthcare District 6412 Laurel Ave. Lake Isabella, CA 93240 760-379-2681	Standby						

Mercy Hospital 2215 Truxtun Ave. Bakersfield, CA 93301 661-632-5000	Basic	X					X
Mercy Southwest Hospital 400 Old River Road Bakersfield, CA 93311 661-663-6000	Basic	X					X
Ridgecrest Regional Hospital 1081 N. China Lake Blvd Ridgecrest, CA 93555 760-446-3551	Basic	X		EDAP2	X Level IV		X

Disaster Medical

Reporting Year: **2023**

County: **Kern**

SYSTEM RESOURCES

1. **Casualty Collection Points (CCP)**
   a. Where are your CCPs located? — Veterans' buildings and schools.
   b. How are they staffed? — MRC, Red Cross, PH and EMS
   c. Do you have a supply system for supporting them 72-hours? — Yes

2. **CISD**
   a. Do you have a CISD provider with 24-hour capability? — Yes

3. **Medical Response Team**
   a. Do you have any team medical response capability? — Yes
   b. For each team, are they incorporated into your local response plan? — Yes
   c. Are they available for statewide response? — Yes
   d. Are they part of a formal out-of-state response system? — Yes

4. **Hazardous Materials**
   a. Do you have any HazMat trained medical response teams? — Yes
   b. At what HazMat level are they? — n/a
   c. Do you have the ability to do decontamination in an emergency room? — Yes
   d. Do you have the ability to do decontamination in the field? — Yes

OPERATIONS

	Question	Answer
1.	Are you using a Standardized Emergency Management System (SEMS) that incorporated a form of Incident Command System (ICS) structure?	Yes
2.	What is the maximum number of local jurisdictions EOC's you will need to interact with in a disaster?	10
3.	Have you tested your MCI Plan this year in a:	
	a. exercise?	Yes
	b. real event?	Yes
4.	List all counties with which you have a written medical mutual aid agreement.	Region V
5.	Do you have formal agreements with hospitals in your operational area to participate in disaster planning and response?	Yes
6.	Do you have a formal agreement(s) with community clinics in your operational areas to participate in disaster planning and response?	Yes
7.	Are you part of a multi-county EMS system for disaster response?	Yes
8.	Are you a separate department or agency?	No
9.	If not, to whom do you report?	Public Health
10.	If your agency is not in the Health Department, do you have a plan to coordinate public health and environmental health issues with the Health Department?	n/a

Resource Directory

Approved Training Programs

Reporting Year: **2023**

County: **Kern**

KCEMS approved and certified through 2026.

Training Institution	Mobile Intensive Care Nurse	Emergency Medical Technician	Paramedic
Bakersfield College 1801 Panorama Drive Bakersfield, CA 93305 661-395-4284		X	X

Cerro Coso Community College 3000 College Heights Blvd Ridgecrest CA93555 760-375-5001		X	
Taft College 29 Cougar Court Taft, CA 93268 661-496-9063		X	
Kern County EMS 1800 Mount Vernon Ave., Bakersfield, CA 93306 661-321-3000	X		

Dispatch Agencies

Reporting Year: **2023**

Agency	EMD Trained Personnel	Public/Private	Written Contract with KCEMS
Emergency Communications Center (ECC) 2601 Panorama Drive Bakersfield, CA 93305 661-861-2521	18	Fire	NO
Hall Ambulance Service Inc. (OCD) 2001 21st Street Bakersfield, CA 93301 661-322-8741	22	Private	YES

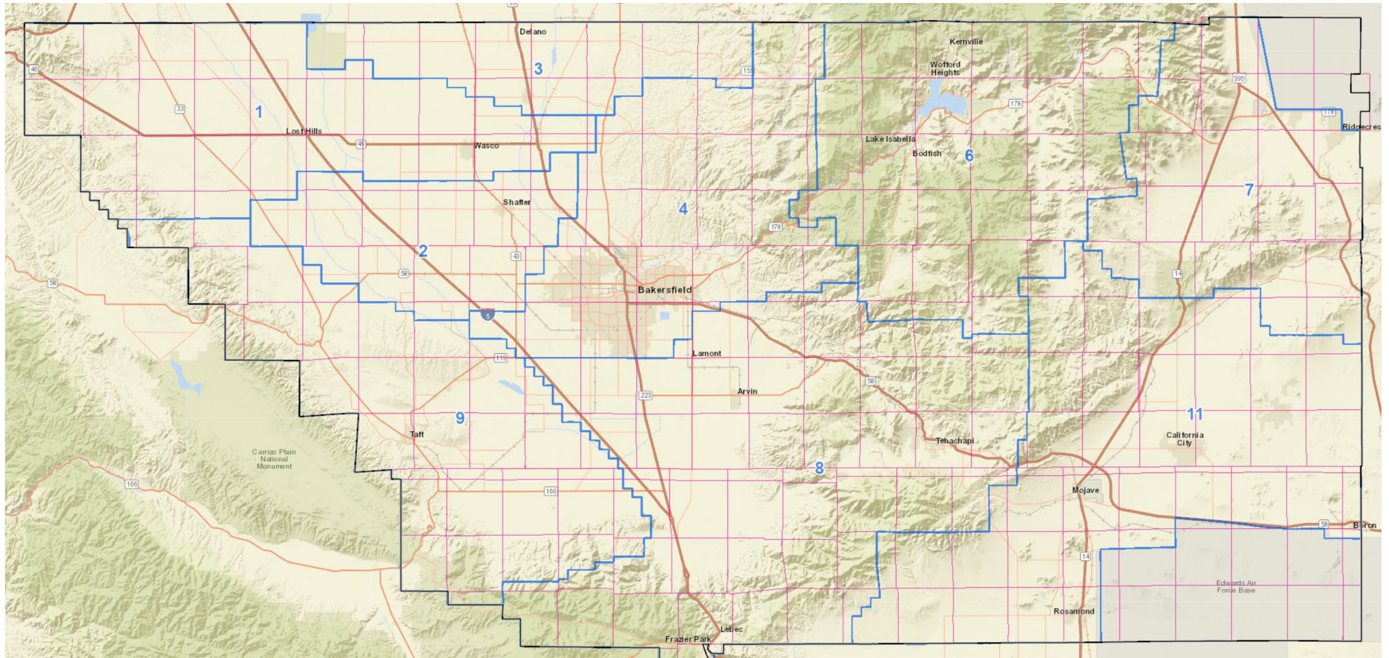
EMS Providers

Reporting Year: **2023**

As reported in CEMSIS Data Base

Agency Name	Agency Organizational Type	Level	Non-Transporting	Transporting	24 Hour	Agreement
Bakersfield Fire Department 2101 H Street Bakersfield, CA 93301 661-326-3941	Public	ALS/ BLS	X		Yes	Yes
RioTinto(Borax) Ambulance Service 14468 Borax Road Boron, CA 93516 760-762-7616	Private	ALS	X		No	No
California City Fire Department 20890 Hacienda Blvd California City, CA 93505 760-373-4841	Public	ALS	X		Yes	Yes
US Air Force, Edwards Base 30 Hospital Road Edwards, CA 93524 661-277-2330	Public	ALS		X	Yes	No
Hall Ambulance Service Inc. 1001 21st Street Bakersfield, CA 93301 661-332-8741	Private	ALS/ BLS		X	Yes	Yes
Kern County Fire Department 5642 Victor Street Bakersfield, CA 93308 661-391-7000	Public	ALS/ BLS	X		Yes	Yes
Liberty Ambulance Service 1325 W. Ridgecrest Blvd Ridgecrest, CA 93555 760-375-6565	Private	ALS		X	Yes	Yes
Mercy Air 1670 Miro Way Rialto, CA 92376 909-357-9006	Private	ALS		X	Yes	Yes

Kern County Ambulance Zone Map



Kern County Ambulance Zone Summary Forms

AMBULANCE ZONE SUMMARY FORM – EOA 1

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: EOA 1
Name of Current Provider(s): Hall Ambulance Service, Inc.
Area or subarea (Zone) Geographic Description: Includes communities of Wasco and Lost Hills and surrounding unincorporated areas
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive

Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7 digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service Inc., was awarded EOA 1 following a competitive bid process on February 25, 2020. County and Hall Ambulance entered into a five (5) year contract with an optional five (5) year extension.

AMBULANCE ZONE SUMMARY FORM – EOA 2

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: EOA 2
Name of Current Provider(s): Hall Ambulance Service, Inc. since 3/16/1999.
Area or subarea (Zone) Geographic Description: Includes communities of Shafter, Buttonwillow and surrounding unincorporated areas
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service, Inc. is the successor to Shafter Ambulance service which provided service to the area since 1/1/81.

AMBULANCE ZONE SUMMARY FORM – EOA 3

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: Operational Area #3
Name of Current Provider(s): Hall Ambulance Service, Inc.
Area or subarea (Zone) Geographic Description: Includes communities of Delano, McFarland, Woody and surrounding unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service, Inc. is the successor to Delano Ambulance Service who provided service to the area since 1/1/81.

AMBULANCE ZONE SUMMARY FORM – EOA 4

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: Operational Area #4
Name of Current Provider(s): Hall Ambulance Service, Inc.

Area or subarea (Zone) Geographic Description: Includes community of Bakersfield, Glennville and surrounding unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service, Inc. is the provider of service to the area since 1/1/81 without interruption.

AMBULANCE ZONE SUMMARY FORM – EOA 6

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: Operational Area #6
Name of Current Provider(s): Liberty Ambulance Service
Area or subarea (Zone) Geographic Description: Includes communities of Kernville, Lake Isabella, Wofford Heights and surrounding unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive

Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Liberty Ambulance is the successor to CARE Ambulance which provided services to the area since 1/1/80.

AMBULANCE ZONE SUMMARY FORM – EOA 7

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: Operational Area #7
Name of Current Provider(s): Liberty Ambulance Service
Area or subarea (Zone) Geographic Description: Includes communities of Ridgecrest, Inyokern and surrounding unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.

Method to achieve Exclusivity, if applicable (HS 1797.224): Liberty Ambulance Service was awarded EOA 7 following a competitive bid process on February 25, 2020. County and Liberty Ambulance entered into a five (5) years contract with an optional five (5) year extension.

AMBULANCE ZONE SUMMARY FORM – EOA 8

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: Operational Area #8
Name of Current Provider(s): Hall Ambulance Service, Inc.
Area or subarea (Zone) Geographic Description: Includes communities of Lamont, Arvin, Tehachapi, Frazier Park and surrounding unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service, Inc. provide service to the area since 1/1/81 without interruption.

AMBULANCE ZONE SUMMARY FORM – EOA 9

Local EMS Agency or County Name: Kern County EMS Agency

Area or subarea (Zone) Name or Title: Operational Area #9
Name of Current Provider(s): Hall Ambulance Service, Inc. since 3/6/1995. Purchased from Taft Ambulance
Area or subarea (Zone) Geographic Description: Includes communities of Taft, Maricopa, McKittrick and surrounding unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service, Inc. is the successor of Taft Ambulance Service which provided service to the area since 1/1/81.

AMBULANCE ZONE SUMMARY FORM – EOA 11

Local EMS Agency or County Name: Kern County EMS Agency
Area or subarea (Zone) Name or Title: Operational Area #11
Name of Current Provider(s): Hall Ambulance Service, Inc. since 1994
Area or subarea (Zone) Geographic Description: Includes communities of California City, Boron, Mojave, Rosamond and surrounding unincorporated areas.

Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance Services for 9-1-1, 7-digit, All ALS Ambulance Services, IFT, CCT, Non-Emergency, Standby Transportation only within the specified area or sub-area.
Method to achieve Exclusivity, if applicable (HS 1797.224): Hall Ambulance Service Inc., was awarded EOA 11 following a competitive bid process on August 24, 2021. County and Hall Ambulance entered in to a five (5) year contract with an optional five (5) year extension.

Kern EMS Agency Trauma System Plan 2023

Trauma System Summary

The Kern County Emergency Medical Services Agency (KCEMSA) is comprised of urban, suburban, rural, and desert environments containing a population base of approximately 913,000 people living in an 8,161 square mile area. The development of the trauma system began in 2001 to better standardize trauma system care in the Kern County EMS system.

Bakersfield – Kern Medical is a Level II trauma center located in the Metro Bakersfield Area. Kern Medical is dedicated to serving the Metro, West Kern and East Kern Areas. Kern Medical completed an ACS re-verification and was re-designated by KCEMSA in 2023.

Ridgecrest –Ridgecrest Regional Hospital is designated as Level IV Trauma Center in the city of Ridgecrest. This facility completed a Level IV Trauma Center redesignation in 2023 conducted by KCEMS Agency staff and trauma system experts from other trauma centers.

1. **Trauma Policies & Procedures** – Kern County EMS Agency Policies and

Procedures are available online to EMS responders for quick look up and reference. **4005.00 Trauma Policies and Procedures .**

Trauma Triage:

Trauma patients are identified in the prehospital setting according to KCEMSA Trauma Triage Criteria as defined in Policy 4005.00 (IV – F.)

Trauma Center Requirements:

Trauma patient destination is defined in the KCEMSA policy 4005.00 (XIV-XVII)

Trauma Center Destination Exceptions:

Trauma Center Exceptions is defined in KCEMSA Policy 4005.00 (VIII)

Prehospital Treatment Guidelines for Traumatic injuries

Treatment Guidelines for prehospital management of trauma patients can be found in KCEMSA Policies 5000 Series. Active Policies: Destination Decision, Determination of Death, 111, 113, 124, 126, 129, 204,

2. **Trauma Center Designation**

Trauma Center designation and compliance with Statute and Regulations are defined within the Trauma Center Conditions of Designation Agreements between KCEMSA and our designated centers. Copies of current agreements will be provided to the California EMS Authority and will accompany this plan.

3. **Number and Designation Level of Trauma Centers**

There are two designated Trauma Centers in the KCEMSA region.

a. Kern Medical - Level II Adult Trauma Center
b. Ridgecrest Regional Hospital - Level IV Trauma Center

4. **Trauma System Goals and Objectives**

a. **Continue to support the Regional Trauma Audit Committee**

Central California Regional Trauma Audit Committee meets on a quarterly basis with stakeholders from all counties in our region including Kern County. The mission of this committee is to optimize the quality of care and outcomes for all trauma patients and reducing injury severity and death. This committee performs confidential trauma case study, education, data analysis and regional studies. The committee provides recommendations to EMS regarding the care provided within the trauma system. The meeting agendas also consists of updates from our trauma centers as well as any updates from the EMS Agency. Progress on our current goals and CQI projects are reported on. This meeting is well attended by participants from all facilities in our region as well as surrounding LEMSAs.

A pre-TAC meeting occurs at Community Regional Medical Center, Level I Trauma Center 2-3 weeks prior to the TAC meeting. This meeting includes members of trauma services from the Trauma Centers in our region as well as Kern County EMS Agency staff. Specific cases are reviewed that vary or deviate from established standards of care and cases that have teaching value or demonstrate unusual/extraordinary management for presentation at the TAC meeting.

b. **Develop and maintain a trauma registry system to better collate, collect and review data from each trauma center.**

The Kern County EMS Agency staff will collect and maintain accurate and reliable data from all trauma centers. The data will be validated and submitted to the California Trauma Data System. The EMS Agency will provide aggregate data to other EMS committees for review and analysis. The trauma registry data will be utilized to help identify trends of injury, areas of improvement, and benchmarking to enhance the care provided to trauma patients and to direct injury prevention activities. KCEMSA hopes to be able to provide bi-directional data sharing allowing outcomes to be shared with prehospital providers as all currently utilize the ImageTrend platform.

c. **Explore and research the need for additional trauma resources in the Kern County EMS Region**

The Kern County EMS Agency requires Level II ACS verification prior to LEMSA designation. Kern Medical is in the process of preparing for an ACS reverification tentatively scheduled for some time in 2025. The Kern County EMS Agency staff is participating in planning meetings and will continue to do so throughout the entire process.

d. **Improve coordination of local trauma activities with trauma services, in adjacent counties, through involvement in CQI**

activities with our region trauma centers and trauma systems.

The Kern County EMS Agency supports and participates in the Central California Regional Trauma Coordinating Committee (RTCC) resulting in improved communication among our regional trauma centers and the EMS Agencies.

Kern County EMS Agency staff also routinely holds quarterly QI Meeting with EMS Agencies.

Kern County EMS Agency Stroke Plan 2023

Kern County EMS Agency

Kern County is comprised of the metropolitan city of Bakersfield spanning to the southern end of the central valley. Covering the southern slope of the coast ranges and East beyond the southern slope of the Sierra Nevada into the Mojave Desert, at the City of Ridgecrest. Its Northern Most City is Delano, and its Southern end extends just beyond the mountainous city of Fraizer Park. The EMS system is a blend of urban, suburban, and rural. Environments containing a population base of approximately 909,235 people living in an 8,161.42 square mile area.

Stroke System Summary

The California Emergency Medical Service Authority (EMSA) developed stroke system of care regulations for California with the goal to reduce morbidity and mortality from acute cerebrovascular accidents by improving the delivery of emergency medical care within local communities in California. KCEMSA, per Title 22, Division 9, Chapter 7.2, Article 2 § 100270.220 of the California Code of Regulations has developed a Stroke Critical Care System Plan. The primary focus of the plan is to provide guidelines to facilitate the early recognition of patients suffering from an acute stroke, and to expedite their transport to a center able to provide definitive care within an appropriate time window.

KCEMSA Stroke Critical Care System is based on current evidence-based guidelines, best of practices, and a shared commitment to excellence. A system approach to stroke care begins in the prehospital setting with rapid identification of stroke symptoms by EMS providers, continues into the Emergency Department (ED) of a stroke receiving center with rapid treatment, and throughout the patient's hospital stay and rehabilitation. Committed participation in the Stroke Quality Improvement by all stakeholders is a key component to optimizing and improving patient outcomes.

This Stroke System of Care Plan seeks to identify and promote efforts of effective communication and collaboration, provide an inclusive organized approach to identifying performance measures, and create a consistent standard of high-quality patient care and continued performance improvements.

In 2023 there were 249 Stroke related calls within Kern County. The table below identifies the primary Stroke centers in Kern County.

Hospital	Emergency Department Level	Primary Stroke Center
Adventist Health Bakersfield	Basic	YES, Advanced
Bakersfield Memorial Hospital	Basic	YES, Advanced
Kern Medical Center	Trauma	YES
Mercy Hospital	Basic	YES
Mercy Southwest Hospital	Basic	YES

Stroke Specialty Care Staff

EMS Coordinator- Anthony Dominguez

EMS Medical Director- Dr. Kris Lyon

Stroke Plan

Stroke Identification:

Stroke patients are identified in the prehospital setting according to KCEMSA Policy 4002.00 Suspected Acute Cerebrovascular Accident (Stroke). KCEMSA Policies & Procedures may be found online by going to:

https://kernpublichealth.com/wp-content/uploads/2023/09/4002.00-Stroke-System-Of-Care-Policy-2023-11-09-1.pdf

Stroke Center Point of Entry:

Stroke patient destination is defined in the KCEMSA Point of Entry Policy 4002.00.

Stroke Center Designation:

Stroke Center designation and compliance with Statute and Regulations is defined within the Receiving Hospital Agreements between KCEMSA and our facilities. Not every facility in our region is Stroke designated at this time, but all hospitals could receive stroke patients from the field via an early identification process, and administer thrombolytic therapy in a timely manner, regardless of outside accreditation. Through ImageTrend Resource Bridge, we have an immediate way for any hospital to notify the system when this ability is offline, due to CT scanner or other issues via a Stroke Bypass Alert.

Stroke System Goals and Objectives

A. Continue to lead the Stroke Quality Improvement Committee within the Kern County Stroke System.

The Stroke quality Improvement Committee meets on a quarterly basis with stakeholders from all counties in our region. Our meeting agenda consists of updates and data from our Stroke centers as well as any updates from the EMS agency. Progress on our current goals and CQI projects are reported and followed up with case review. This meeting is well attended by participants from all facilities in our region.

1) Collect data for prehospital "Stroke Alert" that supports accurate notification to a Stroke Receiving Center.

EMS personnel advanced notice to hospitals of suspected Stroke may reduce the time to receiving diagnostics and therapy upon arrival to a primary stroke center. Data will be collected annually and submitted as part of KCEMSA submittal of Core Measures.

2) Develop inter-county Stroke Center transfer agreements with neighboring EMS Agencies.

   Review and Identify Stroke patient catchment patterns and determine the flow of Stroke patients into EMSA Stroke centers and work with Counties in neighboring jurisdictions to develop memorandum of understanding to ensure access to Stroke care.

3) Work with our system partners to facilitate Stroke training and education with EMS Providers.

   Our designated Primary Stroke centers have an obligation to provide outside education and we intend to assist with that education to prehospital providers facilitating classes and connecting stroke programs with EMTs and Paramedics for updates in best practices.

4) Continue Attending the Central Valley Stroke Collab meetings.

   These meetings concur for Hospitals and EMS Agencies that serve the Central Valley, and review ways to improve patient outcomes.

Kern County EMS Agency STEMI Plan 2023

STEMI System Summary

The Kern County EMS (KCEMS) system spans a diverse range of environments, including urban, suburban, rural, mountainous, and desert areas, covering approximately 8,161 square miles and serving a population of around 909,235 residents. The most recent iteration of our STEMI system was developed in 2013. In 2023, there were 384 reported STEMI cases. Bakersfield Memorial Hospital, Adventist Health Bakersfield, and Bakersfield Heart Hospital, all located in the city of Bakersfield, are designated STEMI centers, with no additional centers designated in other areas of the County at present.

STEMI System Specialty Care Staff

- EMS Coordinator- Robert Lopez
- Medical Director- Kristopher Lyon

STEMI Identification:

STEMI patients are identified in the prehospital setting according to KCEMS Policy 5000.110 "Chest Pain or Acute Coronary Syndrome" and KCEMS Policy 5000.201 "12-Lead EKG". KCEMS Policies & Procedures are accessible online at:

EMS Policies - Kern County Public Health (kernpublichealth.com)

STEMI Center Point of Entry:

STEMI patient destination is delineated in the KCEMS Destination Decision Summary Criteria, specified in KCEMS Policy 5000.

STEMI Center Designation:

STEMI Center designation and compliance with Statute and Regulations are outlined within the STEMI system of care policy 4003. All STEMI center facilities must adhere to the policies set forth by KCEMS. Copies of current agreements can be provided upon request.

STEMI System Goals and Objectives

1) **Continue to explore ways to get more accurate information from our providers & receiving centers.**

   We observed an increase in BLS-transported STEMI patients in 2023. The accuracy of the information being reported is vital and as a result we are working with our dispatch centers to improve our EMD capture and dispatching accuracy. We have been collaborating with our receiving centers to obtain more detailed information on every STEMI patient admitted, ensuring data accuracy.

2) **Develop linkages between the prehospital data and STEMI registry data.**

   All STEMI centers in Kern County currently use nationally recognized cardiac care registries. Required quarterly data reporting from both centers is collected and reviewed by the EMS Agency. If an opportunity arises to

develop a direct link between prehospital data and STEMI data, we will explore it.

3) **Implement clinical performance standards for ALS field providers.**

Every quarter, we convene a QI meeting with all stakeholders. A dedicated segment of these meetings focuses on the STEMI system of care, highlighting the current quarterly metrics and performance standards that must be upheld by each stakeholder.

EMS Quality Improvement Program (1002.00)

I. Authority

On January 1, 2006, the California Emergency Medical Services Authority (EMSA) implemented regulations related to quality improvement for Emergency Medical Services throughout the state. Kern County Emergency Medical Services Quality Improvement Program (EQIP) satisfies the requirements of Title 22, Chapter 12, Section 4 of the California Code of Regulations.

In addition, EMSA document #166, Emergency Medical Services System Quality Improvement Program Model Guidelines provided additional information on the expectations for development and implementation of a Quality Improvement Program for the delivery of EMS for Local EMS agencies and EMS service providers. Fundamental to this process is the understanding that the program will develop over time and allows for individual variances based on available resources.

II. Mission Statement

To assure the safety and health of Kern County residents by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual quality improvement in emergency medical service care.

III. Vision Statement

The vision of the Kern County Emergency Medical Services Division (Division) is to provide structure and future growth of our emergency medical services system. All actions will be dedicated to the continued advancement of quality emergency medical services delivered in Kern County.

This will be accomplished through consistent and thorough evaluation methods and proactive functions focusing on:

- Strengthening clinical capabilities of field personnel to meet the needs of each and every patient whose care is our primary purpose and mission.
- Develop a vigorous quality improvement program that is proactive and evolves with the communities we serve.
- Capitalizing on innovative and emerging technologies.
- Strengthening collaborative relationships with public safety agencies, BLS and ALS providers, hospitals, and educational partners to better serve the health care needs of our communities.
- Improve data systems
- Forging strong partnerships with all EMS stakeholders to provide educational campaigns.
- Achieving cultural change of current interoperable communications system.
- Building continuity of operations for disaster planning, response and mitigation.

IV. Kern County EMS Quality Improvement Program (EQIP)

The Kern County EQIP is made up of the following key components:

- Core Patient Care Indicators
- Quality Review Process
- QI Agency Activity tracking

These key components in tandem with effective communication processes are mission-critical in establishing a truly integrated and effective county-wide QI program. Improvements on performance and quality issues require a comprehensive understanding of what is happening in the field, effective identification of root causes, data focused analysis and non-punitive improvement interventions. This is coupled with strategies to establish realistic and appropriate priorities for improvement. Success is dependent on promoting collaborative quality partnerships with all stakeholders throughout the EMS system.

V. Quality Improvement Defined

The County is charged by the State to approve and monitor Quality Improvement Programs. Many healthcare providers, hospitals and other facilities have in place, or are implementing, Continuous Quality Improvement (CQI) Programs. CQI is a higher, broader level of Quality Assurance. The County mandates that all EMS providers, both BLS and ALS Providers, as well as Base Hospital Providers, and specialty centers institute CQI programs within their organizations. The programs are outlined in specific policies by the County EMS Manager and are monitored by the EMS Medical Director and EMS staff.

CQI takes on the responsibility of continuously examining performance in the system to see where the personnel, system, and processes can continue to improve. The overall concept of quality improvement begins with the idea that all members of the team or system want to do well and continues with an examination of the system to determine how it can be structured to achieve this goal. The theories of CQI look at what was done and what was done right so that the members can learn from both. Positive reinforcement is of tantamount importance in a CQ Program so that trust is instilled, and fear is driven out. This applies to the Administrator of the Program to the most junior level healthcare provider.

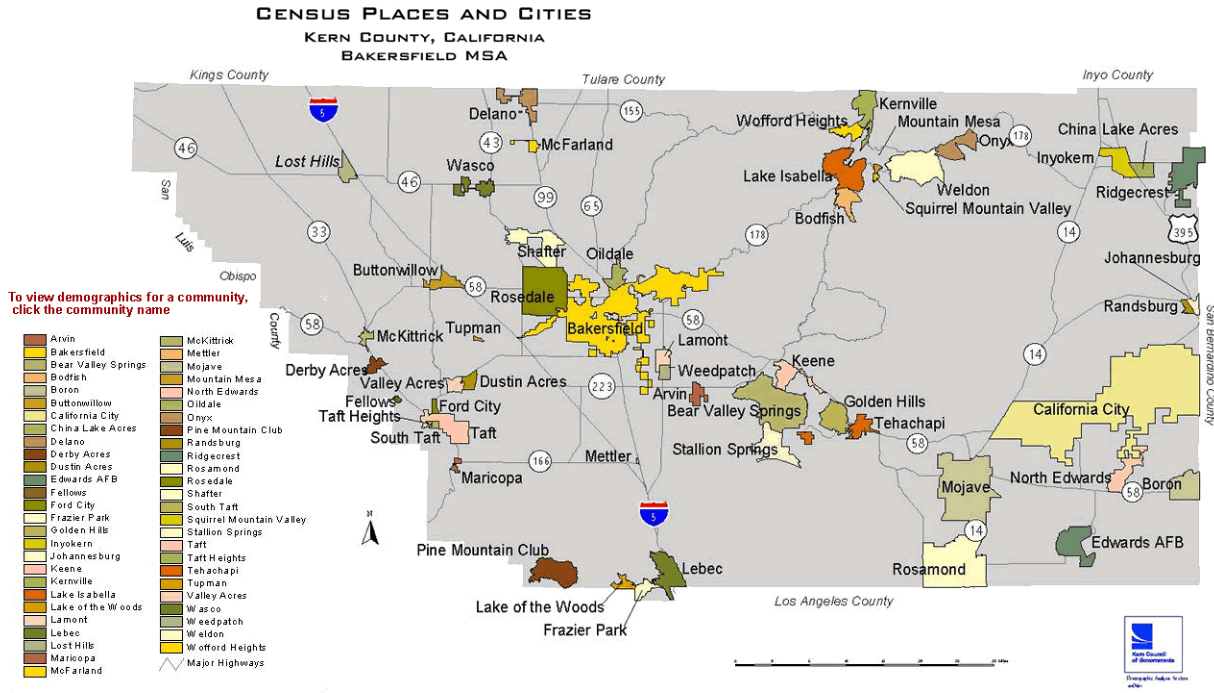
The program must define "quality" and take into consideration what is timely(mandated), efficient, and effective. We must consider all system resources, which include personnel, facilities, equipment and financing. Some of the variables of these resources include communication, topography, bureaucracy, education and expectation.

VI. Structure and Organizational Description

Kern County Demographics

Kern County is both geographically and demographically diverse. Located at the southern end of California's great Central Valley, Kern County is the gateway to Southern California, the San Joaquin Valley, the Sierra Nevada and the MojaveDesert. Encompassing 8,161 square miles, Kern County is the third largest county in California. Larger than Delaware, Rhode Island and Connecticut combined Kern County have a population of 913,090.

(https://worldpopulationreview.com/us-counties/ca/kern-county-population)



EMS Overview

The Kern County EMS System responds to approximately 130,000 calls for medical emergencies per year. Kern County's EMS System includes a variety of agencies and organizations working together to accomplish the goal of providing rapid emergency medical response and treatment. While most EMS responses are day-to-day emergencies, the Division also plans and prepares for disaster medical response. In addition, the Division is actively involved with preventative health care and managed care in the overall scope of its functions.

Kern County EMS includes:

- Emergency Medical Dispatch (EMD)
- Fire services first response and treatment
- Private ground and air ambulance response, treatment and transport
- Law enforcement agencies
- Hospitals and specialty care centers
- Training institutions and programs for EMS personnel
- Managed care organizations
- Preventative health care
- Citizen and medical advisory groups
- Public Health partners

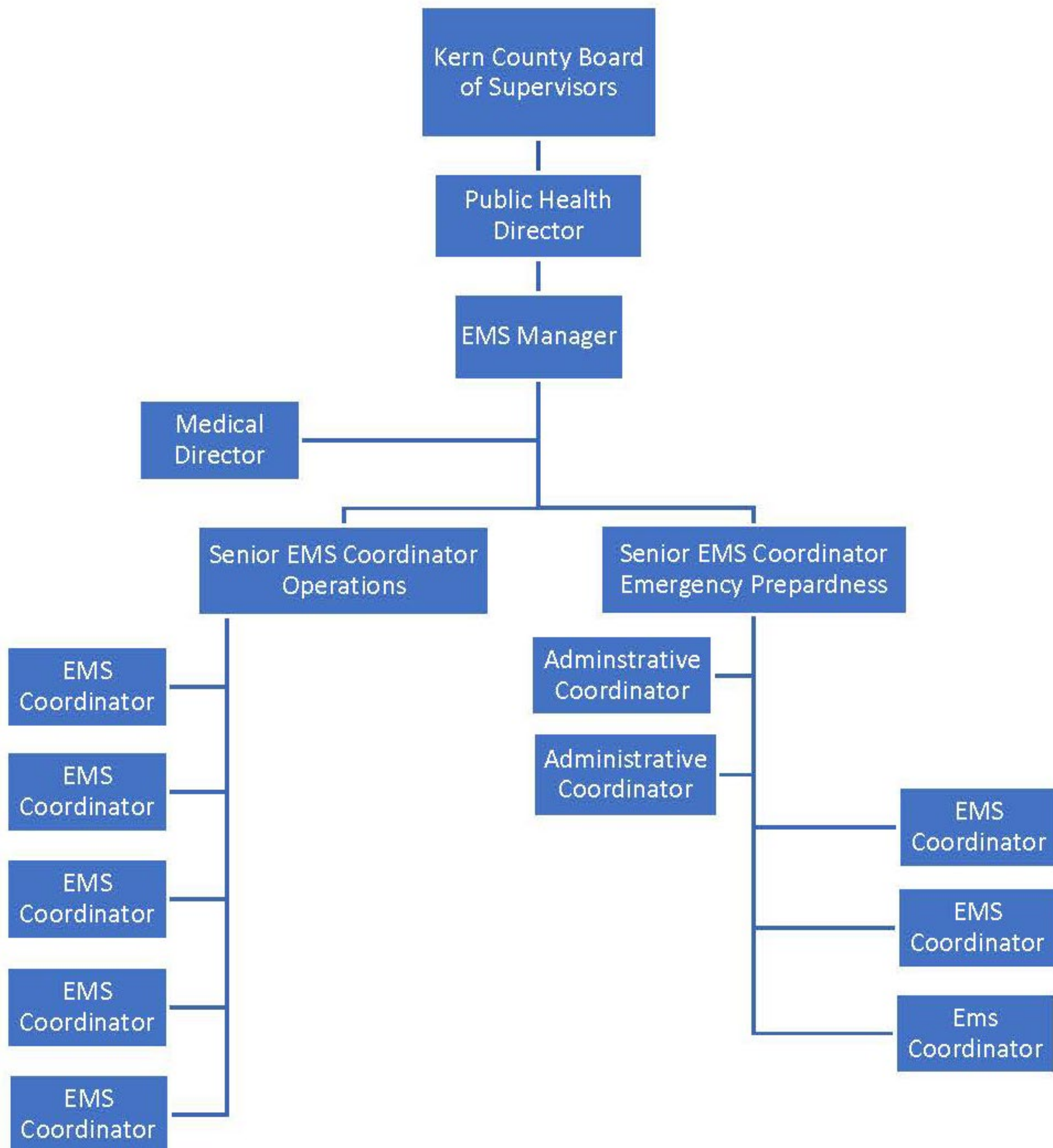
Organizational Structure

Kern County Emergency Medical Services, a division of the Kern County Public Health Department, oversees a system of services organized to provide rapid response to serious medical emergencies, including immediate medical care and patient transport to definitive care in an appropriate hospital setting. In Kern County the Board of Supervisors designated the EMS Division as the Local EMS Agency (LEMSA). The Kern County Ambulance Ordinance, which governs the ground prehospital system in the County, was adopted by the Board of Supervisors in November 1990, and became effective on February 28, 1991.

The EMS Agency Manager reports to the Director of Public Health. The Director of Public Health Reports directly to the Board of Supervisors which is comprised of five elected Supervisors, each representing a distinct area of the County.

The EMS Medical Director oversees medical components of the EMS System and is responsible for prehospital medical control within the system. This includes protocol development, policies, procedures, equipment approval, medical dispatch, base station protocols, and continuous quality performance. The Emergency Medical Care Advisory Board (EMCAB) is responsible for vetting local policies and procedures prior to implementation and acts as a sub- committee to the Board of Supervisors. EMCAB is a diverse board comprised of members representing the entire EMS system including County Police Chiefs; County Fire Chiefs; County Medical Society; Kern County Hospital Administrators; County Ambulance Association; Board of Supervisors; Medical Director of Local EMS Agency; Two City Representatives, one selected by City Selection Committee and one representative of the City Managers Association.

Organizational Structure Chart



VII. EMS Services Provided

The EMS Division provides for overall administration, direction and management of the Kern County EMS System which includes:

- Training oversight and certification/accreditation of over 2904 EMS personnel
- Medical dispatch and communications management
- Interaction with ten hospital emergency departments and specialty care centers
- Emergency medical data collection and analysis
- Promotion of public information and EMS System education
- Medical disaster preparedness, planning, response
- Kern County Health Care Coalition
- Kern County Medical Reserve Corps
- Hospital Base Station management
- Trauma system management
- STEMI system management
- Stroke system management
- Burn system management
- Emergency Medical Services for Children
- Coordination of three emergency medical transportation services and seven first responder agencies

VIII. Data Collection and Reporting

Various databases currently exist which contain data relevant to Continuous Quality Improvement (CQI) in EMS. These databases include electronic patient care reporting (ePCR), ReddiNet, Trauma One, Mission Lifeline, Get With the Guidelines: Stroke, and Compliance data. These data systems are used to evaluate performance in the following ways:

- Prospectively identify areas of potential improvement
- Answer questions about the EMS System
- Monitor changes once improvement plans are implemented
- Provide accurate information enabling data driven decisions
- Monitor individual performance within the EMS system
- Support research that will improve our system and potentially broaden EMS knowledge through publication.

Core Indicator reports, as provided by the state, have been identified and are in

various phases of development (See Table A). Data elements used to compile core indicator reports will be compliant with both CEMSIS and NEMSIS. As state reporting becomes integrated with local EMS data systems and relationships between prehospital and hospital data merge, the vision of sharing clinical and outcome information will be realized.

Such a data management system will need to be adequately supported by data and technology experts. Mechanisms for the timely data management including the rapid interpretation by CQI reviewers/evaluators are essential to the process. Resources will need to be planned and established for these systems to evolve and become further refined. The Local EMS Agency plays an important role in supporting stakeholders in their efforts to integrate electronic prehospital records into their EMS Systems

Table A

Indicator ID	Performance Measure Name	Comments
TRA-2	Measurement of trauma patients transported to a trauma center	In use
Hyp-1	Treatment administered for hypoglycemia	In use
STR-1	Prehospital screening for suspected stroke patients	In use
PED-3	Respiratory assessment for pediatric patients	In use
RST-4	911 requests for services that include a lights and/or siren response	In use
RST-5	911 requests for services that include a lights and/or siren transport	In use

IX. Evaluation of Indicators

Quality indicators are defined measurements that are part of a process. These indicators can then be used for analysis and comparison. ePCR within Kern County are NEMSIS compliant and are essential to the creation and evaluation of indicators.

These indicators are evaluated on a regular basis through various methods. ePCR review monitors a percentage of patient care reports for compliance with policies, procedures, and protocols. ReddiNet is used to monitor and report large scale incidents, extended patient offload delays, and assures that all local hospitals are updating bed availability.

The Quality Improvement Committees are used to identify indicators for review. Evidence of this can be seen in changes made to EMD codes based on data review. Specifically, using procedural data collected on low acuity calls to determine if resources are dispatched in a way that is appropriate to patient care indicators. Another example of this is with the Trauma Evaluation Committee (TEC). This QI group has conducted special studies on pain management and cervical spinal immobilization practices. The TEC uses data and research to develop indicators and evaluate the system for trends. Identification of trends can be used to evaluate or modify policies, procedures, or protocols, identify topics for review at annual update classes, and documentation errors that need correction by personnel.

In addition, Kern County uses compliance data, collected through FirstWatch as well as data submitted by each provider to assure compliance with all local contractual obligations and specialty program reporting.

The following table contains data elements evaluated monthly by the EMS Division. Each coordinator is responsible for multiple performance measures.
Each measure must be evaluated within 10 days of the end of the month. Once evaluation is complete, any deficiencies found are submitted to the provider within 15 days of the end of the month. Deficiencies must be corrected by the provider by the last day of the month.

Indicator ID	Performance Measure Name	Staff Assigned
	EMD Downgrade Investigations on all lights and siren transports generated from downgraded responses	QI Coord.
	ePCR Audits on a percentage of calls for each agency	QI Coord.
TRA-2	Measurement of trauma patients transported to a trauma center - By provider	Trauma Coord.
	Needle Thoracotomy-All Calls	Trauma Coord.
	Intraosseous Access-All Calls	Trauma Coord.
STR-1	Prehospital screening for suspected stroke patients	Stroke Coord.
PED-3	Respiratory assessment for pediatric patients- By provider	Peds Coord.
	Out-of-Hospital cardiac arrests return of spontaneous circulation- By provider	QI Coord.
	Endotracheal Intubation- By Provider	QI Coord.

AIR	End tidal CO_2 Confirmation of All Advanced Airways	QI Coord.

While the EMS Division is responsible for creating and coordinating the overall Quality Improvement Plan, each provider agency is responsible for developing their own EMS QI plan to monitor internal quality indicators and perform quality improvement activities.

For example, Field Supervisors, Quality Assurance Managers, and Training Officers perform audits of responses to monitor the quality of care provided.

It is important to note that the purpose of Quality Indicators and Activities is to improve on the things that EMS is doing well and to identify processes that require improvement. The focus of EMS performance improvement is not punitive.

Categories	Specific areas to be monitored	Requirements	Process
Personnel	EMD	Accreditation-Required NAED certification	Certification
	EMT	Certification-State requirements	Certification
	EMT Optional	Accreditation-Required for local providers: CPR Mandatory update class	Certification
	Paramedic	Accreditation- High Performance CPR PHTLS Handtevy Pass Local Exam Mandatory Update Class	Certification
	MICN	Accreditation-	Certification

		Current active RN in local ER Mandatory class/exam	
	Preceptors	Accreditation- Nomination from employer Be considered in good standing with EMS Mandatory class Pass Local exam	Certification
	EMT Training Programs	Approval- State required reporting Compliance with all regulations Site Audit	Training
	Paramedic Training Programs	Approval- State requirements CoEMSP CAAHEP Site Audit	Training
	Continuing Education Providers	Approval- Site Audit Total Courses Taught	Training
Equipment and Supplies	Radio Communications	Mandatory Channel Inventory	EMS Coordinator
	Mandatory minimum inventory requirements	Defined in specific policy Site Audit	EMS Coordinator

	Narcotic Oversight	Verification of narcotic resupply	EMS Coordinator
Documentation	Compliance Reports	Mandatory monthly compliance reports	EMS Coordinator
	ePCR mandatory elements	ePCR Policies and Procedures ePCR Audit	EMS Coordinator
Clinical Care and Patient Outcome	EMSA mandated core measures	Core Measure Reports	EMS Coordinator
	Specialty System of care QI indicators	Mandated data elements Mandated QI elements in policies	EMS Coordinator
	ePCR audit for protocol compliance	Random sampling of ePCR for adherence to protocol and procedure guidelines	EMS Coordinator

Categories	Specific areas to be monitored	Requirements	Process
	EMD Card Review	Annual review of EMD card data Response configuration	EMS Coordinator
	Research	Specialty care committees may request research into best practices	EMS Coordinator
Skills Maintenance/ Competency	EMT	State mandated skills verification sheet EMS approved signers	Certification
	EMT Optional	Required skills every two (2) years	Certification

	Paramedic	Required skills competency	Certification
	Provider Specialty programs	Mandated skills education and verification	EMS Coordinator
Transportation/ Facilities	Unusual Occurrences/MCI	On-Call availability Site Audits	EMS Coordinator
	Ambulance destination	Ambulance destination decision policies and procedures	EMS Coordinator
	Exclusive Operating Areas	Approved transport providers	EMS Coordinator
	Base Station	Contractual obligations Site Audits	EMS Coordinator
Public Education and Prevention	Specialty care centers	Policy required to provide education to public Site Audit Contractual Obligation	EMS Coordinator
Risk Management	Approved ALS Providers	Monthly reporting Contractual obligations Site audit	EMS Coordinator
	Contracts	Hospital re-designation process Annual EOA performance evaluation	EMS Coordinator
	Investigation	Investigation Policy	EMS Coordinator
	Enforcement	Health and Safety Code/Title 22 standards	EMS Coordinator

X. Quality Improvement Activities

QI activities are comprehensive in scope and encompass many strategies. They use a number of approaches and models of problem solving and analysis. These activities, while distinct, are inter-related and address clinical and system issues.

EMS QI CONTRIBUTIONS

Committees:

Kern County EMS has instituted multiple committee collaborations in specific areas to assure Quality Improvement. The following committees have at least one EMS Division representative attending and whenever possible, the EMS Medical Director as well:

- Emergency Medical Dispatch Committee (EMD)
- Trauma Evaluation Committee (TEC)
- ST Elevation Myocardial Infarction QI Committee (STEMI)
- Stroke System of Care QI Committee
- Pediatric Advisory Committee (PAC)
- Emergency Medical Care Advisory Board (EMCAB)
- EMS System Collaborative Meeting

ePCR Audit:

Each month EMS staff perform audits of electronic patient care reports (ePCR).

- Using the EMS data warehouse, EMS staff determine a population based on either the primary impression, medication, or procedure fields as it directly relates to existing protocols (i.e. chest pain, stroke, multi- system trauma, etc).
- A random statistical sample will be calculated and reviewed without replacement.
- Each sample will be compared to the associated treatment protocol algorithm.
- The sample will then be scored based on documentation and adherence to protocols.

Each month EMS Staff will perform a 100 percent audit of procedures that are considered high risk, low frequency.

- Adult endotracheal intubation (may sample)
- Cardiac Arrest
- Needle thoracotomy
- Intraosseous access
- Unified Scope of Practice Procedures
- Local Optional Scope of Practice

Quality Review Request:

In the event the EMS Division identifies an issue that would benefit from quality review, the Division may forward the information to the provider QI department for review. The provider will report to the Division the results and findings from the review.

Division approved Provider agencies may request a quality review with the Division. Requests must be in writing, with the specific reason for the request. The Division may request additional documentation, as needed.

Reaccreditation: Paramedic

Every two (2) years, upon local reaccreditation, a mandatory test must be passed with a passing grade of 80% or higher.

Paramedic Mandated Certifications:

Upon reaccreditation paramedics must be certified in all of the following:

- Cardiopulmonary Resuscitation
- HandTevy
- Pre-Hospital Trauma Life Support

Paramedic Skills Verification:

The following skills require verification:

- Thoracic Decompression
- Endotracheal Intubation
- Interosseous needle placement
- Epinephrine Drip
- Supraglottic Pediatric airway placement

Annual Update Class:

Each year EMS staff may provide a mandatory update class for all Kern County accredited emergency medical technicians and/or paramedics. This class will be held over several days and will include but is not limited to the following:

- Review of reaccreditation testing for previous year
- Update of all policies, procedures, and protocols
- Run Review
- QI Committee Data Review

Process Control:

As new processes are developed or changes made to existing processes, staff shall be assigned to identify and create measuring/monitoring systems to ensure success.

ALS/BLS PROVIDER CONTRIBUTIONS:

Prospective

- Evaluation
- New Employee
- Peer Reviews
- Direct Observation
- Skills Evaluation

Education

- Design corrective action plans for individual deficiencies
- Provide continuing education courses and skill reinforcement training for pre-hospital care personnel
- Provide education specific to issues identified in evaluation and trend analysis

Retrospective Analysis

- Develop performance standards for evaluating the quality of care delivered by the field personnel through retrospective analysis.
- Comply with reporting requirements and other quality improvement activities as specified by the EMS Division.

BASE HOSPITAL CONTRIBUTIONS:

Prospective

- Evaluation
- Develop criteria for the evaluation of individual Base Hospital personnel including, but not limited to:
  - Base Hospital documentation and tape review
  - Evaluation of new MICNs and ongoing routine evaluation of continued MICN communication with prehospital personnel
  - Compliance with routine base hospital procedures as outlined by county policies.
- Participate in EMS Peer Review committee and any QI related program as requested by the Division

Education

- Participate in certification courses, field care audits, and educational opportunities to further the knowledge of prehospital and base hospital care providers
- Establish procedures for informing Base Hospital personnel of system changes

Concurrent

- Provide online medical control for paramedics
- Develop procedures for identifying problem calls
- Appoint a quality improvement liaison to carry out CQI activities

Retrospective

- Develop a process for retrospective analysis of base direction using audio, PCR, and patient follow up.
- Perform ALS base contact call audits
- Develop performance standards for evaluating the quality of medical

direction delivered by both MICN staff and base hospital physicians through retrospective analysis
- Comply with reporting and other CQI requirements as specified by the EMS Division

II. Annual Update

The Kern County EMS Medical Director will evaluate the QI Program with the EMS staff annually. This group will ensure that the QI Plan is in alignment with our strategic goals and will review the plan to identify what did and did not work. From this information, an Annual Update will be created and will include the following:

- Indicated monitors
- Key findings and priority issues identified
- Identification of any trends
- Improvement action plans and plans for further action
- Description of any in-house policy revisions
- Description of any continuing education and skills training provided as a result of Improvement Plans
- Description of whether the goals were met and whether follow up is needed
- Description of next year's work plan based on the current year's indicator review

III. Action to Improve

Improvement can only be achieved through constant surveillance of the system and its components. The evaluation of the system as a whole is crucial to ensuring that optimal response to the sick and injured occurs when the system has been activated. Continuous Quality Improvement (CQI) provides a method for understanding the system processes and allows for their revision using data obtained from those same processes.

CQI is a dynamic process that provides critical feedback and performance data on the EMS system based on defined indicators that reflect standards in the community, state and the nation. Traditional components of the CQI process include:

- Define a problem
- Measure data to validate and quantify the problem
- Analyze the data and symptoms of the problem to determine the root cause
- Develop and implement a plan of action through education or policy/process revision

- Measure and monitor the results providing feedback
- Continuous monitoring of control system to assure compliance

CQI incorporates Quality Assurance aspects but is unique in its approach to problem analysis and problem solving.

CQI in Kern County is dynamic. Each specialty system of care, (STEMI, STROKE, TEC, EMD, PED), is supported by its own CQI committee and each committee is chaired by an EMS Coordinator. These specialty CQI committees take a technical and clinical look at system performance. These committees thoroughly evaluate the effectiveness of each respective program as well as shortfalls. These committees are considered the experts in the field. They use available data and analysis to make recommendations for change, if needed, to each respective system of care. These recommended changes are discussed with the EMS Manager. CQI reports and recommendations are taken to the EMS System Collaborative Group where the recommendations are further discussed on a broader stage.

EMS staff are responsible for overseeing all CQI activities. EMS staff will act in an advisory role in the development of QI committees, performance indicators and reports, and data evaluation. EMS staff are also responsible for preparing annual reports of Core Measures for EMSA. EMS staff, in conjunction with the EMS Medical Director and the EMS Manager, guide the CQI activities for mandated CQI programs and the EMS System as a whole.

The EMS System Collaborative meetings are held bimonthly. These meetings are open to the public. This is truly the multidisciplinary meeting for the County EMS System. All stakeholders are invited to attend. The purpose of this meeting is to evaluate and discuss changes to EMS on a system-wide scale. All CQI committees report to the EMS System Collaborative. The chairperson for each committee prepares a report of CQI activities, specialty system performance, and committee recommendations.

Based on feedback from the EMS System Collaborative, recommended changes are made to policies and then may be published for public comment.

IV. Training and Education

The provider agencies, through their internal QI process, are responsible for creating and monitoring issue resolution programs in conjunction with the EMS Medical Director, up to and including individual performance improvement plans, education and training, standardized education and if necessary, discipline.

Once a decision to take action or to solve a problem has occurred, training, and

education are critical components that need to be addressed. The need for training is presented to the provider agency and personnel from said agency work in conjunction with the QI personnel to ensure that appropriate training is presented to the pre-hospital care personnel.

To implement change, one must deliver verifiable, ongoing training that is appropriate to the skill level and service goals of the organization. The EMS Medical Director/Division can develop standardized training to be disseminated to all the provider agencies. Examples of this training include paramedic update classes held to assure that all field staff are up to date with all policies, procedures, and protocols, as well as Mobile Intensive Care Nurse updates.

The Division approves and monitors on an on-going basis EMT and Paramedic Training Programs, and Continuing Education Provider Programs. EMT and Paramedic Training Programs are approved, monitored, and managed in accordance with Title 22 regulations. Continuing Education Provider Programs are approved, monitored, and managed in accordance with Title 22 regulations and Division *Prehospital Continuing Education Policies and Procedures*. Updates are requested on a bi-annual basis with an account for the number of courses taught. Site audits are conducted on a rotating basis upon renewal for compliance with policies.

The Division conducts a MICN class quarterly for nurses seeking local accreditation. This course focuses on local policy, procedures, and protocols. An exam is given at the end of the course with a mandatory pass rate of 80%. Additionally, MICN's are required to complete a sixteen (16) hour ALS ground ambulance transport ride-along and are assigned a preceptor for responding to ALS radio call-ins and requests for medical control.

Division approved base hospitals are obligated by contract to provide education to pre-hospital providers. Typically, this education is in collaboration with an ALS provider, the Division, or non-profit organizations such as American Heart Association. Other forms of Base Hospital education include case review, base station call review, specialty system of care overview, and clinical observations.