

EMERGENCY MEDICAL SERVICES AUTHORITY

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October 16, 2024

Lauri McFadden, EMS Director
Alameda County Emergency Medical Services Agency
1000 San Leandro Blvd., Ste. 200
San Leandro, CA 94577

Dear Lauri McFadden

This letter is in response to Alameda Emergency Medical Service (EMS) Agency's 2023 EMS, Trauma, St-Elevation Myocardial Infarction (STEMI), Stroke, Quality Improvement (QI), and EMS for Children (EMSC) plan submissions to Emergency Medical Service Authority (EMSA) on July 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 approved for implementation pursuant to HSC § 1797.105(b). Based on the transportation documentation provided, please find the enclosed EMS area/subarea status, compiled by EMSA.

EMSA has also reviewed the Trauma, STEMI, Stroke, QI plans, and EMSC based on compliance with Chapters 7, 7.1, 7.2, 12, and 14 of the California Code of Regulations, Title 22, Division 9, and has been approved for implementation.

Per HSC § 1797.254, local EMS agencies must annually submit EMS plans to EMSA. Alameda County 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 October 16, 2025. Concurrently with the EMS plan, please submit an annual Trauma, STEMI, Stroke, QI, and EMSC 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 Systems Division

Enclosure:
AW: rd

ALAMEDA COUNTY EMS SYSTEM PLAN

2023



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ALAMEDA COUNTY EMS SYSTEM PLAN TRANSMITTAL LETTER

May 31, 2024

Elizabeth Basnett
Director
California Emergency Medical Services Authority
11120 International Dr., Suite 200
Rancho Cordova, CA 95670

Director Basnett,

Attached please find the 2023 Alameda County EMS System Plan. This plan depicts the current state of our EMS system as well as updates from our last submission in 2023. The California Emergency Medical Services Authority (EMSA) approved that last submission of the Alameda County EMS System Plan in May of 2023.

You may notice that our branding has changed. That is all that has changed. We still have the same reporting structure.

Alameda County EMS Agency's principal objective continues to be ensuring the financially sustainable provision of high-quality emergency medical services (EMS) that are efficient and effective both clinically and operationally. To this end, the County has released a Request for Proposal representing the culmination of a comprehensive and collaborative engagement of system stakeholders to redesign and shape the future of EMS in Alameda County with the intentions of a new contract for services implementing on July 1, 2026.

Thank you in advance for your review of the plan. As always, please do not hesitate to contact me if you have any questions or require additional information.

Respectfully,

Lauri McFadden
Director, Emergency Medical Services

Attachment

CC: Colleen Chawla, Alameda County Health Director
Aneeka Chaudhry, Alameda County Health Assistant Director
Dr. Zita Konik, Alameda County EMS Medical Director
William McClurg, Alameda County EMS Deputy Director

Colleen Chawla
Alameda County Health

Director

Lauri McFadden
EMS Director

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ALAMEDA COUNTY ESM AGENCY

2023 EMS SYSTEM PLAN

EXECUTIVE SUMMARY

Overview

In 1984, the Alameda County Board of Supervisors designated the EMS Agency as the Local Emergency Medical Services Agency (LEMSA) for the County of Alameda, as authorized by California Health & Safety Code section 1797.200. In this role, the EMS Agency has the exclusive authority over and sole responsibility for planning, implementing, and evaluating the county's EMS System. This authority includes the power to designate a 911 ambulance service provider selected through a competitive procurement process.

Pursuant to Section 1797.224 of the California Health and Safety Code, Alameda County EMS has established five exclusive operating areas (EOAs) for 9-1-1 ambulance transport services. Four of the EOAs are granted through an exclusive non-competitive process due to grandfathering city fire departments that provided ambulance services prior to The Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980. The four grandfathered EOAs are the cities of Alameda, Albany, Berkeley, and Piedmont. The city of Berkeley EOA includes the state property of UC Berkeley and the federal property at Lawrence Berkeley Lab. The fifth EOA encompasses the remainder of Alameda County and is granted through an exclusive competitive process. This EOA was last competitively bid in 2018 with the winning contractor, Falck, implementing service in July of 2019. Falck was awarded the EOA for a 5-year term that has been extended through at least April of 2026 due to the ongoing ambulance provider request for proposal (RFP). Lawrence Livermore National Lab (LLNL) is federal property and is exempted from the EOAs. Ambulance transport services for LLNL are provided through a federal contract with Alameda County Fire District. Alameda County EMS has signed, executed transport agreements with all of the 9-1-1 ambulance providers with the exception of Alameda County Fire District providing service to LLNL which operates under a federal contract. All of the agreements will be extended through at least April of 2026.

First Response Advanced Life Support (FRALS) services are provided throughout all EOAs by fire departments or districts within each jurisdiction. All FRALS providers have signed, executed agreements in place with Alameda County EMS that will be extended through at least April of 2026. The need for the provision of Advanced Life Support (ALS) transport services is determined through a tiered response informed by the Medical Priority Dispatch System (MPDS) and further local call prioritization as determined by historical clinical and operational data under the discretion of the Alameda County EMS Agency Medical Director's medical control. ALS transport services are provided through either an ALS ambulance staffed with at least one paramedic or through the combination of a basic life support (BLS) ambulance and a paramedic staffed quick response vehicle (QRV) or fire department paramedic.

EMS resources for 9-1-1 calls are dispatched through six dispatch centers, two of which, Oakland Fire Department Dispatch and Alameda County Regional Emergency Communications Center (ACRECC), perform Medical Priority Dispatch System (MPDS) Emergency Medical Dispatch (EMD) services and are Accredited Centers of Excellence (ACE). Each year, EMS providers respond to approx. 160,000 9-1-1 calls a year, which results in 100,000 transports.

In addition to 9-1-1 providers, Alameda County EMS, through our Ambulance Ordinance, permit eleven interfacility ambulance providers to operate within the County. These providers operate basic life support (BLS), critical care transport paramedic (CCT-P), and critical care transport registered nurse (CCT-RN) level resources

Organizational Changes

In January of 2024, Dr. Nicole D’Arcy joined Alameda County EMS as the Deputy Medical Director. Dr. D’Arcy went to undergraduate and medical school at Stanford University. She then completed residency in Emergency Medicine at Harbor-UCLA Medical Center and fellowship in EMS and Disaster Medicine at UC San Francisco/Alameda County EMS. Since then, she served as the base hospital medical director for Santa Clara Valley Medical Center (SCVMC) Emergency Department. She has also served as Pediatric Emergency Care Coordinator for SCVMC, medical director for the Mission Street Recovery Station (alcohol/drug sobering center for Santa Clara County), and Emergency Response Physician for the San Francisco 49ers.

The EMS Agency has also been fortunate to augment our staff in injury prevention, health emergency preparedness and response, as well as data analysis.

Receiving Facilities/Hospitals

Alameda County has fifteen 9-1-1 ambulance receiving facilities comprised of thirteen hospitals with emergency departments and two psychiatric receiving facilities, one for adults, John George Psychiatric Hospital, and one for adolescents, Willow Rock.

Twelve of the thirteen hospital emergency rooms in Alameda County have achieved and are designated with at least one specialty care designation by Alameda County EMS. Alameda County EMS provides specialty care designation for Trauma, Stroke, and S-T Elevation Myocardial Infarction (STEMI). Washington Hospital is on track to receive provisional trauma designation in 2024. Bishop+Associates, a leading organization in trauma hospital expertise, and the EMS Agency are working closely with Washington Hospital so they may safely receive trauma patients in a provisional status. There will be careful monitoring and quality improvement processes in place as they continue their journey to certification by the American College of Surgeons in the future.

As in many counties in California, ambulance patient offload times (APOT) continue to be a challenge in Alameda County. The Alameda County EMS Agency is in the process of contracting with a throughput consultant to identify and share best practices as well as efficiencies across our EMS receiving facilities and transport providers in order to further address and lower systemic APOT times.

EMS System Request for Proposal (RFP)

Pursuant to the work of the stakeholders in the EMS System Redesign effort, an RFP was submitted by Alameda County EMS to the EMS Authority of California, and it was approved on January 4, 2024. The RFP process is progressing and represents many innovations meant to deliver the right care in the right place to the residents and visitors of Alameda County.

1.01 LEMSA STRUCTURE

MINIMUM STANDARDS:

Each local EMS agency shall have a formal organization structure which includes both agency staff and non-agency resources and which includes appropriate technical and clinical expertise.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County EMS Agency (ALCO EMS) is a division of Alameda County Health Care Services Agency (ALCO HCSA) under the Office of the Agency Director (OAD). ALCO EMS is led by the EMS Director who reports to the HCSA Assistant Agency Director of Systems and Policy.

ALCO EMS has multiple division devoted to different functional areas to include Operations & Regulatory Compliance, Clinical Systems of Care, Strategic & Specialized Response, Injury Prevention, Health Emergency Preparedness & Response, Administrative & Finance Support, and Information Systems.

Clinical expertise is drawn from our EMS Director, Deputy Director, Medical Director, Deputy Medical Director, UCSF EMS Fellows, Supervising EMS Coordinator, and EMS Coordinators all of which have medical certification or licensure to include EMT, Paramedic, Registered Nurse, or Physician. Additionally, the Health Emergency Preparedness & Response division has a strong relationship with the Alameda County Medical Reserve Core (MRC) which is comprised of a diverse mix of clinical expertise and one of our EMS Coordinators serves as the administrator for the Alameda County Disaster Health Volunteers (DHV).

Technical expertise is drawn from the diverse backgrounds and experience of our staff. Within our Clinical Systems of Care division, we hired an Information Systems Analyst in order to better manage, understand, and communicate our data. Within our Strategic & Specialized Response and Health Emergency Preparedness & Response divisions we have fostered a strong working relationship with law enforcement to enhance their medical training and facilitate joint exercises and training. Additionally, a warehouse was established during the COVID-19 pandemic for personal protective equipment and cleaning supplies, which will be transitioning to an all-hazards focus, with a comprehensive inventory management system and a user-friendly store front interface for resource ordering and fulfillment.

NEED(S):

The need to develop a more comprehensive and structured clinical oversight program has been identified, especially as we move towards implementation of a more clinically focused EMS System that has been constructed during the revisioning process. We have started the work to create clinical teams with specific focuses and a regular cadence of meetings both internally and externally facing.

A new Deputy EMS Medical Director has been hired who will serve a greater role both operationally and clinically in our system than in the past. The new Deputy EMS Medical Director will assist in rectifying span of control concerns in order to ensure better management and oversight of programs as well as build more robust clinical teams under direct supervision of a physician.

The need for internal and public facing dashboards is necessary. As we move forward, we want to be transparent with system performance. The addition of the Information Systems Analyst to our team will assist in making these dashboards a reality.

The EMS Agency is continuing to operationalize its approximately 20,000 square foot warehouse in San Leandro, CA. Staff is working to integrate all supplies and durable equipment into an inventory management system. Work is also underway to upgrade the fire sprinkler system in order to increase storage capacity while adhering to permitting and safety standards. Staff is being sent to training opportunities to optimize warehouse efficiency and expand their knowledge.

OBJECTIVE:

Work to restructure clinical oversight teams.

Restructure org chart and reporting structure to ensure manageable span of control.

Develop and implement data dashboards utilizing new Information Systems Analyst.

Send staff to training opportunities to improve knowledge and processes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.02 LEMSA MISSION

MINIMUM STANDARDS:

Each local EMS agency shall plan, implement, and evaluate the EMS system. The agency shall use its quality assurance/quality improvement (QA/QI) and evaluation processes to identify system changes.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS.

Agency Vision and Mission:

In 2023, EMS Agency staff came together to update our Agency Vision and Mission, which resulted in the following:

- **Vision:** Helping people live healthy and fulfilling lives through training, preparedness, prevention, and medical response.
- **Mission:** Provide training, preparedness, prevention, and medical response that improves health and safety by providing equitable, fair, and inclusive services for all.

In 2019 we also began conducting EMS system redesign meetings with all stakeholders and the public. These meetings informed developing the direction to guide future iterations of the EMS system. During this collaborative process, COVID-19 and the subsequent trio of severe respiratory illness significantly effecting pediatric populations exposed and perpetuated many industry-wide challenges such as healthcare staffing insufficiencies in both the hospital and pre-hospital setting, as well as struggles in mitigating surges in healthcare access and utilization. The input, feedback, and highlighted challenges were utilized to inform the 911 Ambulance Transport request for proposal (RFP) for the competitively bid exclusive operating area which was released in 2023 and will subsequently implement in July of 2026 once awarded through a competitive County procurement process.

Refer to the 2024 QI Plan

NEED(S):

Continuous engagement of stakeholders to ensure attainment of the shared vision for the system and to adapt as implementation progresses and as community needs evolve.

Complete procurement process and award contract for 911 Ambulance Transport with an implementation date of July 1, 2026.

OBJECTIVE:

Complete procurement process and award contract for 911 Ambulance Transport EOA Contract that commences in 2026.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.03 PUBLIC INPUT

MINIMUM STANDARDS:

Each local EMS agency shall have a mechanism (including EMCCs and other sources) to seek and obtain appropriate consumer and health care provider input regarding the development of plans, policies and procedures, as described in the State EMS Authority's EMS Systems Standards and Guidelines.

RECOMMENDED GUIDELINES: NONE.

CURRENT STATUS: *MEETS MINIMUM STANDARD.*

Alameda County EMS conducts a variety of regularly scheduled meetings as listed below to solicit internal and external stakeholder input:

- EMS Quality Council
- Receiving Hospital Committee
- STEMI Committee
- Stroke Committee
- Trauma Audit Committee
- Regional Trauma Audit Committee
- Data Steering Committee
- ePCR Change Committee
- EMS Coordinators Meetings
- Disaster Preparedness Healthcare Coalition (DPHC) Meetings
- Pediatric QI and EMSC Meeting
- Additional ad-hoc committees (i.e., EMS Transition Meetings; ReddiNet)

Additionally, Alameda County EMS Agency staff participate in the following externally conducted meetings where input and feedback are regularly solicited:

- Alameda County Fire Chiefs & Chiefs' EMS Section Committees
- EMSAAC & EMDAAC
- Regional EMS Coordinators Meetings
- State and Regional EMSC, QI, & Pediatric Surge Committee Meetings
- Western Regional Alliance for Pediatric Emergency Management (WRAP-EM)

Alameda County EMS also facilitates periods of public comment and public forums for community input regarding proposed annual protocol and policy updates.

In 2019, 2021, and 2022, in addition to normally conducted meetings, Alameda County EMS conducted EMS system redesign meetings to leverage and engage all stakeholders during several in person and virtual sessions. The partner recommendations and feedback assisted Alameda County EMS in developing a vision to guide the system direction. These meetings concluded in 2022 prior to the EMS Agency initiating the writing of the 911 emergency ambulance transport request for proposal.

NEED(S):

Continued expansion of engagement with all stakeholders.

OBJECTIVE:

Continue obtaining input from consumer and healthcare partners.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.04 MEDICAL DIRECTOR

MINIMUM STANDARDS:

Each local EMS agency shall appoint a Medical Director who is a licensed physician who has substantial experience in the practice of emergency medicine.

RECOMMENDED GUIDELINES:

The local EMS Agency Medical Director should have administrative experience in emergency medical services systems. Each local EMS agency medical director should establish clinical specialty advisory groups composed of physicians with appropriate specialties and non-physician providers (including nurses and pre-hospital providers), and/or should appoint medical consultants with expertise in trauma care, pediatrics, and other areas, as needed.

CURRENT STATUS: MEETS MINIMUM STANDARD

Effective June 25, 2022, Dr. Karl Sporer retired from his position as a Physician IV from Alameda County and immediately assumed the position of Retired Annuitant II in order to provide continuous coverage as the EMS Medical Director. Alameda County EMS completed a recruitment and selected Dr. Zita Konik as the new EMS Medical Director. Dr. Konik has previous experience as an Emergency Physician with Kaiser San Rafael, an EMS Provider Medical Director for Novato Fire Department, and a LEMSA Medical Director for Napa County EMS Agency. Dr. Sporer relinquished his position as EMS Medical Director on November 28, 2022, once Dr. Konik officially started her employment with Alameda County. Dr. Sporer will remain employed as a Retired Annuitant II to support Dr. Konik as she transitions into the role, gains familiarity with our EMS system, and selects a Deputy EMS Medical Director.

Effective December 10, 2022, Dr. Jocelyn Freeman-Garrick vacated her role as Deputy EMS Medical Director. The position was filled in January of 2024 with Dr. Nicole D'Arcy. Dr. D'Arcy has previous experience as an Emergency Physician with Santa Clara Valley Medical Center and completed an EMS Fellowship at UCSF prior to her work as an attending. She currently leads the trauma and pediatric systems of care.

Alameda County EMS has a contract with University of California, San Francisco, Department of Emergency Medicine to provide exposure and education to the two EMS Fellows each year, providing them insight and knowledge of prehospital medical care and the functions/coordination of an EMS system. Reports to the Medical Director. The fellows are listed below:

- Amelia Breyre MD - Graduated June 2021
- VJ Bains, MD - Graduated June 2021
- Courtney Shay, MD - Graduated June 2022
- Tim Hong, MD - Graduated June 2022
- Samantha Williams, MD – Graduated June 2023
- Kristen Bascombe, MD – Graduated June 2023
- Lauren Friend, MD – Current fellow
- Bryan Fregoso, MD – Current fellow

Medical Directors and Fellows Research

Karl Sporer, MD, UCSF fellows, and staff continue to publish both peer review and non-peer reviewed publications in highly respected professional journals and periodicals.

- Hodroge SS, Glenn M, Breyre A, Lee B, Aldridge NR, **Sporer KA**, Koenig KL, Gausche-Hill M, Salvucci AA, Rudnick EM, Brown JF, Gilbert GH. Adult Patients with Respiratory Distress: Current Evidence-based Recommendations for Prehospital Care. West J Emerg Med 2020 Jun 25;21(4):849-857.
- Hart L, Sanford JK, **Sporer KA**, Kohn MA, Guterman EL. Identification of generalized convulsive status epilepticus from emergency medical service records: a validation study of diagnostic coding. Prehosp Emerg Care. 2020 Oct 9:1-8.

- Guterman EL, Sanford JK, Betjemann JP, Zhang L, Burke JF, Lowenstein DH, Josephson SA, **Sporer KA**. [Prehospital midazolam use and outcomes among patients with out-of-hospital status epilepticus](#). Neurology. 2020 Dec 15;95(24):e3203-e3212.
- Hern HG, Goldstein D, Tzvieli O, Mercer M, **Sporer K**, Herring AA: [Overdose Receiving Centers – An Idea Whose Time Has Come?](#) Prehospital Emergency Care 2021, DOI: 10.1080/10903127.2020.1864073
- Breyre A, Taigman M, Salvucci A, **Sporer K**. . [Effect of a Mobile Integrated Hospice Healthcare Program on Emergency Medical Services Transport to the Emergency Department](#). Prehosp Emerg Care. 2021 Mar 9:1-7. doi: 10.1080/10903127.2021.1900474.
- Lacocque J, Siegel L, **Sporer KA**. [Prehospital, post-ROSC blood pressure and associated neurologic outcome](#). Am J Emerg Med. 2021 Jun: 49:195-199.
- Breyre AM, Bains G, Moore J, Siegel L, **Sporer KA**. [Hospice and Comfort Care Patient Utilization of Emergency Medical Services](#). J Palliat Med. 2021 Aug 31. doi: 10.1089/jpm.2021.0143
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NEED(S):

Continuation of the contract with UCSF for EMS Physician Fellowship Program.

OBJECTIVE:

Continuation of the contract with UCSF for EMS Physician Fellowship Program.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.05 SYSTEM PLAN

MINIMUM STANDARDS:

Each local EMS agency shall develop an EMS System Plan, based on community need and utilization of appropriate resources, and shall submit it to the EMS Authority.

The plan shall:

- Assess how the current system meets these guidelines,
- Identify system needs for patients within each of the targeted clinical categories (as identified in section ii), and
- Provide a methodology and timeline for meeting these needs.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

CA EMSA APPROVAL - SYSTEM PLANS AND REGULATORY COMPLIANCE

EMS SYSTEM PLAN

- Alameda County 2020-2022 EMS System Plan (with 2022-23 Executive Summary) approved by EMSA in May 2023
- Alameda County 2017 EMS System Plan update (with 2017-2018 Executive Summary) completed and approved by the California EMS Authority.
- 2018 update submitted to EMSA September 2019

EMS TRAUMA PLAN

- Alameda County 2022 EMS Trauma Plan approved by EMSA in May 2023
- Alameda County 2021 EMS Trauma Plan
- Alameda County 2017 EMS Trauma Plan Update and approved by CA EMSA in 2018
- Update submitted to EMSA September 2019 and approved in 2019.

EMS QUALITY IMPROVEMENT (QI) PLAN

- Alameda County 2022 EMS Quality Improvement Plan approved by EMSA in May 2023
- Alameda County 2021 EMS Quality Improvement Plan
- 2019 update submitted to EMSA September 2019
- 2018 update submitted to EMSA September 2018

EMS FOR CHILDREN (EMSC) PLAN

- Plan to submit EMSC Plan to EMSA in May 2024 consistent with CA EMSC regulations.
- Ensuring all Receiving Hospitals implement PedRC requirements.

EMS SYSTEM EVALUATION AND REQUEST FOR PROPOSALS (RFP)

- Alameda County EMS successfully completed our stakeholder meetings which culminated in a ground-breaking new EMS system design and that RFP was approved by EMSA and released in January 2024.
- ALCO EMS is planning for the next RFP process, to select and implement a contract for services to the Exclusive Operating Area (EOA) starting July 1, 2026.
- FALCK is the selected and current ALCO EMS 911 Provider as of JULY 1, 2019.
- Emergency Ground Ambulance Service will be extended through at least April of 2026.
- EMS executes the FALCK Contract, ensuring contract compliance and oversight

CONTRACT EXTENSIONS & NEW CONTRACTS—FRALS AND FIRE TRANSPORT

- Alameda County Regional Emergency Communications Center (ACRECC) Emergency Medical Dispatch – executed extension effective until June 30, 2026.
- ALAMEDA COUNTY EMS HAS SIGNED, EXECUTED TRANSPORT AGREEMENTS WITH ALL OF THE 9-1-1 AMBULANCE PROVIDERS WITH THE EXCEPTION OF ALAMEDA COUNTY FIRE DISTRICT WHICH OPERATES UNDER A FEDERAL

CONTRACT. ALL OF THE AGREEMENTS ARE BEING EXTENDED THROUGH JUNE 30, 2026, ALCO EMS IS CURRENTLY IN AN RFP PROCESS TO SELECT AND IMPLEMENT A CONTRACT FOR SERVICES TO THE EXCLUSIVE OPERATING AREA (EOA) FOR THE FUTURE.

- FIRST RESPONDER ADVANCED LIFE SUPPORT (FRALS) AND FIRE TRANSPORT – negotiated and executed new contracts extended through June 30, 2026.

NEED(S):

OBJECTIVE:

Objective: EMS System Planning – **Refer to the 2022 QI Plan**

OVERARCHING GOALS

- Sustain and improve quality of clinical care the patient receives
- Stabilize or reduce the cost of EMS services.
- Improve patient satisfaction.

SIX FUNDAMENTAL TENANTS

1. Preserving a high level of emergency medical response throughout the County
2. Producing a system that is cost-effective while preserving a high level of response and care
3. Designing a system that is County-wide (i.e. Current Exclusive Operating Area (EOA) allowing for consistency of service throughout all areas and jurisdictions of the county
4. Maintaining and supporting the current workforce
5. Producing a system that is sustainable for the long term.
6. Maintaining the appropriate regulatory and oversight functions between the local EMS agency (LEMSA) and the chosen provider(s)

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.06 ANNUAL PLAN UPDATE

MINIMUM STANDARDS:

Each local EMS agency shall develop an annual update to its EMS System Plan and shall submit it to the EMS Authority. The update shall identify progress made in plan implementation and changes to the planned system design.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

On August 18, 2020, the Emergency Medical Services Authority (EMSA) issued a memo providing an extension for submission of local EMS System Plans. On December 14, 2020, a revised memo which superseded the August memo was released updating the deadline for submission of EMS System Plan to 180-days post cessation of the State's declared emergency on the coronavirus pandemic.

Subsequently, on July 13, 2022, EMSA rescinded the December 2020 memo and required submission of updated local EMS System Plans on or before January 31, 2023, even though the declared coronavirus pandemic declared emergency is continued through the end of February 2023.

In December 2022, Alameda County EMS requested approval to extend the submission deadline for our updated plan until April 30, 2023, due to the triple-demic of COVID, influenza, and RSV as well as the efforts to release of ambulance transport request for proposal.

For the last submitted and approved EMS System Plan please refer to the [Alameda County 2020-22 EMS System Plan \(approved May 26, 2023\)](#).

- Alameda County 2021 EMS System Plan (with 2021-22 Executive Summary)
- Alameda County 2018 EMS System Plan update (with 2018-2019 Executive Summary) completed, submitted, and approved by the California EMS Authority September 2019

The annual 2023 EMS System Plan is submitted May 2024.

NEED(S):

OBJECTIVE:

Update the EMS System Plan yearly or as prescribed and submit to EMSA (short range)

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.07 TRAUMA PLANNING

MINIMUM STANDARDS:

The local EMS agency shall plan for trauma care and shall determine the optimal system design for trauma care in its jurisdiction.

RECOMMENDED GUIDELINES:

The local EMS agency should designate appropriate facilities and execute agreements with trauma facilities in other jurisdictions.

California Code of Regulations

- TITLE 22. SOCIAL SECURITY
- DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES
- CHAPTER 7. TRAUMA CARE SYSTEMS

CURRENT STATUS: MEETS MINIMUM STANDARDS

The purpose of the trauma plan is to monitor the delivery of services, improve patient care through the adoption of current best practices in reducing death and disability from trauma, and identify areas where improvement can be made.

FIELD CLINICIANS:

All ALS agencies/departments, both first response and transport, have executed ALS provider agreements with Alameda County EMS. All providers, inclusive of our ALS providers and permitted interfacility providers use ALCO EMS trauma triage (CDC criteria) and transport protocols. All 9-1-1 ALS provider clinicians, and EMTs for the competitively bid EOA 9-1-1 transport provider, must maintain ITLS, PHTLS or equivalent certification. January 2024, EMS providers began using the current (2022) ACS Field Trauma Triage guidelines for the injured patient.

TRAUMA CENTERS:

Alameda County currently has three EMS designated American College of Surgeons (ACS) Verified (required) **Trauma Receiving Centers:**

- Alameda Health System-Highland Hospital-Oakland (Adult level 1)
- Sutter Eden Medical Center-Castro Valley (Adult level 2)
- UCSF Benioff Children's Hospital-Oakland (Pediatric level 1)

In 2021-2022, a comprehensive data driven evaluation of the entire Alameda County EMS Trauma System was completed by Bishop and Associates, a reputable independent consultant with substantial subject matter expertise. Upon conclusion of their evaluation and analysis, Alameda County EMS made the determination to work collaboratively with Washington Hospital with the intent of their facility becoming an Adult Level 2 Trauma Center within the next 5 years in order to address projected community need.

- Additionally, in February of 2022, a bi-directional Healthcare Data Exchange (HDE) utilizing ESO, our system-wide prehospital electronic health record provider, was established with Alameda Health System which includes one of our trauma receiving centers: Highland Hospital. In 2023, Washington Hospital, a future ALCO adult level 2 TC, and UCSF Benioff Children's Hospital-Oakland (existing Pediatric level 1 TC) established HDE. Currently, only but one existing/future trauma receiving center can share clinical and outcome data directly with field providers automatically on a per incident basis enabling field level clinicians to follow up on their patients and learn from the information provided.

COORDINATION WITH OTHER EMS AGENCIES:

- Coordination/collaboration with Contra Costa County EMS and John Muir Medical Center, (adjacent ACS verified adult level-2 trauma center), through quarterly participation in bi-county Trauma Audit Committee (TAC) meetings.
- Coordination/collaboration with Bay Area Regional LEMSAs (Solano, Contra Costa, San Francisco, San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey, Marin) through participation in bi-monthly (every two months) Regional Trauma Coordinating Committee (RTCC) meetings.

NEED(S):

Improve the functionality of our Trauma Audit Committee by sharing existing individual TC and EMS trauma data.

TCs maintain ACS Verification as a required by contractual agreement for EMS designation.

Establish Bi-directional Healthcare Data Exchange (HDE) with the one TC not yet connected: Eden

Establish a third ACS Verified Adult Level 2 trauma receiving center within the next 4 years.

Establish and complete an EMS pre-designation review process for Washington Hospital prior to them receiving EMS patients.

OBJECTIVE:

Continuous monitoring and evaluation of trauma care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

Collaboration with Washington Hospital to ensure safe, efficient and effective implementation of trauma services.

Complete EMS pre-designation review/assessment, and ensure Washington Hospital is compliant with all minimum current CA State Trauma Regulation requirements regarding a Level 2 adult trauma receiving center.

Continue to work with ALCO receiving facilities and ESO to broaden bidirectional HDE availability to all facilities, including existing and future trauma receiving centers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.08 ALS PLANNING

MINIMUM STANDARDS:

Each local EMS agency shall plan for eventual provision of advanced life support services throughout its jurisdiction.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Advanced Life Support has been available county-wide since 1986. Advanced Life Support has been available on first response vehicles county-wide since 1998.

Alameda County (ALCO) EMS currently has contractual agreements in place through 2024 with all first response agencies within our jurisdiction to render care at the ALS level. ALCO EMS also has contracts with transport providers to render ALS level care both within municipalities that have retained their CCR 1797.224 EOA rights (Cities of: Albany, Alameda, Berkeley, and Piedmont) and for the balance of the County 911 Transport EOA.

Additionally, to deliver the appropriate level of care to each response, Medical Priority Dispatch (MPDS) has been implemented in over 90% of the system. Via contractual agreement, Oakland Fire Department (OFD) and Alameda County Regional Emergency Communications Center (ACRECC) provide this service.

Under MPDS, from July 1, 2019 moving forward, call determinants have been categorized into priorities. The new priority system has 5 response priorities:

- Priority 1 – High Acuity Calls - Code 3 response by FRALS, ALS transport and EMS Supervisor
- Priority 2 – Moderate Acuity Calls - Code 3 response by FRALS and ALS transport
- Priority 3 – Emergent Interfacility – Code 3 ALS transport (Code 3 FRALS as needed)
- Priority 4 – Low Acuity Calls – Code 2 ALS or BLS transport. (FRALS at discretion of each agency)
- Priority 5 – Non-medical 5150 – Code 2 ALS or BLS transport OR Approved alternative

Alameda County EMS continues to work with closely the above noted dispatch centers and other stakeholders to identify, in evidence-based manner, to ensure that EMS responses are prioritized appropriately and have the proper resources sent to them.

The FRALS and fire transport agreements are being extended until at least April of 2026.

NEED(S):

Ensure compliance with and maintenance of all contractual agreements related to the provision of ALS care.

Work to ensure the appropriate prioritization of all responses and the appropriate response configurations.

OBJECTIVE: (Short and Long Term)

Appropriately triage all EMS responses and ensure that each response receives the appropriate resource in a timely manner.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.09 INVENTORY OF RESOURCES

MINIMUM STANDARDS:

Each local EMS agency shall develop a detailed inventory of EMS resources (e.g., personnel, vehicles, and facilities) within its area and, at least annually, shall update this inventory.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Personnel:

A spreadsheet of all Alameda County (ALCO) EMS Personnel actively working with the County is housed within the Agency and is maintained continuously with the assistance of all provider agencies that operate within our jurisdiction. The EMS Agency is in the process of developing an online application portal in partnership with ImageTrend. The application portal will be completed and implemented in 2023.

Apparatus:

Each ALCO EMS provider agency has a wide variety of apparatus that is utilized for the provision of EMS services within the County. First responder services are most often delivered utilizing fire engines and trucks. Transport providers have several different types of ambulances based on their agency's needs. They also utilize numerous specialty vehicles such as, SUVs for supervisors and Quick Response Vehicles, all-terrain vehicles for special events or inaccessible areas, and others. The cities of Alameda and Hayward, as well as the contracted EOA 9-1-1 ambulance transport provider Falck, have behavioral health response vehicles that offer an alternative to a traditional ambulance response.

The ALCO EMS Agency has sufficient apparatus to support our operations. Additionally, we are in the process of outfitting a retired transit bus with the necessary equipment so that it will enable field providers to treat and/or transport multiple patients simultaneously in the event of a multi-casualty incident.

The EMS Agency specifies in Policy the minimum standards that all apparatus within the system must meet and also the supplies and equipment that the above apparatus shall have in order to be considered in-service.

Facilities:

Each provider Agency has adequate facilities located throughout their jurisdictions for the provision of EMS service throughout the County.

First Responder agencies almost exclusively operate out of Fire Stations located in all communities with administrative facilities in various cities that support needs of those first responders.

Falck Northern California, the currently contracted 911 transport provider for the EOA has headquarters that are centrally located within the County in the City of Hayward. This facility provides deployment of ambulances, supervisors, etc., as well as administrative and logistical support for their operations. Falck also has satellite deployment facilities located in the Cities of Oakland and Livermore.

The ALCO EMS Agency main office is centrally located in the City of San Leandro, which we have recently expanded to make room for additional staff. Additionally, in 2020, the EMS Agency, gained a new sub-unit, Healthcare Emergency Preparedness and Response (HEPR) whose mission is to prepare for and respond to healthcare crises within our jurisdiction and support other jurisdictions that are faced with crises. With the addition of the HEPR program and the follow on needs to provide continuing support the healthcare system with crisis response, EMS opened a newly acquired 2-acre 21,000 sq. foot high security warehouse with emergency back-up power in San Leandro. This location supports combined operations of warehousing and disaster support needs. The location houses several response trailers for various types of needs for EMS and is the home of the Alameda County EMS Mass Casualty response vehicle. This location is staffed by two full time personnel and serves as the back-up Emergency Department of Operations Center (DOC).

NEED(S):

A streamlined online platform to help with the management of provider agency lists.

Working with the contracted 911 transport provider for the EOA to meet the requirements of their contract with the establishment of comfort stations.

OBJECTIVE: (Short and Long Term)

Ensure efficient tracking of personnel within the County.

Ensure contract compliance and contracted provider employee well-being.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.10 SPECIAL POPULATIONS

MINIMUM STANDARDS:

Each local EMS agency shall identify population groups served by the EMS system which require specialized services (e.g., elderly, handicapped, children, non-English speakers).

RECOMMENDED GUIDELINES:

Each local EMS agency should develop services, as appropriate, for special population groups served by the EMS system which require specialized services (e.g., elderly, handicapped, children, non-English speakers).

California Code of Regulations
Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 14. Emergency Medical Services for Children (EMSC)

California Code of Regulations
TITLE 22. SOCIAL SECURITY
DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES
CHAPTER 7. TRAUMA CARE SYSTEMS

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.2 Stroke Critical Care System

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

CURRENT STATUS: Meets minimum standards

Refer to previous sections and local policies/plans (compliant with current CA State EMSC, Trauma, Stroke, STEMI Regulations):

- 1.27 (Pediatric System Plan)
- 5.04 (Specialty Care Facilities)
- Trauma Care System Plan
- Child Injury Prevention
- Child Abuse/Neglect Reporting Policy
- Senior Injury Prevention
- Older Adult Abuse/Neglect Reporting Policy
- Youth Alive Violence Injury Prevention
- Sexual Assault Policy
- Domestic Violence Reporting Policy
- Stroke Care System Plan
- EMS for Children System Plan (planned submission May 2024) which includes pediatric policies and data metrics
- Alameda County Pediatric Surge Annex to Disaster Preparedness Healthcare Coalition (DPHC) Response Plan
 - [HCC Pediatric Surge Annex](#)
- STEMI Care System Plan
- Policies related to medical devices (i.e., ventricular assist devices, stomas, tracheostomies)
 - [Alameda County EMS Field Treatment Protocols](#)
 - [2024 Alameda County EMS Field Manual](#)
- Psychiatric and Behavioral Emergencies Policy

ALCO EMS is currently in an RFP process to select and implement a contract for services to the Exclusive Operating Area (EOA) for the future. Additionally, metrics are integrated into the upcoming 9-1-1 ambulance transport request for proposal (RFP) to evaluate, monitor, and improve system equity and inclusion across the diverse population groups that are served.

NEED(S):

Complete RFP process and ensure competitive procurement for 9-1-1 ambulance transport which includes new population specific metrics.

Develop comprehensive data monitoring systems to ensure accurate tracking of system performance

OBJECTIVE:

Continuous monitoring and evaluation of specialty care systems and general 9-1-1 system performance regarding special populations for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.11 SYSTEM PARTICIPANTS

MINIMUM STANDARDS:

Each local EMS agency shall identify the optimal roles and responsibilities of system participants.

RECOMMENDED GUIDELINES:

Each local EMS agency should ensure that system participants conform with their assigned EMS system roles and responsibilities, through mechanisms such as written agreements, facility designations, and exclusive operating areas.

CURRENT STATUS: MEETS MINIMUM STANDARD

Dispatch Providers:

Alameda County (ALCO) has 18 distinct PSAPs throughout the County. These include two ACE Accredited EMD Centers (Alameda County Regional Emergency Communications Center (ACRECC) and Oakland Fire Dept. Dispatch) that utilize MPDS to code and prioritize calls and provide pre-arrival instructions. Oakland Fire Dept. Dispatch provides EMD services for the City of Oakland. ALCO EMS has a contractual agreement in place with ACRECC for the provision of EMD Services for the balance of the County.

First Response Agencies:

Alameda County EMS has numerous First Responder Agencies within Alameda County All First Responder ALS Agencies have written contracts with our EMS Agency that are executed through June 30, 2024 with provisions for extension of those agreements.

ALS First Responder Agencies:

- Alameda County Fire Department (Serving the cities of, Emeryville, San Leandro, San Lorenzo, Union City, Newark, Dublin, Sunol and other unincorporated portions of Alameda County)
- City of Alameda Fire Department
- City of Albany Fire Department
- City of Berkeley Fire Department
- City of Fremont Fire Department
- City of Hayward Fire Department
- City of Oakland Fire Department
- City of Piedmont Fire Department
- Livermore-Pleasanton Fire Department

911 Transport Agencies:

Alameda County EMS has several 911 transporting Agencies that provide BLS and ALS services throughout the County. Contractual Agreements are in place with these provider agencies. The municipal agencies listed below have the exclusive rights to transport within their jurisdiction based on CCR 1797.224. The balance of the County has an EOA for 911 transport services that is bid out and awarded based on a competitive bidding process in line with State Statutes and Regulations.

- City of Alameda Fire Department
- City of Albany Fire Department
- City of Berkeley Fire Department
- City of Piedmont Fire Department
- Falck Northern California (Contracted 911 Transport EOA Provider)

BLS Ordinance Agencies:

The following agencies qualify to perform EMS transport within our jurisdiction, outside of the 911 system, via the Alameda County Emergency Medical Services Ambulance Ordinance.

- American Medical Response
- America West Medical Transportation, Inc.
- Arcadia Ambulance
- Bay Medic Transportation

- Eagle Ambulance
- Falck Northern California
- Falcon Critical Care Transport
- LIFEwest Ambulance Service
- Norcal Ambulance
- Pro Transport-1 Ambulance
- Royal Ambulance
- Westmed Ambulance Service

Receiving Facilities:

The listing below are all the receiving facilities for EMS transport located within our jurisdiction and their current designations.

- Alameda Hospital | Basic Emergency Services, Primary Stroke Center
- Alta Bates Summit Medical Center- Ashby Campus | Basic Emergency Services, Labor and Delivery
- Alta Bates Summit Medical Center- Summit Campus | Basic Emergency Services, Primary Stroke Center, STEMI Center
- Eden Medical Center | Basic Emergency Services, Level II Adult Trauma Center, Primary Stroke Center, Labor and Delivery
- Highland Hospital | Basic Emergency Services, Level I Adult Trauma Center, STEMI Center, Labor and Delivery
- Kaiser Oakland | Basic Emergency Services, Primary Stroke Center, STEMI Center, Labor and Delivery
- Kaiser Fremont | Basic Emergency Services, Primary Stroke Center, STEMI Center
- Kaiser San Leandro | Basic Emergency Services, Primary Stroke Center, Labor and Delivery
- St. Rose Hospital | Basic Emergency Services, STEMI Center, Labor and Delivery
- San Leandro Hospital | Basic Emergency Services
- Stanford ValleyCare Hospital | Basic Emergency Services, STEMI Center, Primary Stroke Center, Labor and Delivery
- John George Psychiatric Hospital | Psychiatric Emergency Services for Adults
- UCSF Benioff Children’s Hospital- Oakland | Basic Emergency Services, Level I Trauma Center, and Psychiatric Emergency Services for Children
- Washington Hospital | Basic Emergency Services, Primary Stroke Center, STEMI Center, Labor and Delivery
- Willow Rock Center | Psychiatric Emergency Services for Adolescents and Teens

NEED(S):

Maintenance of contractual agreements with service providers.

Additional of an additional Adult Level 2 Trauma Center within the next 5 years.

OBJECTIVE: (Short and Long Range)

Work collaboratively with system providers to deliver the appropriate level of care from dispatch to definitive care throughout our community.

Continue working with Washington Hospital to facilitate their future designation as a provisional Adult Level 2 Trauma Center within the next year.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.12 REVIEW AND MONITORING

MINIMUM STANDARDS:

Each local EMS agency shall provide for review and monitoring of EMS system operations.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

Currently, the Alameda County (ALCO) EMS Agency continuously monitors general system operations and compliance with performance standards for all aspects of the system from dispatch to receiving facilities. These performance standards are specified by contractual agreements and Agency policy. These performance standards include metrics such as: response times, Ambulance Patient Offload Times (APOT), ensuring adequate crew rest times, etc.

Alameda County EMS employs several methods of monitoring system operations including required self-reporting and multiple technological platforms such as:

FirstWatch: All of the communication centers that provide 9-1-1 EMS resource dispatching are connected to FirstWatch which enables access to CAD records to monitor and review dispatch operations. Oakland Fire Dispatch and the Alameda County Regional Emergency Communications Center, the two ACE-accredited EMD centers in Alameda County, provide MPDS ProQA reporting within FirstWatch. An Alameda County-Contra Costa County joint hospital transport dashboard was created to enable the monitoring of facility impaction and hospital offload delays displaying transport resources from both counties at Alameda County hospitals. Several permitted interfacility ambulance transport provider patient care report databases are linked to FirstWatch, allowing Alameda County EMS to review reports for transports that originated and terminated within Alameda County. Additionally, FirstWatch is utilized for monitoring of response time and clinical performance standard compliance.

ESO: All of the 9-1-1 first response and transport providers in the county utilize ESO as their electronic health record (EHR). Alameda County EMS has an umbrella account which allows viewing of a real time track board, EHRs to be viewed, and access to health data exchange (HDE) data as well as the generation of clinical and operational reports.

PulseGenesis: Falck, the contracted 9-1-1 ambulance transport EOA provider, provides Alameda County EMS access with this platform that receives both CAD call data and all Falck automatic vehicle locator (AVL) data. The platform allows live real time system monitoring as well as retrospective review of AVL history.

Psomas SitStat: SitStat is a system monitoring platform that is linked to CAD data as well as both Falck's and Fire First Response resources. This platform allows for near real time system monitoring of calls and responding resources.

ReddiNet: All 9-1-1 transport providers, all interfacility ambulance transport providers, all 9-1-1 receiving facilities, many mental health facilities, and several long-term and acute care facilities have access to ReddiNet. ReddiNet is utilized to provide emergent information, conducting polling of providers and facilities, MCI notifications and tracking, facility diversion status, and facility bed status.

Alameda County EMS Coordinators are assigned to monitoring various aspects of system performance and reporting any issues to EMS leadership for follow-up as needed. EMS Coordinators also, on a rotating basis, serve as system duty officers in order to assist with and mitigate any issues that may arise during day-to-day operations or pursuant to a specific incident or event. During significant or large-scale incidents, EMS Coordinators and other EMS Agency personnel may deploy to scene incident commands, departmental operation centers (DOCs), or emergency operation centers (EOCs) in order to monitor system resilience and provide subject matter expertise regarding medical and health related operations.

When deficiencies are discovered, our Agency works with the specific provider to review the deficiencies and to assist with planning the steps needed to regain compliance with the established standards. Additionally, ALCO EMS conducts periodic reviews of our performance standards to confirm if those standards are useful and effective for overall system performance.

NEED(S):

Continue to develop technological infrastructure to automate system monitoring.

Conduct detailed audits of contractual agreements to ensure compliance is being monitored and corrected as needed.

OBJECTIVE: (Short and Long Range)

Ensure that all system service providers are performing as expected.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.13 COORDINATION

MINIMUM STANDARDS:

Each local EMS agency shall coordinate EMS system operations.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

The Alameda County (ALCO) EMS Agency coordinates EMS system operations from prevention to definitive care.

Our Agency's Injury Prevention unit delivers education, supplies, and support to our communities in effort to prevent entry into the system or minimize the effects of an unintended event and provides education on the recognition of life-threatening medical emergencies to our communities.

Alameda County EMS works closely with ALCO PSAPs and EMD centers to ensure calls are processed and triaged and appropriate resources are assigned to incidents and that those centers also manage the available EMS resources effectively.

The ALCO EMS Agency has contractual agreements with first response and transport providers in our jurisdiction operational area to ensure appropriate and equitable response to incidents. ALCO EMS has designated EMS Coordinator liaisons within our Agency that provider agencies can coordinate with to resolve issues and plan for the future.

Alameda County EMS works collaboratively with receiving facilities to ensure efficient basic services and comprehensive, quality specialty care services to include pediatric, STEMI, stroke, trauma, and cardiac arrest care.

ALCO EMS conducts several on-going meetings with all the above system participants to maintain open communication and coordination of efforts.

Overall, we have a well-coordinated system that serves our community and anticipates future needs and adapts to those.

NEED(S):

None currently.

OBJECTIVE:

Maintain collaborative relationships with all of our system partners to ensure the delivery of quality services to our community.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.14 POLICY & PROCEDURES MANUAL

MINIMUM STANDARDS:

Each local EMS agency shall develop a policy and procedures manual that includes all EMS agency policies and procedures. The agency shall ensure that the manual is available to all EMS system providers (including public safety agencies, ambulance services, and hospitals) within the system.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

For many years, the Alameda County EMS Agency has established administrative policies that cover a wide range of areas, including operational, clinical, and administrative topics. Alameda County EMS began work in 2023 to update these policies and is continuing to update policies as needed through internal EMS input and by leveraging input from system-wide stakeholders and the public.

Additionally, Alameda County EMS Agency has a field manual and an accompanying digital application that contains clinical and operational guidelines for field providers to reference. A new 2024 version of this was published this year. Refer to the “2024 Field Manual – Alameda County EMS Final Book”

- [2024 Alameda County EMS Field Manual](#)

NEED(S):

Complete updates to the Alameda County EMS Agency’s administrative policies.

Conduct a gap analysis to determine if there are any policies that need to be put in place.

Ensure all policies are easily accessible to all.

OBJECTIVE:

To have up-to-date policies for all needed topics that are easily accessible.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.15 COMPLIANCE WITH POLICIES

MINIMUM STANDARDS:

Each local EMS agency shall have a mechanism to review, monitor, and enforce compliance with system policies.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS : MEETS MINIMUM STANDARD

The Alameda County EMS Agency utilizes multiple mechanisms to monitor and ensure compliance with policies and contractual terms. This includes pathways for self-reporting, reporting, contract audits, and automated monitoring/reporting.

The Alameda County EMS Agency utilizes technological platforms to monitor aspects such as response time requirements, Ambulance Patient Offload Times (APOT), and clinical benchmarks. Alameda County EMS also ensures these same technological platforms are available to our provider agencies to encourage and facilitate internal monitoring.

When deficiencies are noted, Alameda County EMS works closely with the agency or individual involved to ensure awareness of the standards and develop plans to assist to those involved to return to compliance with the established standards and/or take disciplinary measure if deemed appropriate in accord with State Statutes and Regulations. If needed, this is also followed up with directives to assist those involved to remain in compliance.

Alameda County EMS also conducts routine reviews of policies and standards to ensure that they are up-to-date, reasonable, and rationale for the system.

NEED(S):

None currently.

OBJECTIVE:

None currently.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.16 FUNDING MECHANISM

MINIMUM STANDARDS:

Each local EMS agency shall have a funding mechanism, which is sufficient to ensure its continued operation and shall maximize use of its Emergency Medical Services Fund.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

The Alameda County EMS CSA was formed in 1983 to provide emergency medical services throughout the county, and it covers the total cost to Alameda County for providing ambulance, paramedic, trauma care and related services, including emergency medical dispatch and associated EMS program activities. With the passage of Proposition 218 in November 1996, EMS charges no longer met the definition of “benefit assessment.” Therefore, a special tax, Measure C, to replace the benefit assessment was approved by Alameda County voters in 1997 with more than the required two-thirds majority with 81.4% of voters voting Yes. This special tax measure also authorizes the Board of Supervisors to adjust the tax once a year in an amount not to exceed the increase in Consumer Price Index (CPI) for the San Francisco-Oakland-San Jose area. This year, the Alameda County Board of Supervisors is expected to approve an increase for Fiscal Year 2023-2024 based on the February 2023 San Francisco-Oakland-San Jose area CPI increase data released by the Bureau of Labor Statistics.

Additionally, ALCO EMS receives funding through Measure A which supports EMS Corps, injury prevention, and behavioral health programs.

ALCO EMS annually pursues and receives grant funding through the State Homeland Security Grant Program (SHSGP) and the Bay Area Urban Areas Security Initiative (BAUASI) for disaster preparedness and community education initiatives.

The Health Emergency Preparedness & Response (HEPR) division receives grant funding through multiple federal and state programs such as the Center for Disease Control’s (CDC’s) Cities Readiness Initiative (CRI), CDC’s Public Health Emergency Preparedness (PHEP), and Office of the Assistant Secretary for Preparedness and Response (ASPR’s) Hospital Preparedness Program (HPP).

NEEDS:

Identify existing or new funding streams for potential system subsidies, system expansion, and implementation of innovative or novel programs.

OBJECTIVE: (Long Range)

Monitor annual increase in Measure C funding to insure sustainment of existing programs, staff, and services as well as opportunities for additions or expansions.

Continue pursuing current and identify new grant funding sources.

Evaluate additional opportunities to expand or establish new sustainable funding streams.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.17 MEDICAL DIRECTION

MINIMUM STANDARDS:

Each local EMS agency shall plan for medical direction within the EMS system. The plan shall identify the optimal number and role of base hospitals and alternative base stations and the roles, responsibilities, and relationships of pre-hospital and hospital providers.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County has a comprehensive plan and program for the provision of on and off- line **medical direction** within the EMS system.

The plan identifies Highland Hospital as the system Base Hospital

- Current Base Hospital (Alameda Health System – designated since 2004).
- MOU with \$200,000 annual subsidy completed- 7/1/2021-6/30/2024.
- Sole Base Hospital Agreement for the County
- Base Hospital Coordinator and Medical Director assigned. Kristen Bascombe MD is the Base Hospital Medical Director Jan 2024 to the present
- All calls are recorded and evaluated as part of the QI process to ensure appropriate direction
- Monthly Base Hospital calls are reviewed at our monthly Clinical Quality Council

NEED(S):

Renew contract with Highland Hospital for Base station services

OBJECTIVE:

SHORT-RANGE PLAN:

- Update / revise Base Hospital Course for second year residents in Alameda County Health Center as necessary

LONG-RANGE PLAN:

- Review subsidy & MOU for new contract

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.18 QA/QI

MINIMUM STANDARDS:

Each local EMS agency shall establish a quality assurance/quality improvement (QA/QI) program. This may include use of provider-based programs which are approved by the local EMS agency, and which are coordinated with other system participants.

RECOMMENDED GUIDELINES:

Pre-hospital care providers should be encouraged to establish in-house procedures, which identify methods of improving the quality of care provided.

CURRENT STATUS: MEETS MINIMUM STANDARD

The Alameda County EMS Agency has had a well-established QA/QI program for many years that guides many system activities. The ALCO EMS Directors and QI Coordinators provide on-going review and refinement to the QI program on a regular basis. Refer to the Alameda County QI Plan 2024.

- [Alameda County EMS Quality Improvement Plan 2024](#)

Additionally, all of the provider agencies, including first response, 911 transport, and non-emergency permitted providers, are all required to and currently have in place a QA/QI program for their agency, which is submitted to the ALCO EMS Agency for review and approval.

NEED(S):

Continued review and revision of the Alameda County EMS QI plan with input from partner agencies

Ensure countywide compliance with the Alameda County EMS QI plan

Work with provider agencies throughout the County to ensure QI plans are in place and are being complied with.

OBJECTIVE:

Ensure our Agency and provider agencies have robust and meaningful QI plans in place.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.19 POLICIES, PROCEDURES, PROTOCOLS

MINIMUM STANDARDS:

Each local EMS agency shall develop written policies, procedures, and/or protocols including, but not limited to:

- triage,
- treatment,
- medical dispatch protocols,
- transport,
- on-scene treatment times,
- transfer of emergency patients,
- standing orders,
- base hospital contact,
- on-scene physicians and other medical personnel, and
- local scope of practice for pre-hospital personnel.

RECOMMENDED GUIDELINES:

Each local EMS agency should develop (or encourage the development of) pre-arrival/post dispatch instructions.

CURRENT STATUS: MEETS MINIMUM STANDARD

The Alameda County EMS Agency has both an EMS administrative policy and field manual that covers all the minimum standards listed above and additional policies, procedures, and protocols to cover operational and clinical standards.

Alameda County EMS began the process of reviewing and updating the administrative policy manual in 2023 and will finish these updates in 2024.

The field manual and the associated digital application covers the majority of these areas and this manual and digital application is typically updated on an annual basis. The 2024 manual has been released: [2024 Alameda County EMS Field Manual](#)

All policies, procedures, and protocols are reviewed utilizing internal input, stakeholder engagement, and public comment.

NEED(S):

Complete review and update the administrative manual

Continue reviewing the field manual and digital application.

OBJECTIVE:

To ensure up-to-date comprehensive policies, procedures, and protocols to guide system activities.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.20 DNR POLICY

MINIMUM STANDARDS:

Each local EMS agency shall have a policy regarding "Do Not Resuscitate (DNR)" situations in the pre-hospital setting, in accordance with the EMS Authority's DNR guidelines.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

The EMS Agency has a comprehensive "Death in the Field" protocol within the Agency's field manual and accompanying digital application that contains guidance regarding DNR situations in line with EMSA's #311 guidelines.

- [2024 ALAMEDA COUNTY EMS FIELD MANUAL](#)

NEED(S): None.

OBJECTIVE: None.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.21 DETERMINATION OF DEATH

MINIMUM STANDARDS:

Each local EMS agency, in conjunction with the county coroner(s) shall develop a policy regarding determination of death, including deaths at the scene of apparent crimes.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

The EMS Agency has a comprehensive “Death in the Field” protocol within the Agency’s field manual and accompanying digital application that contains guidance regarding determination of death in medical and trauma scenarios and management of death at a suspected crime scene.

NEED(S):

Review the current “Death in the Field” policy and revise as needed.

OBJECTIVE:

Ensure the policy is up to date, useful, and relevant in accordance with evidence-based medicine

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.22 REPORTING OF ABUSE

MINIMUM STANDARDS:

Each local EMS agency shall ensure that providers have a mechanism for reporting child abuse, elder abuse, and suspected SIDS deaths.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEET MINIMUM STANDARD

The Alameda County EMS Agency has a policy and procedure outlined for the reporting of child abuse and/or elder abuse to the appropriate County agencies, which was updated in 2023 to ensure easy to use and accessible reporting options. Suspected SIDS deaths are reported to Law Enforcement and/or receiving facility staff. Refer to the 2024 EMS Policy Manual: [ALAMEDA COUNTY EMS FIELD PROTOCOLS](#)

Alameda County EMS also has a procedure located in our Field Manual to help field providers to screen for domestic violence and connect those who screen positive during that assessment with appropriate resources. In 2023, ALCO EMS conducted updated training for the recognition and care of domestic violence victims.

In 2023, ALCO EMS updated policies to include screening for and reporting of suspected human trafficking and developed associated training for this policy for all Alameda County EMS providers.

NEED(S):

None.

OBJECTIVE:

None.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.23 INTERFACILITY TRANSFER

MINIMUM STANDARDS:

The local EMS medical director shall establish policies and protocols for scope of practice of pre-hospital medical personnel during interfacility transfers.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD. Refer to policies listed below.

- **INTERFACILITY TRANSFERS**
 - Refer to the Alameda County Emergency Medical Services Field Manual, Operations Section on the ALCO EMS website:
 - [2024 Alameda County EMS Field Manual](#)
- **CRITICAL CARE PARAMEDIC (CCP) POLICIES**
 - Refer to the Alameda County EMS Website:
 - [ALAMEDA COUNTY EMS CCP FIELD MANUAL](#)
 - [Bay Area Critical Care Paramedic Guidelines \(BACCP\)](#)
- **ALAMEDA COUNTY CRITICAL MEDICAL PATIENT TRANSFERS**
 - Refer to the Alameda County EMS Website:
 - [2024 Alameda County EMS Field Manual](#)

OBJECTIVE:

MONITOR TO DETERMINE IF CURRENT POLICIES NEED TO BE UPDATED

- Alameda County EMS will follow up on Unusual Occurrence Reports. These Unusual Occurrence Reports are submitted by facilities and/or transport providers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.24 ALS SYSTEMS

MINIMUM STANDARDS:

Advanced life support services shall be provided only as an approved part of a local EMS system and all ALS providers shall have written agreements with the local EMS agency.

RECOMMENDED GUIDELINES:

Each local EMS agency, based on state approval, should, when appropriate, develop exclusive operating areas for ALS providers.

CURRENT STATUS: MEETS MINIMUM STANDARDS

PROGRESS TO DATE:

Alameda County has 5 exclusive operating areas (EOA). Four EOAs are in cities and are run by the fire departments – Alameda, Albany, Berkeley, and Piedmont. The rest of the county is an EOA for which Falck won the RFP and started service July 1, 2019. All of the transport providers have agreements in place with the LEMSA. The remainder of the fire departments (with the exception of East Bay Regional Parks) are ALS departments and also have signed agreements in place with the LEMSA.

We successfully completed our stakeholder meetings which culminated in a ground-breaking new EMS system design and that RFP was approved by EMSA and released in January 2024.

NEED(S): Completion of the current RFP process.

Short-Range Plan (one year or less)

- Completion of RFP process.
- Further relationships with fire departments and ambulance providers to decrease the effects of staffing issues as all have current, signed agreements.
- Advance new policies and partnerships with all transport providers and hospitals to drive our APOT times down.

Long-Range Plan (more than one year)

- Negotiate contract and implement new system.

OBJECTIVE:

Maintain current system and further partnership improving the care of our patients as the system is currently structured and conclude the RFP that includes innovation to deliver the most appropriate, timely care to our community.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.25 ON-LINE MEDICAL DIRECTION

MINIMUM STANDARDS:

Each EMS system shall have on-line medical direction, provided by a base hospital (or alternative base station) physician or authorized registered nurse/mobile intensive care nurse.

RECOMMENDED GUIDELINES:

Each EMS system should develop a medical control plan that determines:

- the base hospital configuration for the system,
- the process for selecting base hospitals, including a process for designation which allows all eligible facilities to apply, and
- the process for determining the need for in-house medical direction for provider agencies.

CURRENT STATUS: MEETS MINIMUM STANDARD

Currently, Alameda County EMS has an established contractual agreement through 2024, which is currently being renewed through 2027 with Alameda Health System – Highland Hospital as the sole base hospital for on-line medical direction in Alameda County.

Through contract and policy, ALCO EMS has established standards for which physicians are authorized to serve in the capacity of Base Hospital Physician. ALCO EMS has also established responsibilities for on-going reporting, review of base hospital contacts and medical direction communications.

Pursuant to Title 22 Chapter 4 § 100170, Medical Control, the medical director of our LEMSA has established and maintained medical control by establishing policies which provide for direct voice communication between a paramedic and a base hospital physician as needed, and maintenance of records of communications between the service providers(s) and the base hospital through tape recordings and through emergency department communication logs sufficient to allow for medical control and continuing education of the EMT or paramedic.

All provider agencies are required to and have designated medical directors in-house for the purpose of off-line medical direction.

NEED(S):

Revise and renew on-line medical direction contract with Alameda Health System – Highland Hospital and ensure the contract/program has a robust QI plan.

OBJECTIVE:

To have a contract for on-line medical direction that is beneficial for EMS providers throughout the County and helps drive needed system improvements.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.26 TRAUMA SYSTEM PLAN

MINIMUM STANDARDS:

The local EMS agency shall develop a trauma care system plan, based on community needs and utilization of appropriate resources, which determines:

- the optimal system design for trauma care in the EMS area, and
- the process for assigning roles to system participants, including a process which allows all eligible facilities to apply.

RECOMMENDED GUIDELINES:

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY
DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES
CHAPTER 7. TRAUMA CARE SYSTEMS
Article 2. Local EMS Agency Trauma System Requirements
§ 100256. Trauma Plan Development

CURRENT STATUS: MEETS MINIMUM STANDARDS

(Compliant with current CA State Trauma Care Systems Regulations)

Refer to sections and plans:

- 1.07 (Trauma Planning) Progress Update Form 2023-24
- 1.19 (Policies, Procedures, Protocols) Progress Update 2023-24
- 1.27 (Pediatric System Plan) Progress Update Form 2023-24
- Trauma System Plan 2023-24

NEED(S):

Trauma system assessment

- Review and update trauma care system plan as needed.
- Improve/strengthen ALCO trauma care system by Continuous monitoring and evaluation of trauma system performance for needed policy/protocol modification, with the intention to improve system operations, quality/continuity of care, and optimize patient outcomes.

OBJECTIVE:

Improve/strengthen ALCO trauma care system by continuous monitoring and evaluation of trauma system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.27 PEDIATRIC SYSTEM PLAN

MINIMUM STANDARDS:

The local EMS agency shall develop a pediatric emergency medical and critical care system plan, based on community needs and utilization of appropriate resources, which determines:

- the optimal system design for pediatric emergency medical and critical care in the EMS area, and
- the process for assigning roles to system participants, including a process which allows all eligible facilities to apply.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: **'MEETS MINIMUM STANDARD'**

Refer to sections and plans:

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)
- 5.01 (Assessment of Capabilities)
- 5.10 (Pediatric System Design)
- 5.11 (Emergency Departments)

CA EMSC REGULATIONS AND EMSC SYSTEM PLAN

- Alameda County EMS is planning to submit the EMSC System plan to state EMSA in 2024
- Implementing Pediatric System Design changes to strengthen EMSC program.
- Preparing new 2024 contract with UCSF Benioff Children's Hospital Oakland and SF Mission Bay for continued Pediatric Readiness Site visits, ImPACT Simulation training, and "just in time" pediatric clinical expertise with pediatric resource packets
- Scheduling bi-annual ALCO EMS PedRC / EMSC meeting with healthcare system partners. Next Meeting is scheduled May 15, 2024.
- EMSC PROGRAM AND WORKPLAN includes:
 - First response non-transport
 - Transport
 - Interfacility transfer
 - Critical care
 - Pediatric specific personnel training
 - Pediatric ambulance equipment
 - Data management requirements –quality improvement plan and evaluation *
 - PedRCs requirements for Hospitals. *
 - Pediatric patient destination policies - EMS agency

PEDIATRIC SURGE PREPAREDNESS AND EXERCISES

- Developed and revised the Alameda County Pediatric Surge Annex with the Western Regional Alliance for Pediatric Emergency Management (WRAP-EM) Pediatric Surge PLAYBOOK 2023. ALCO EMS Coordinator is a contributor author to the WRAP-EM Surge PLAYBOOK
- Provided training to the ALCO DPHC on the Pediatric Surge Annex, WRAP-EM Pediatric Surge PLAYBOOK & CA CDPH Pediatric Surge Annex to Patient Movement Plan.
- Leveraging partnerships with pediatric experts including WRAP-EM, Pediatric Pandemic Network (PPN), and National Pediatric Disaster Coalition (NPDC). ALCO EMSC Coordinator is the EMS Liaison to NPDC
- ALCO EMS Surge Lead presented the Pediatric Surge PLAYBOOK poster at the October 22, 2023 AAP Conference in Washington DC and at the CDPH Emergency Preparedness Training Workshop 2023.
- Completed, disseminated, and tested pediatric surge annex components with healthcare system partners in the 2/29/2024 Chemical / Pediatric Surge VTTX and Medical Response Surge Exercise (MRSE).

RECEIVING HOSPITAL PEDIATRIC READINESS AND SURGE CAPABILITY

- *Pediatric Critical Care Trauma Center – Level 1 – UCSF Benioff Children’s Hospital is the designated Trauma Center*
- Hospitals are expected to have pediatric receiving center readiness capability (PedRC) aligned with the CA EMSC regulations. Hospitals have designated a Pediatric Emergency Care Coordinator (PECC) physicians and nurses.
- All receiving hospital pediatric site visits were conducted in 2023 with UCSF Benioff Children’s Hospital Oakland and Mission Bay. The feedback reports and customized pediatric resource packets were disseminated to all participating hospitals. In 2024, follow-up conference calls have been or will be scheduled in 2024 to provide feedback and to identify pediatric needs
- Preparing new contract with UCSF Benioff Children’s Hospital, Oakland and Mission Bay, San Francisco, for Hospital Site Visits and ImpACT simulation training. Planning to integrate EMSC regulation requirements and prehospital assessments with PECC designations
- Shared CA EMSC Regulations EMSA implementation plan with Receiving Hospital partners
- All receiving hospitals completed the National Pediatric Readiness Project (NPRP) Survey in 2023
- Pediatric Site Visits will provide data on trauma re-triage. Education provided on Trauma Re-triage policy.

PEDIATRIC QI - CQI DATA COLLECTION

- CHILDREN INTEGRATED IN EMS QI DATA COLLECTION:

- Refer to ALCO EMSC System Plan for pediatric data metrics (to be submitted in 2024)
- Pediatric Hospital and Prehospital QI Data highlights include:

| Alameda County EMS Pre-Hospital Metrics_Pediatric (≤14yrs) | | |
|--|-------------|--|
| Category | Metric Name | Metric Description |
| Cardiac | PCAR -1 | Cardiac Arrest Survival - Non-Traumatic Arrest |
| | PCAR-2 | Cardiac Arrest Hospital Admissions - Non-Traumatic Arrest |
| Respiratory / Airway | PRESP-1 | Respiratory Assessment for Respiratory Distress |
| | PRESP-2 | Bronchodilator Administration for Bronchospasm (Transports Only) |
| | PRESP-3 | Supraglottic Airway Device - I-GEL Success Rates |
| Trauma | PTRA-1 | 90th Percentile Scene Times for Trauma Alerts |
| | PTRA-2 | Trauma Alerts Transported to a Pediatric Trauma Receiving Center |
| | PTRA-3 | Patients Meeting Critical Trauma Criteria documented as a Trauma Alert |
| | PTRA-4 | Appropriate Use of Pediatric Trauma Re-Triage |
| Medication Administration | PMED-1 | Accuracy for all Weight-Based Pediatric Medication Administrations |
| Seizures | PSEIZ-1 | Midazolam Administration for Active Seizures |
| Pain | PPAIN-1 | Fentanyl Administered for Pain ≥ 7 |
| Other | PEDS-1 | Treatment Administered for Hypoglycemia with Altered Mental Status |
| | PEDS-2 | Blood Pressure Assessment for Patients < 3 years of age |
| | PEDS-3 | Weight or Pedatape Color for all Patients Receiving a Weight-Based Medication |
| | PEDS-4 | Blood Glucose Level Assessment for Altered Mental Status |
| | PEDS-5 | Appropriate Destination for Pediatric's on an Involuntary Psychiatric Hold (5585) (≤17yrs) |

- Other pediatric data systems, metrics and reports include:
 - APOT Report and Change in Wall time- control chart
 - QI Reports = Pediatric Destinations/Transports (by Primary Impression); Trauma Reports and Psych patients
 - ED Pediatric Readiness Site Visit Reports
 - First Watch

ALAMEDA COUNTY EMS POLICIES AND PROCEDURES

– EMSC AUDIT PROCESS INTEGRATED IN EMS QI ACTIVITIES

- Alameda County QI Plan 2024 (Pediatric System of Care integrated in EMSC and QI Plans)
- PedRC recommendations aligns with EMSC Regulations
- ALCO EMS Administrative Policies include:
 - Hospital Responsibilities and Policy and Skills Competency
 - Trauma Audit Process Policy
 - Unusual Occurrence Policy
- National Pediatric Readiness Project (NPRP) Reports and Hospital Pediatric Site Visit Reports

ALCO EMS QI

Activities with focus on children and pediatric transports include:

- Contract compliance monitoring – UCSF Benioff Children’s’ Hospital Pediatric Readiness Project.
 - Hospital Assessment and QI provided by Pediatric Readiness Project with UCSF Benioff Children’s Hospital and Mission Bay Hospital
- Review – Unusual occurrence impacting children process
- Integrating the prehospital EMS providers in the Pediatric Readiness Project. EMS 911 Transport providers will participate in the on-line National Prehospital Pediatric Readiness Project Assessment in May 2024.

INVESTIGATIONS

- Contract compliance monitoring – UCSF Benioff Children’s’ Hospital Pediatric
- Investigation of all incidents reported via the Alameda County Unusual Occurrence reporting process, and coordination with all EMS providers and allied agencies to provide educational follow-up or disciplinary actions (where applicable).
- Tracked, investigated, and managed numerous Unusual Occurrences (real/potential reported threats to health and safety as per State regulation) reported to the EMS Agency
- EMS QI Coordinator Role collaboration with EMS for Children Coordinator
- Monitor hospital bypass and ambulance “wait times” – with consideration for children

PEDIATRIC COMMUNICATIONS - REDDINET

- Developed customized assessment polls with pediatrics
- Conducted remote virtual training with multiple hospital sites during the real events and exercises.
- Prepared to implement pediatric bed polling and customized assessments. New ReddiNet Administrative policy has been implemented in 2024.

PEDIATRIC INTEGRATION DURING “REAL EVENT” RESPONSE

- The goals included ALCO EOC to Hospital Command Center coordination, pediatric medical surge, and communications with cross sector healthcare partners.
- EMSC Coordinator facilitated COVID-19 Therapeutic allocation including with UCSF Benioff Children’s Hospital, Oakland and will support in future if needed
- Alameda County EMS leverages pediatric experts and partners to develop a comprehensive EMSC program work plan and clinical expertise in “real time” events

ALAMEDA COUNTY EMS POLICIES

- 2024 EMS Field Manual – Reviewed and updated pediatric policies as needed

TRAIN – TRIAGE RESOURCE ALLOCATION FOR INPATIENT

- Promoting the Triage by Resource Allocation for In-patients (TRAIN) project. Supporting Sutter Hospital TRAIN implementation project in Alameda County

PEDIATRIC INTEGRATION - COMMITTEES

- EMSC and Pediatric Readiness integration in quarterly Receiving Hospital Meetings
- UCSF Benioff Children’s Hospital & Mission Bay, San Francisco Pediatric Readiness Project Contract meeting occurs quarterly
- Updated Pediatric Resources and ensure access with system partners via ED Receiving Hospital Committee, HCC - Disaster Preparedness Coalition (DPHC), QI Meetings, EMSC, and Hospital Disaster Preparedness Committees
- Ensure pediatric issues are addressed in all EMS programs and committees: Quality Improvement, Trauma, Disaster, Injury Prevention, IFT, Falck 911, and Region II ABAHO Projects
- Facilitating semi-annual Pediatric QI & EMSC meetings with partners and stakeholders
- Ensure EMSC coordination and collaboration with Child Injury prevention program
 - Refer to Alameda County EMS Website - Alameda County Ems Prevention PROGRAMS
- EMSC integration in Trauma Program – Refer to Trauma System Plan 2024
- EMSC Coordinator participates on the CA EMSC-TAC Committee and Disaster Projects; CDPH/EMSA Pediatric Surge project committee as needed; and supports the ASPR Speaker Series

- EMSC Coordinator supports Pediatric Centers of Excellence Project Grant, Pediatric Pandemic Network, and Western Regional Alliance Planning Emergency Management Team as needed

PEDIATRIC RESOURCES AND LOGISTICS

- EMS and MHOAC Procurement Center (established during COVID-19) continues to include pediatric resource procurement to meet operational needs

NEED(S):

Implement the new UCSF Pediatric Readiness Contract and Project Site Visits with prehospital integration.

Facilitate Health Data Exchange (HDE) with UCSF Benioff Children’s Hospital, Oakland and other hospitals

OBJECTIVE:

ALAMEDA COUNTY EMS FOR CHILDREN BENCHMARKS:

- Implementation EMSC Regulations with PedRC benchmarks
- Ensure pediatric ALS/BLS equipment and supplies
- Adopt evidence based pediatric policies and protocols
- Leverage hospitals to strengthen pediatric readiness for “day to day” and medical surge readiness
- Ensure pediatric competency in hospitals and with prehospital providers
- Strengthen pediatric medical surge and disaster plans including the Pediatric Surge Annex to the HCC Pediatric Response Plan Annex
- Ensure pediatric resources are disseminated to healthcare partners via Alameda County EMS Website; google list serve, and coalitions/committees
- Ensure Pediatric Quality Improvement
- Ensure Injury Prevention and education Projects
- Pediatric Medical Surge capability and system-wide readiness
- Sustain EMSC & Pediatric Readiness QI and Surge Advisory Committees
- Strengthen HDE with all hospitals with pediatric benchmarks
- Promote Pediatric Resource Information via Alameda County EMS Website, National Pediatric Disaster Coalition Googlelist Serve, ASPR Tracie Pediatric Resources, and PPN, WRAP-EM Websites

NEED(S):

OBJECTIVE:

The overall goal of the Alameda County EMS for Children (EMSC) program is to ensure that acutely ill and injured children have access to high quality, coordinated, and comprehensive emergency and critical care services appropriate for children’s special needs.

SHORT-RANGE/ LONG RANGE

- Continue to assess the local ED and prehospital pediatric capability. Facilitate hospital and ALS EMS provider pediatric readiness with focus on pediatric medical surge.
- Implement CA EMSC regulation guidelines - Strengthen the program consistent with CA EMSC regulations.
- Continue to promote the TRAIN Model with focus on NICU.
- Continue to support the WRAP-EM and HRSA Pediatric Pandemic Network (PPN) projects

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

1.28 EOA PLAN

MINIMUM STANDARDS:

The local EMS agency shall develop and submit for State approval, a plan, based on community needs and utilization of appropriate resources, for granting of exclusive operating areas, that determines: a) the optimal system design for ambulance service and advanced life support services in the EMS area, and b) the process for assigning roles to system participants, including a competitive process for implementation of exclusive operating areas.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Pursuant to Section 1797.224 of the California Health and Safety Code, ALCO EMS has established 5 exclusive operating areas (EOAs) for 9-1-1 ambulance transport services.

Four of the EOAs are granted through an exclusive non-competitive process due to grandfathering city fire departments that provided ambulance services prior to The Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980. The four grandfather EOAs are the city of Alameda, the city of Albany, the city of Berkeley, and the city of Piedmont. The city of Berkeley EOA includes the state property of UC Berkeley and the federal property at Lawrence Berkeley Lab.

The fifth EOA encompasses the remainder of Alameda County and is granted through an exclusive competitive process. This EOA was last competitively bid in 2018 with the winning contractor implementing service in July of 2019. The current contractor has been awarded the EOA for a 5-year term and a 2-year extension ending in June of 2026.

Lawrence Livermore National Lab (LLNL) is federal property and is exempted from the EOAs. Ambulance transport services for LLNL is provided through a federal contract with Alameda County Fire District.

First Response Advanced Life Support (FRALS) services is provided throughout all EOAs by fire departments or districts within each jurisdiction. The need for the provision of Advanced Life Support (ALS) transport services is determined through a tiered response informed by the Medical Priority Dispatch System (MPDS) and further local call prioritization as determined by historical clinical and operational data under the discretion of the Alameda County EMS Agency Medical Director's medical control. ALS transport services are provided through either an ALS ambulance staffed with at least one paramedic or through the combination of a basic life support (BLS) ambulance and a paramedic staffed quick response vehicle (QRV).

NEED(S):

Maintenance of existing EOAs.

Maintenance and continuous review of tiered responses.

OBJECTIVE:

Conduct competitive process for provision of ambulance services in fifth EOA described above.

Maintain continuous provider agreements for provision of ambulance services with non-competitive grandfathered fire department providers in other established EOAs.

Maintain continuous provider agreements for provision of FRALS by fire departments and districts within each jurisdiction.

Continually review MPDS and local call prioritization to ensure appropriate community response.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.01 ASSESSMENT OF NEEDS

MINIMUM STANDARDS:

The local EMS agency shall routinely assess personnel and training needs.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

Refer to the Alameda County QI Plan 2024, Pediatric Surge Annex, EMS for Children System Plan, and the Alameda County EMS System Plan following sections:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 1.27 (Pediatric System Plan)
- 5.01 (Assessment of Capabilities)
- 5.10 (Pediatric System Design)
- 5.11 (Emergency Departments)
- 5.12 (Public Input)

- 2024 QI PLAN

As part of the annual protocol updates conducted in Q3 and Q4 of 2023, Alameda County EMS surveyed field providers to determine what types of education and training they would like to receive and needed. ALCO EMS obtained nearly 900 responses and are using the feedback to develop training for the next year and in the future.

Alameda County EMS conducted Pediatric Readiness Site Visit Assessments and ImPACT simulation training for the ALCO receiving hospitals. The National Pediatric Readiness Assessment (NPRP) evidenced based assessment was utilized to identify the hospital pediatric readiness gaps. Based on the assessment, customized pediatric resource packets and follow-up pediatric training is planned for 2024.

NEED(S):

Improve provider patient care and patient outcomes.

Develop and deploy training in accord with the survey findings described above.

OBJECTIVE

Develop and conduct training on the subject areas that EMS providers request. Conduct Alameda County EMS system-wide training sessions regarding policy changes – conducted annually following the policy review process and prior to the implementation of new policies.

Assess pediatric resources and readiness for all Alameda County Receiving Hospitals consistent with the CA EMS for Children regulations and the evidence based National Pediatric Readiness Project (NPRP) benchmarks.

Conduct pediatric ImPACT simulation training with feedback for all hospitals with UCSF Benioff Children’s Hospital

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.02 APPROVAL OF TRAINING

MINIMUM STANDARDS:

The EMS Authority and/or local EMS agencies shall have a mechanism to approve EMS education programs that require approval (according to regulations) and shall monitor them to ensure that they comply with state regulations.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: Meets Minimum Standards

The Alameda County EMS Agency has a mechanism to approve and monitor EMS Education Programs using the State regulations under Title 22, Division 9 -Prehospital Emergency Medical Services.

These Alameda County EMS Education Programs include:

- Paramedic Programs
- Emergency Medical Technician Programs
- CE Providers
- Public Safety First Aid (PSFA)

NEED(S): None

OBJECTIVE:

Continue evaluating EMS Education Programs applying for accreditation.

Monitor compliance standards of the approved EMS Education Programs.

Obtain consistency from the EMS Education Programs.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.03 PERSONNEL

MINIMUM STANDARDS:

The local EMS agency shall have mechanisms to accredit, authorize, and certify pre-hospital medical personnel and conduct certification reviews, in accordance with state regulations. This shall include a process for pre-hospital providers to identify and notify the local EMS agency of unusual occurrences that could impact EMS personnel certification.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Review DOJ/FBI reports as appropriate of licensed EMT personnel
- Oversight of EMT and paramedic training programs, with guidance as appropriate
- Mandatory county orientation, which is held on a monthly basis, for all EMTs and paramedics entering the system
- Facilitate intern candidate orientation.
- Facilitate paramedic preceptor training.
- Collaboration with clinical education and training service divisions of county EMS providers and other allied agencies
- Online reporting capability for unusual occurrences related to EMS performance issues as well as system issues.

NEED(S):

Enabled enhance online reporting and application system through an online Image Trend based portal.

OBJECTIVE:

Continue collaboration and coordination with EMS providers, other allied agencies, and training programs.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.04 DISPATCH TRAINING

MINIMUM STANDARDS:

Public safety answering point (PSAP) operators with medical responsibility shall have emergency medical orientation and all medical dispatch personnel (both public and private) shall receive emergency medical dispatch training in accordance with the EMS Authority's Emergency Medical Dispatch Guidelines.

RECOMMENDED GUIDELINES:

Public safety answering point (PSAP) operators with medical dispatch responsibilities and all medical dispatch personnel (both public and private) should be trained and tested in accordance with the EMS Authority's Emergency Medical Dispatch Guidelines.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

EMD--Alameda County maintains two IAEMD ACE Accredited EMD Centers of Excellence.

ACRECC (Alameda County Regional Emergency Communications Center)--provides EMD services for all areas of the County other than the City of Oakland. ACRECC also dispatches first responder and ambulance transport apparatus for several municipalities as well as Falck Alameda County.

Oakland Fire Department-- provides EMD services for the City of Oakland.

MEDICAL DISPATCH REVIEW COMMITTEE (MDRC)

- Coordinate and standardize emergency medical dispatch functions throughout the County, Alameda County EMS has established a Medical Dispatch Review Committee that is comprised of representatives from ACRECC and the Oakland Fire Department Dispatch center as well as field personnel, the EMS Director, EMS Medical Director and provider agency and leadership.
- The establishment of this committee has assisted in standardizing the assignment of EMS resources throughout the county and maintaining cross-center dialogue has improved our data collection with respect to MPDS activities.
- This improved data collection has provided us the means to assess the effectiveness of our MPDS implementation more accurately.

NEED(S):

Work with all Dispatch Centers regarding education and specific QA/QI for calls that are potentially cardiac arrest in origin and warrant Dispatch Assisted Pre-Arrival CPR and AED instructions.

Public safety answering point (PSAPs) operators with medical dispatch responsibilities and all medical dispatch personnel are trained and tested in accordance with the EMS Authority's Emergency Medical Dispatch Guidelines. Develop and maintain bi-directional CAD to CAD communications links between all PSAP and Emergency Dispatch Centers.

OBJECTIVE:

Continuously monitor system response compliance to ensure the most priority patients receive the most priority response.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.05 FIRST RESPONDER TRAINING

MINIMUM STANDARDS:

At least one person on each non-transporting EMS first response unit shall have been trained to administer first aid and CPR within the previous three years.

RECOMMENDED GUIDELINES:

At least one person on each non-transporting EMS first response unit should be currently certified to provide defibrillation and have available equipment commensurate with such scope of practice, when such a program is justified by the response times for other ALS providers.

At least one person on each non-transporting EMS first response unit should be currently certified at the EMT level and have available equipment commensurate with such scope of practice.

CURRENT STATUS: MEETS MINIMUM STANDARDS

TRAINING – POLICIES AND AGREEMENTS – Requirements

- Refer to the **Alameda County 2024 Field Manual** – General Operational Policies (Available on the Alameda County EMS – website: [ALAMEDA COUNTY EMS FIELD PROTOCOLS](#))
- Emergency Medical Technicians - A completed EMT Skills Verification Form (EMSA-SCV 01/17) is required for those individuals who are either renewing or reinstating their EMT certification every two (2) years.

PROVIDER CONTRACTS/AGREEMENTS

- Refer to the EMS First Responder Advanced Life Support Services Agreements (FRALS) with Fire Departments

Emergency Medical Services First Responder Advanced Life Support (Paramedic) Services Agreements:

- [First Responder Advanced Life Support Services Agreement - City of Alameda](#)
- [First Responder Advanced Life Support Services Agreement - City of Albany](#)
- [First Responder Advanced Life Support Services Agreement - City of Berkeley](#)
- [First Responder Advanced Life Support Services Agreement - City of Dublin](#)
- [First Responder Advanced Life Support Services Agreement - City of Emeryville](#)
- [First Responder Advanced Life Support Services Agreement - City of Fremont](#)
- [First Responder Advanced Life Support Services Agreement - City of Hayward](#)
- [First Responder Advanced Life Support Services Agreement - City of Livermore](#)
- [First Responder Advanced Life Support Services Agreement - City of Newark](#)
- [First Responder Advanced Life Support Services Agreement - City of Oakland](#)
- [First Responder Advanced Life Support Services Agreement - City of Piedmont](#)
- [First Responder Advanced Life Support Services Agreement - City of Pleasanton](#)
- [First Responder Advanced Life Support Services Agreement - City of San Leandro](#)
- [First Responder Advanced Life Support Services Agreement - City of Union City](#)

NEED(S): None

OBJECTIVE:

To provide at least one person on each non-transporting first response unit trained in first aid and CPR every two years - **COMPLETED.**

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.06 RESPONSE

MINIMUM STANDARDS:

Public safety agencies and industrial first aid teams shall be encouraged to respond to medical emergencies and shall be utilized in accordance with local EMS agency policies.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

Refer to Alameda County EMS System sections and plans:

- 2.12 (Early Defibrillation)
- Public safety agencies and industrial first aid teams are encouraged to respond to medical emergencies and are utilized in accordance with local EMS agency policies.
 - Alameda County EMS held Stop the Bleed and CPR training at the Oakland Airport in 2023

EMS Policy Manual

Refer to the Alameda County Administration and Policy Manual 2024 (Available on the Alameda County EMS Website):

<https://ems.acgov.org/ClinicalProcedures/FieldTreatmentProtocols.page>

- [2024 Alameda County EMS Field Manual](#)

Tactical Medicine

- All prehospital training is in accordance with EMSA/POST approved tactical medicine curriculum. Currently offering Tactical Medical Technician (TMT) 40-hour classes projected have resumed. TMT is POST, EMSA and LEMSA approved.
- The annually held SWAT Challenge is a coordinated endeavor that is coordinated with the Alameda County Sheriff's Office to include tactical medical training for EMS personnel, medical personnel, and first responders in a full-scale exercise to practice response to a mass casualty active shooter event.
- ALCO EMS has become an approved National Association of EMTs training site to provide the Tactical Emergency Casualty Care (TECC) credential.

Tactical Emergency Medical Support (TEMS) Team

- In conjunction with the County EOA Contractor, ALCO EMS has implemented and continues to develop an active Tactical Emergency Medical Support (TEMS) program including 40 hours of training via a California EMS Authority approved curriculum and level IIIA ballistic protection for tactical EMS personnel.
- Maintained routine operation of the ALCO TEMS team in responding to high threat/ high consequence incidents county-wide.

EMS and Clinic Field Treatment Site Co-Location Project

- ALCO EMS held a Co-location tabletop exercise in April 2022. An in person multi-agency exercise will be held in June to follow with three different clinic agencies.
- ALCO EMS conducted two Co-location full scale exercises in Oakland on April 17, 2024, with La Clinica and West Oakland Health Centers. Patient Tracking was tested with EMS providers.
- The Oakland airport exercise in March and April 2024 tested non-medical collection points for family reunification and passenger gathering.

NEED(S): None

OBJECTIVE:

Ramp up Tactical Medicine training and maintain routine operation of the ALCO TEMS team.

Complete Co-location project and continue MCI planning.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.07 MEDICAL CONTROL

MINIMUM STANDARDS:

Non-transporting EMS first responders shall operate under medical direction policies, as specified by the local EMS agency medical director.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

- Refer to 1.02 and 1.24 Form in this 2023 EMS System Plan
- Refer to 2024 QI Plan
 - Refer to the EMS Policy Manual 2024 (available on the EMS website or downloadable app)
 - [ALAMEDA COUNTY EMS FIELD PROTOCOLS](#)
 - Refer to the Annual Protocols Update Training on the Alameda County EMS website and available upon request to Alameda County EMS
 - Printed books and IOS and Android applications are available for download
 - **Alameda County EMS Mobile Field Manual** (Free download) ([iOS Devices](#) | [Android Devices](#))
 - Provider contracts and service agreements are in place
 - **Emergency Medical Services First Responder Advanced Life Support (Paramedic) Services Agreements:**
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Alameda](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Albany](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Berkeley](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Dublin](#)
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 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Newark](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Oakland](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Piedmont](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Pleasanton](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of San Leandro](#)
 - [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Union City](#)

NEED(S): None.

OBJECTIVE:

- SHORT-RANGE PLAN:
 - Ongoing Performance improvement monitoring

- LONG-RANGE PLAN
 - Renew MOUs when appropriate

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.08 EMT-I TRAINING

MINIMUM STANDARDS:

All emergency medical transport vehicle personnel shall be currently certified at least at the EMT-I level.

RECOMMENDED GUIDELINES:

If advanced life support personnel are not available, at least one person on each emergency medical transport vehicle should be trained to provide defibrillation.

CURRENT STATUS: (INDICATE 'MEETS MINIMUM STANDARD' OR 'DOES NOT MEET MINIMUM STANDARD')

- Meets Minimum Standard

All emergency medical transport vehicles have personnel certified at least at EMT-1 level.

- EMT Certification - Required baseline
- Policy - Refer to Operations Policy "Staffing"
- All EMS provider contracts address training.

NEED(S):

NO NEEDS AT THIS TIME

OBJECTIVE:

Continue monitoring compliance with all standards.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.09 CPR TRAINING

MINIMUM STANDARDS:

All allied health personnel who provide direct emergency patient care shall be trained in CPR.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: *(INDICATE 'MEETS MINIMUM STANDARD' OR 'DOES NOT MEET MINIMUM STANDARD')*

- Meets Minimum Standards

Progress to Date

- Alameda County EMS Policies require all prehospital care providers to be trained in CPR.
 - Refer to 2.06 (Response)
 - Refer to 2.12 (Early Defibrillation)

AED/PAD Program

- A contract was implemented in October 2021 with Via Heart Project to manage the 92 AEDs across the county. Via performed site visits to change all AED pads and ensure an AED coordinator had been identified at each location.
 - Agreement with Via Heart Project has a term of 3 years ending September 30th 2024. This contract is currently being renewed for another service period.

CPR 9

- State legislation requires ninth graders that take health science be trained in CPR as a graduation requirement. Alameda County EMS has mostly transitioned formerly used resources for CPR 7 to support the ongoing CPR 9 efforts. Some CPR 7 sites decided to keep their programs, which Alameda County EMS still supports.

Heart Screening

- Alameda County EMS has partnered with Via Heart Project as a co-sponsor for a one-day heart screening for community members 12-25 years of age. This service is FREE of charge as main sponsorship is secured by Via prior to the event.

NEED(S): None

OBJECTIVE:

Execute contract renewal with Via Heart Project or other vendor to maintain AED community sites.

Coordinate with Alameda County Risk Management as needed

ALCO EMS has collaborated with Alameda County Risk management who is overseeing the AED program for County Government owned and leased spaces. (Risk Management provides CPR / AED training for county government personnel).

Ensure long term stability and maintenance of AED sites and programs.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.10 ADVANCED LIFE SUPPORT

MINIMUM STANDARDS:

All emergency department physicians and registered nurses that provide direct emergency patient care shall be trained in advanced life support.

RECOMMENDED GUIDELINES:

All emergency department physicians should be certified by the American Board of Emergency Medicine.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Consistent with state EMSC Regulations, ALCO EMS ensures all hospital Physician Pediatric Emergency Care Coordinators (PECCs) shall be licensed in California and meet all the following minimum requirements: Be a qualified specialist in Pediatrics or Family Medicine, with PALS certification
- Consistent with state EMSC Regulations, ALCO EMS ensures all hospital nurse, nurse practitioner, and physician assistant PECCs shall be licensed in California and meet all the following minimum requirement: Shall have competency in resuscitation of pediatric patients of all ages from neonates to adolescents through a nationally recognized Pediatric Advanced Life Support course approved by EMS Agency.

NEED(S):

Improve ED provider patient care and patient outcomes including pediatrics

OBJECTIVE:

EMS will continue to work collaboratively with ED Directors and Managers to seek these adult and pediatric certifications for physicians and nurses.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.11 ACCREDITATION PROCESS

MINIMUM STANDARDS:

The local EMS agency shall establish a procedure for accreditation of advanced life support personnel that includes orientation to system policies and procedures, orientation to the roles and responsibilities of providers within the local EMS system, testing in any optional scope of practice, and enrollment into the local EMS agency's quality assurance/quality improvement process.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

- Refer to the 2018 Administration Policies, 2022 EMS Field Manual Update, and the 2024 ALCO EMS Field Manual
 - 01/27/2022 - 2022 ALCO EMS Field Manual
 - [PDF Version of the 2024 ALCO EMS Field Manual](#)
- Alameda County EMS facilitates monthly Quality Council Meetings
 - Refer to the Alameda County 2024 EMS Continuous Quality Improvement Plan
- The **Alameda County EMS Orientation** is held monthly
- **Paramedic Accreditation information** is available on the Alameda County EMS website
 - [INDIVIDUAL CERTIFICATION/ACCREDITATION](#)
 - [EMT Initial Certification Application](#)
 - [EMT Recertification Application](#)
 - [Paramedic Accreditation Application](#)
 - [EMT Skills Competency Verification](#)
- **Policy 2000** was updated in Nov. 2021, Alameda County EMS has established a procedure for accreditation of ALS personnel that includes orientation to system policies and procedures. Contact Alameda County EMS for additional information.

NEED(S):

Improve provider patient care and patient outcomes

OBJECTIVE:

Improve policies, accreditation process

Ensure 2018 Administration Policies and 2024 EMS Field Manual Updates

Establish an online EMT certification and Paramedic accreditation application process

- <https://ems.acgov.org/CertsAccreditation/CertsAccreditation.page?>
- *Refer to the Alameda County EMS 2024 EMS Quality Improvement Plan*

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.12 EARLY DEFIBRILLATION

MINIMUM STANDARDS:

The local EMS agency shall establish policies for local accreditation of public safety and other basic life support personnel in early defibrillation.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: **MEETS MINIMUM STANDARD**

Refer to EMS System plan sections and plans:

- Section 2.06 (Response)
- Section 2.09 (CPR Training)
- 2024 QI Plan

AED/PAD PROGRAM

- Alameda County EMS continues to support the placement of AEDs throughout Alameda County.
- The Alameda County AED locations are shared with the two 9-1-1 dispatch centers via PulsePoint.
- Alameda County EMS continues to have a designated AED Coordinator
- Alameda County EMS is planning to distribute 100 **Avive AEDs** for law enforcement vehicles to respond to cardiac arrests. ALCO EMS Coordinators are assessing law enforcement AED needs in each jurisdiction.

AED/PAD PROGRAM – HEARTSAFE PROJECT

- In October 2021, Alameda County EMS implemented a contract with **Via Heart Project** to manage 92 Community AEDs across the county.
 - The Via Heart Project contractor deliverables includes performs site visits; replaces all community AED pads and batteries; ensure an AED coordinator has been identified at each location; and requires AED inspections tracked at each community site. The VIA Heart Project also tracks Alameda County EMS vehicle AEDS with required inspection checks and pad and battery replacement.
 - The VIA Heart Project offers CPR and AED training to the Alameda Community AED locations under if requested. The Alameda County EMS contract with VIA Heart Project does not include the training requirement.
 - Agreement with Via Heart Project has a term of 3 years ending September 30th, 2024, at which point terms, service, and performance are reviewed. Given the VIA Heart project vendor meets the contract deliverable requirements, the contract with Alameda County EMS is anticipated to be renewed.

PULSEPOINT

- Alameda County EMS is collaborating with the PulsePoint vendor to update Alameda County AEDs within the PulsePoint APP. In addition, Alameda County Fire Departments are working with the PulsePoint Vendor to ensure accurate and timely updates for the Alameda County AED locations. Expansion of PulsePoint into the city of Oakland is currently in progress.

CERTIFICATION/RECERTIFICATION CHECKLIST

- Refer to the EMS Administration Manual. Contact Alameda County EMS for additional information.
- <https://ems.acgov.org/CertsAccreditation/CertsAccreditation.page?>

PUBLIC SAFETY FIRST AID PROGRAMS

- Implemented credentialing program as required by state regulation for Public Safety First Aid programs in 2022. Alameda County EMS continues to identify new programs 2023 and 2024
 - <https://ems.acgov.org/CertsAccreditation/CertsAccreditation.page>
 -
- Public Safety First Aid Providers are recognized through completion of initial training through an approved entity, and that recognition is maintained through completion of refresher training in accordance with regulation.
 - Refer to the [California Regulations](#) pertaining to Public Safety First Aid Providers

NEED(S):

Improve layperson, Public Safety, and BLS responses to cardiac arrest patients to improve patient outcomes

OBJECTIVE: Improve cardiac arrest survival

Encourage citizens to install PulsePoint on their smartphones in order to get more bystanders who are motivated to perform CPR to do so inclusive of apply defibrillators to patients in cardiac arrest

Implement Avive AEDs in Law Enforcement vehicles

Continue HeartSAFE Community AED project

Continue contract for HeartSAFE project with VIA Heart Project to maintain 92 Community AEDs for an additional three years.

Work with Fire Departments on the data analysis regarding frequency of activations and responder participation in CPR and use of AED prior to EMS arrival.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

2.13 BASE HOSPITAL PERSONNEL

MINIMUM STANDARDS:

All base hospital/alternative base station personnel who provide medical direction to pre-hospital personnel shall be knowledgeable about local EMS agency policies and procedures and have training in radio communications techniques.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

- Alameda County EMS has a 3-year agreement with the Base Hospital – Highland Hospital (Alameda Health System) in Oakland which ends June 30, 2024. ALC EMS is in the process of developing a new 3-year contract which will start July 1, 2024

NEED(S):

Improved base hospital physician medical direction to field providers

OBJECTIVE:

Provide timely and appropriate Physician Medical Direction for field EMTs and Paramedics (Short and Long Range)

- Conduct Monthly Base Call Reviews
- Refer to 2024 QI PLAN
- Refer to 2024 EMS System Plan Sections:
 - 1.12 (Review and Monitoring)
 - 5.01 (Assessment of Capabilities)
 - 1.18 (QA/QI)
 - 3.01 (Communications Plan)

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

3.01 COMMUNICATIONS PLAN

MINIMUM STANDARDS:

The local EMS agency shall plan for EMS communications. The plan shall specify the medical communications capabilities of emergency medical transport vehicles, non-transporting advanced life support responders, and acute care facilities and shall coordinate the use of frequencies with other users.

RECOMMENDED GUIDELINES:

The local EMS agency's communications plan should consider the availability and use of satellites and cellular telephones.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

REDDINET COMMUNICATIONS

- ReddiNet access and utilization is a priority bi-directional communications system. Alameda County EMS is expanding and leveraging new user partners including hospitals, EMS transport providers and the Alameda County Office of Emergency Services.
- A new ReddiNet Bed Capacity data was added for HAvBED Surge
- ReddiNet upgrades and new users were added for non-911 transport permitted providers.
- A new Alameda County EMS ReddiNet Administrative Policy was developed in 2023 and revised in 2024 with hospital, ACRECC, and 911 Transport ReddiNet utilization requirements,

700/800 MEGAHERTZ COMMUNICATIONS EBRCSA XAL COMMUNICATIONS

- The EMS 700/800 Megahertz radio communications system is hosted by the East Bay Regional Communications System Authority (EBRCSA). Redundant and interoperable communications with common radio frequencies between fire and ambulance providers, hospitals and law enforcement is fully operational. Portable EBRCSA radios have been issued to each EMS Agency Duty Officer, the MHOAC and RDMHS Region II and have also been distributed to all hospital emergency planners for the hospital incident command centers.
- All ALS and BLS/IFT providers integrate 700/800 Megahertz Radios into daily operations.
- Alameda County EMS conducts monthly 700/800 Megahertz Radio drills with Hospital Command Center partners.
- All provider radios have updated TDMA firmware and possess the latest XAL Communications Code Plug Programming System Key.
- In the event of a large-scale event or Mass Casualty Incident (MCI) all providers have interoperability with Dispatch Centers, Receiving Hospitals, County-based Provides, and Law Enforcement with the ability to integrate in the existing Disaster Plan.

CALIFORNIA HEALTH ALERT NETWORK (CAHAN)

- Alameda County EMS has updated the CAHAN contacts with 911 and Non-911 emergency permitted Providers in 2023.
- Alameda County EMS CAHAN Administrators participate in monthly CAHAN conference call meetings and exercises.

LOCAL ALAMEDA COUNTY MASS NOTIFICATION SYSTEM – EVERBRIDGE

- Alameda County participates in HCSA Emergency Operations Workgroup to develop AC Alert user groups, policies, messaging, and completed additional training modules.
- Alameda County participates in Mass Notification planning meetings and exercises with Alameda County OES in accordance with the Disaster Plan.

ALAMEDA COUNTY EMS WEBSITE

- The Alameda County EMS Agency website is frequently updated and socializes the public, partners and stakeholders with the latest information to keep all parties informed and educated.

COORDINATION WITH OTHER EMS AGENCIES:

Alameda County maintains interoperability with neighboring dispatch centers through Reddi-Net. In addition, ABAHO facilitates Bay Area stakeholder communication planning discussions via monthly meetings and conference calls.

NEED(S): NONE CURRENTLY.

OBJECTIVE:

Provide on-going training and exercises to ensure redundant and interoperable communications.

- Ensure on-going training, exercises, and “real events” test redundant and interoperable communications
- Continue to expand partner access and competency on ReddiNet with focus on messaging, MCI alerting, patient tracking and customized polling

TIME FRAME FOR MEETING OBJECTIVE:

Long-Term Plan (one year or less):

3.02 RADIOS

MINIMUM STANDARDS:

Emergency medical transport vehicles and non-transporting advanced life support responders shall have two-way radio communications equipment which complies with the local EMS communications plan which provides for dispatch and ambulance-to-hospital communication.

RECOMMENDED GUIDELINES:

Emergency medical transport vehicles should have two-way radio communications equipment that complies with the local EMS communications plan and that provides for vehicle-to-vehicle (including both ambulances and non-transporting first responder units) communication.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

COMMUNICATION RADIOS

- All Alameda County EMS Providers, Dispatch Centers and PSAPs, Hospital Command Centers, and HCSA Command Staff share the ability to communicate EBRCSA 700/800 megahertz radios with full interoperability. Functional tests are performed at predetermined intervals.

EBRCS XAL COMMUNICATIONS

- Full integration of TDMA EBRCSA XAL Communications Code Plug to improve EMS provider radio communications.

Refer to Alameda County EMS sections and plans:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 3.01 (Communications Plan)
- 3.04 (Dispatch Center)
- 3.07 (9-1-1 Planning Coordination)
- 5.01 (Assessment of Capabilities)
- 2024 QI PLAN

NEED(S): NONE CURRENTLY

OBJECTIVE:

Maintain operation of TDMA EBRCSA 700/800 megahertz radios at receiving facilities and ensure operations through testing and a QI/QA process.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year): ongoing

3.03 INTERFACILITY TRANSFER

MINIMUM STANDARDS:

Emergency medical transport vehicles used for interfacility transfers shall have the ability to communicate with both the sending and receiving facilities. This could be accomplished by cellular telephone.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- All 9-1-1 and non-9-1-1 permitted providers have radios that are able to function with all facets of our current EBRCS radio system. This is required equipment as listed in the Alameda County EMS field manual – operations section.
- Firmware updates have been installed to all EBRCS radios (2021)
- All Alameda receiving hospitals have the ability to receive radio communications via the EBRCS system.
- Out of county receiving facilities are notified by transporting unit(s) or the base hospital.
- All 9-1-1 transport providers and non-9-1-1 permitted providers issue cell phones to on duty crews
- All Alameda receiving hospitals, 9-1-1 and non-9-1-1 permitted providers have access to Reddinet with the messaging, status, and MCI modules

Refer to EMS System Plan sections and plans:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 3.01 (Communications Plan)
- 3.02 (Radios)
- 5.01 (Assessment of Capabilities)
- 2024 QI PLAN

COORDINATION WITH OTHER EMS AGENCIES:

EBRCS programmed radios provide ability for cross communication between Alameda County resources and Contra Costa County resources. Additionally, interfacility ambulance companies that may function in additional counties, would have access to EBRCS if permitted and functioning in either Alameda County or Contra Costa County.

NEED(S): NONE AT THIS TIME

OBJECTIVE:

Continue to perform monthly radio checks with the non-9-1-1 permitted providers.

Evaluate the need for an updated bls code plug.

Ensure non-9-1-1 permitted providers continue to instruct new hires in the use of the EBRCS radio.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

3.04 DISPATCH CENTER

MINIMUM STANDARDS:

All emergency medical transport vehicles where physically possible, (based on geography and technology), shall have the ability to communicate with a single dispatch center or disaster communications command post.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- All EOA provider contracts require interoperable radio and disaster communications capability including Falck, FRALS, and two dispatch centers - the Alameda County Regional Emergency Communications Center (ACRECC) and Oakland Fire Dispatch.
- EMS Providers utilize East Bay Regional Communications System Authority (EBRCSA) radio programming.
- Alameda County maintains two IAED ACE Accredited EMD Centers of Excellence. OFD provides EMD services for the City of Oakland. ACRECC (Alameda County Regional Emergency Communications Center) provides EMD services for the remainder of the county.
- ACRECC also dispatches first responders and ambulance apparatus for several municipalities as well as our 9-1-1 ambulance contract provider, Falck Alameda County.
- To coordinate and standardize emergency medical dispatch functions throughout the County, Alameda County EMS has established a Medical Dispatch Review Committee (MDRC) comprised of representatives from ACRECC and the Oakland Fire Department Dispatch center as well as field personnel, the EMS Director, EMS Medical Director and provider agency and leadership. The establishment of this committee has assisted in standardizing the assignment of EMS resources throughout the county. Establishing cross-center dialogue has improved our data collection with respect to MPDS activities. This improved data collection allows us to accurately assess MPDS implementation.

NEED(S): NONE CURRENTLY

OBJECTIVE:

All emergency medical transport vehicles shall have ability to communicate with dispatch centers and disaster communications centers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year): ongoing

3.05 HOSPITALS

MINIMUM STANDARDS:

All hospitals within the local EMS system shall (where physically possible) have the ability to communicate with each other by two-way radio.

RECOMMENDED GUIDELINES:

All hospitals should have direct communications access to relevant services in other hospitals within the system (e.g., poison information, pediatric and trauma consultation).

CURRENT STATUS: **'MEETS MINIMUM STANDARD'**

REDDINET

- ReddiNet continues to be used in Alameda County and is our dedicated emergency medical communications network. ReddiNet facilitates timely and efficient bidirectional information exchange between hospitals, EMS, prehospital 911 and Non-911 Permitted Transport providers, dispatch centers, law enforcement, and other health care facilities. ReddiNet provides messaging, MCI initiation, ED status, patient tracking, and assessment polling
- All ALCO receiving hospitals have access to ReddiNet – Refer to ReddiNet Utilization Policy- ALCO EMS Administrative Policies.
 - [ReddiNet Utilization Administrative Policy 2024](#)

PLANS, POLICIES, AND PROCEDURES – Hospital Communications:

- Hospitals have plans, policies, and procedures that provide communication and information management protocols aligned with the Alameda County Operational Area Communications Plans. Refer to the plans and policies below:
 - **ALCO EMS DPHC Preparedness and Response Plans 2024** – describes communications
 - **Multi-Casualty Incident Policy** - describes radio utilization requirements
 - **ReddiNet Utilization Policy**
 - **Alameda County Emergency Operations Plan**
 - **Alameda County Healthcare Services Agency (HCSA) Emergency Operations Plan**
 - **Pediatric Surge Annex**
 - **EMS Situation Status/Resource Request Forms**
 - **Alameda County Medical Health Operational Coordinator (MHOAC) Manual** - identifies the notification and communication pathways.

RACES / ARES

- The operational area communications plan supports hospitals and includes Radio Amateur Civil Emergency Services (RACES) and Amateur Radio Emergency Services ARES Field Response Manual. On-going training opportunities offered for HCC hospital coalition partners in 2022 and 2023.

RADIOS – 700/800 MEGAHERTZ

- In addition to radios in each emergency department, hospitals have received portable EBRCS (700/800 megahertz radios) for their Hospital Command Centers.
- A radio communications test between hospitals is conducted each month.

REFER TO SECTIONS, PLANS, AND POLICIES

- 3.01 (Communications Plan)
- 3.02 (Radios)

NEED(S):

Offer additional radio training for receiving hospital emergency managers and/or provide with a user operations sheet' for radio use.

OBJECTIVE:

Continue monthly radio checks with all receiving Hospital Emergency Departments.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

3.06 MCI/DISASTERS

MINIMUM STANDARDS:

The local EMS agency shall review communications linkages among providers (pre-hospital and hospital) in its jurisdiction for their capability to provide service in the event of multi-casualty incidents and disasters.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

Alameda County EMS has developed and updated the MCI policy, ReddiNet Utilization Administrative Policy, Health Care Services Agency (HCSA) EOP, Disaster Preparedness Health Coalition (DPHC) Response plan and medical surge workplans which focus on bi-directional communications and information flow pathways for all health care system operational area partners. (Consistent with the state CA Medical/Health EOM and HPP requirements).

DEDICATED LEMSA STAFF TO SUPPORT MCI/DISASTERS

- Alameda County EMS staff members serve as both the Medical Health Operations Area Coordinator (MHAOC) for Alameda County and as Regional Disaster Medical Health Specialists (RDMHS) for California OES Mutual Aid Region II.

| Role | Identified EMS Staff Member |
|--|--|
| Medical Health Operations Area Coordinator (MHAOC) | Jim Morrissey, Supervising EMS Coordinator |
| Regional Disaster Medical Health Specialists (RDMHS) | Andrew Sulyma, EMS Coordinator |
| Regional Disaster Medical Health Specialists (RDMHS) | Ryan Preston, EMS Coordinator |

REDUNDANT AND INTEROPERABLE COMMUNICATIONS SYSTEMS

- Alameda County EMS utilizes the following communication systems:

| | |
|--|---|
| <ul style="list-style-type: none">700/800 Megahertz Radios – East Bay Regional Communications System (EBRCS) | <ul style="list-style-type: none">ReddiNet |
| <ul style="list-style-type: none">CAHAN | <ul style="list-style-type: none">Everbridge (AC Alert) |
| <ul style="list-style-type: none">MED1 – Disaster specific email notification | <ul style="list-style-type: none">CA DHV / MRC system |
| <ul style="list-style-type: none">Web Based Conference Call Platforms (TEAMS, Zoom, and other systems) | <ul style="list-style-type: none">Email, Phone and FAX |
| <ul style="list-style-type: none">ReddiNet Communications System | <ul style="list-style-type: none"> |

REDDINET COMMUNICATIONS IN TRAINING and “REAL EVENTS”

- ReddiNet training is ongoing to ensure practice and to test the Administration Portal customized profile options for notifications, MCI Initiation, Patient Tracking, HAVBED Polling, and Customized Assessment Polling.
- The Alameda County EMS ReddiNet Coordinator conducts customized training for partners and tests ReddiNet in quarterly exercises and/or “real events” including the CDPH required Medical Response Surge Exercise (MRSE) drills.
- Alameda County EMS ensures ongoing messages and status assessment polling within the healthcare system and ambulance providers as needed. During “real events” and exercises, the ReddiNet message module is frequently utilized for health system notification and the assessment module for customized polling as needed.

REDDINET ACCESS AND UTILIZATION

- Expanded “users” beyond existing partners including fire departments with hospitals, prehospital providers (911 transport and non-911 Emergency Permitted Transport Providers) OES, and behavioral health crisis service providers – including the Community Assessment & Transport Team (CATT).
- Facilitated ReddiNet Upgrades with HAVBED Surge modules and permissions for system disaster response partners; ensuring training and exercises for all Alameda County ReddiNet Users including FRALS, 911 transport and non-emergency Permitted Transport Providers

DISASTER PREPAREDNESS HEALTH COALITION (DPHC)

- Quarterly HCC - DPHC General Partner meetings focus on strengthening communications pathways and plans.

RADIOS – 700/800 MEGAHERTZ

- Hospitals have received portable 700/800 Megahertz – East Bay Regional Communications System (EBRCS) radios for their Hospital Command Centers.

HAM RADIO COMMUNICATIONS

- Alameda County EMS offers Ham Radio Communication Classes with an opportunity to participate in monthly ham radio checks.

NEED(S):

Ensure consistent participation in communication “real events, exercises and drills with Alameda County OA Healthcare and EMS partners to ensure situation awareness in surge, MCI and other disaster events

OBJECTIVE:

Continue outreach and training for all communication system current and new users. Ensure communications to multiple levels of Alameda County EMS System partners within health systems (to include regional hospital hubs, transfer centers, and pharmacists)

LONG-RANGE

The goal is to leverage health care system partners to ensure effective timely and reliable disaster / surge preparedness and response notifications, communications and information management

- To ensure the ability to communicate in the event of a surge and/or disaster event with all EMS partners and stakeholders.
- Utilize ReddiNet for urgent messaging, to track patients in an MCI and customized assessment polling.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

3.07 9-1-1 PLANNING/COORDINATION

MINIMUM STANDARDS:

The local EMS agency shall participate in ongoing planning and coordination of the 9-1-1 telephone service.

RECOMMENDED GUIDELINES:

The local EMS agency should promote the development of enhanced 9-1-1 systems.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

DISPATCH SYSTEM

- Alameda County maintains two IAED ACE Accredited EMD Centers of Excellence. OFD provides EMD services for the City of Oakland. ACRECC (Alameda County Regional Emergency Communications Center) provides EMD services for the remainder of the county.
- The EMD Centers provide pre-arrival instructions and drive MPDS based resource assignment and response
- 18 Public Safety Answering Points (PSAPs) in Alameda County receive 911 calls
- ACRECC also dispatches first responders and ambulance apparatus for several municipalities as well as our 9-1-1 ambulance contract provider Falck Alameda County.

PRIMARY QUALITY IMPROVEMENT PARTNERS

- All providers and dispatch centers
- All PSAPs
- All EOA provider contracts require radios and disaster communications including Falck Alameda County, FRALS, and the two dispatch centers (ACRECC) and Oakland Fire Dispatch.

QUALITY IMPROVEMENT PLAN

- Calls are reviewed for appropriateness and monitored.
- To coordinate and standardize emergency medical dispatch functions throughout the County, Alameda County EMS has established a Medical Dispatch Review Committee (MDRC) that is comprised of representatives from ACRECC and the Oakland Fire Department Dispatch Center as well as field personnel, the EMS Director, EMS Medical Director and provider agency and leadership. The establishment of this committee has assisted in standardizing the assignment of EMS resources throughout the county. Establishing cross-center dialogue has improved our data collection with respect to MPDS activities. This improved data collection has provided the means to assess the effectiveness of MPDS implementation more accurately. EMS Dispatch QI, and Unusual Occurrence incidents are reviewed.

Refer to previous sections and plans:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 3.01 (Communications Plan)
- 3.04 (Dispatch Center)
- 3.07 (9-1-1 Planning Coordination)
- 5.01 (Assessment of Capabilities)
- 2024 QI PLAN

NEED(S): NONE CURRENTLY

OBJECTIVE:

Improve dispatcher level of training, 9-1-1 access and turn-around time for calls that need a medical response, monitor dispatch times from first ring at the PSAP to on scene, assist as needed with implementation of cell phone calls going to local jurisdictions if the jurisdictions so choose

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year): ongoing

3.08 9-1-1 PUBLIC EDUCATION

MINIMUM STANDARDS:

The local EMS agency shall be involved in public education regarding the 9-1-1 telephone service as it impacts system access.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

Educational events in partnership with first responder agencies and Falck Alameda County reach thousands of school aged children each year. Activities include EMS Week Kids Day, earthquake preparedness/safety, water safety, wheeled sports safety, fire prevention, and 911 education. Stop the Bleed training session in multiple Alameda County locations. Senior Injury Prevention Partnership Education Forum was held with education to assist with mobility, agility, balance, and mindfulness.

STOP THE BLEED PROGRAM (FUNDED BY UASI AND SHSGP) 2023

- Conducted 19 Stop the Bleed trainings to 276 participants
- Trained 10 Stop the Bleed instructors
- Assisted with trauma centers to teach Stop the Bleed at different schools and events

COMMUNITY OUTREACH & INVOLVEMENT 2023

- Provided CPR, Bleeding Control and First Aid Training to community members at Safe Kids Day, Mentors in Medicine, National Night Out, Piedmont Seniors
- Helped with set-up, safety, and tear down for Healthy Living Festival
- Participated with Domestic Violence Fatality Review Team (DVFRT)
- Participated with Homeless Mortality Review Team (HMRT)
- Developed EMS High Utilizer Workgroup (EMS agencies and community partners discussing cases to help coordinate appropriate care for individuals who frequently utilize emergency services for non-urgent needs)

NEED(S): NONE CURRENTLY

OBJECTIVE:

Develop public service announcements in collaboration with first responder and transport provider agencies. Provide information that educates the public on how to appropriately use 9-1-1 and how calls integrate into MPDS. The Alameda County EMS System will continually monitor and maintain an effective EMS resource deployment.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year): ongoing

3.09 DISPATCH TRIAGE

MINIMUM STANDARDS:

The local EMS agency shall establish guidelines for proper dispatch triage that identifies appropriate medical response.

RECOMMENDED GUIDELINES:

The local EMS agency should establish an emergency medical dispatch priority reference system, including systemized caller interrogation, dispatch triage policies, and pre-arrival instructions.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

QUALITY IMPROVEMENT PLAN

- Calls are monitored and reviewed for appropriateness.
- To coordinate and standardize emergency medical dispatch functions throughout the County, Alameda County EMS has established a Medical Dispatch Review Committee (MDRC) that is comprised of representatives from ACRECC and the Oakland Fire Department Dispatch center as well as field personnel, the EMS Director, EMS Medical Director and provider agency and leadership. The establishment of this committee has assisted in standardizing the assignment of EMS resources throughout the county. Establishing cross-center dialogue has improved our data collection with respect to MPDS activities.
- This improved data collection has provided us the means to assess and improve the effectiveness of our MPDS implementation more accurately.
- ACRECC reviews all cardiac arrest calls to ensure accuracy and efficiency. ACRECC implements CPR instructions during call-taking to improve cardiac arrest outcomes.

DISPATCH SYSTEM AND QUALITY IMPROVEMENT

- Alameda County maintains two International Academies of Emergency Dispatch (IAED) ACE Accredited Centers of Excellence. Oakland Fire Department (OFD) provides Emergency Medical Dispatch (EMD) services for the City of Oakland. ACRECC (Alameda County Regional Emergency Communications Center) provides EMD services for the remainder of the county.
- The EMD Centers provide pre-arrival instructions and facilitate Medical Priority Dispatch Systems (MPDS) based prioritization. Alameda County has 18 Public Safety Answering Points (PSAPs) that receive 911 calls.

Refer to Alameda County EMS system plan sections: •

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 3.01 (Communications Plan)
- 3.04 (Dispatch Center)
- 5.01 (Assessment of Capabilities)

NEED(S): None.

OBJECTIVE:

Work with both Dispatch Centers regarding education and specific QA/QI for calls that are or could be cardiac arrest and warrant Dispatch Assisted Pre-Arrival CPR and AED instructions.

Schedule meetings for MPDS Committee and sustain quality improvement plan.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

3.10 INTEGRATED DISPATCH

MINIMUM STANDARDS:

The local EMS system shall have a functionally integrated dispatch with system-wide emergency services coordination, using standardized communications frequencies.

RECOMMENDED GUIDELINES:

The local EMS agency should develop a mechanism to ensure appropriate system-wide ambulance coverage during periods of peak demand.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Alameda County EMS system uses 700/800 Megahertz radios using P25 compliant communications and participates in regional communications via the East Bay Regional Communications System Authority (EBRCSA).
- ACRECC continues to utilize a “closest most appropriate unit” model throughout the service area to coordinate peak demand response and transport through mutual aid.
- Mutual aid performance is closely monitored and tracked for effectiveness.

NEED(S): NONE CURRENTLY

OBJECTIVE:

Continuously monitor mutual aid performance.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year): ongoing

4.01 SERVICE AREA BOUNDARIES

MINIMUM STANDARDS:

The local EMS agency shall determine the boundaries of emergency medical transportation service areas.

RECOMMENDED GUIDELINES:

The local EMS agency should secure a county ordinance or similar mechanism for establishing emergency medical transport service areas (e.g., ambulance response zones).

CURRENT STATUS: (INDICATE 'MEETS MINIMUM STANDARD' OR 'DOES NOT MEET MINIMUM STANDARD')

- Meets Minimum Standard

COORDINATION WITH OTHER EMS AGENCIES:

- Providing on-going monitoring for system compliance.
- ALS Provider agreements with Falck, City of Albany, City of Berkeley, City of Piedmont, and City of Alameda for emergency medical transportation- Response zones established as part of agreements.

NEED(S): None

OBJECTIVE:

Continuously monitor system compliance. The EMS agency shall determine the boundaries of emergency transportation service areas.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.02 MONITORING

MINIMUM STANDARDS:

The local EMS agency shall monitor emergency medical transportation services to ensure compliance with appropriate statutes, regulations, policies, and procedures.

RECOMMENDED GUIDELINES:

The local EMS agency should secure a county ordinance or similar mechanism for licensure of emergency medical transport services. These should be intended to promote compliance with overall system management and should, wherever possible, replace any other local ambulance regulatory programs within the EMS area.

- **Alameda County EMS monitors the 9-1-1 providers to ensure compliance with contracts, statutes, regulations, policies, and procedures.**
 - Pursuant to Section 1797.224 of the California Health and Safety Code, Alameda County EMS has established 5 exclusive operating areas (EOAs) for 9-1-1 ambulance transport services
 - 2018-2024 Emergency Medical Services Ambulance Transport Provider Agreements
- **Alameda County EMS monitors the Non-9-1-1 Permitted provider (with the Ambulance Ordinance for Non-9-1-1 Permitted Providers) to ensure compliance with statutes, regulations, policies, and procedures.**
 - In addition to 9-1-1 providers, Alameda County EMS, through the Ambulance Ordinance, permits eleven interfacility ambulance providers to operate within the County. These providers operate basic life support (BLS), critical care transport paramedic (CCT-P), and critical care transport registered nurse (CCT-RN) level resources.
- **Alameda County EMS monitors the meetFRALS compliance with executed agreements**
 - First Response Advanced Life Support (FRALS) Services are provided throughout all EOAs by Fire Departments or Districts within each Jurisdiction. All FRALS Providers have signed, Executed Agreements in place with Alameda County EMS Through June 30, 2024, and are eligible for a five-year extension
- **Alameda County EMS ensures ongoing QI and monitors emergency medical transportation services for compliance as follows:**
 - Alameda County EMS QA/QI Plan - Monthly Quality Council Meetings
 - Quarterly Meetings with Non-9-1-1 Permitted Providers to discuss any current issues or questions
 - Site Visits with Non-9-1-1 Permitted Providers to Audit Compliance
 - Quarterly Meetings with Receiving Hospitals to discuss any current issues or questions
 - Monthly meetings with 9-1-1 Contract Provider
 - Monthly EMS Section Meetings
 - Investigation of Unusual Occurrence Reports
 - Established County Wide Health Data Exchange (HDE) Program to Facilitate Training and Education
 - In 2021, Alameda County EMS, in partnership with ESO, began implementation of Health Data Exchange (HDE) project. The HDE project links prehospital electronic health records to the hospital patient care records in the hospital. Once linked, prehospital data will automatically be securely imported into the hospital data collection systems and hospital data such as outcome information will be securely exported out to the prehospital data system.
 - This exchange of data will facilitate improved and efficient access to prehospital records for the hospitals and provide valuable follow up information on patients to prehospital providers.
 - Ambulance Patient Offload Times (APOT) – Monthly Meetings with Receiving Hospitals and Transport Providers with the Goal of Shortening APOT times through teamwork and a shared understanding
 - Although ambulance patient offload times (APOT) have historically been a challenge in Alameda County, COVID-19 has created an environment where offload times have significantly increased and peaked as high as a ninetieth-percentile time of 69 minutes systemwide. To address this systemic concern, Alameda County EMS has engaged all of its transport providers and executive level management at all of the receiving facilities to participate in regular APOT meetings in order to actively work to lower APOT and share best practices across all stakeholders. The mission of the group is to strive to get APOT down to 30 mins or less ninety percent of the time systemwide.

- Standardized County-Wide Electronic Patient Care Reporting and Monitoring System is in place

REFER TO EMS SYSTEM SECTIONS AND PLANS:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 5.01 (Assessment of Capabilities)

NEED(S):

Review current Ambulance Ordinance for possible need for revision

Development of and facilitating RFP for upcoming system BID.

Update Alameda County EMS QA/QI plan to include BLS specific standards

OBJECTIVE:

Alameda County EMS will continue to monitor Emergency Medical Transportation Services to ensure compliance with statutes and regulations.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.03 CLASSIFYING MEDICAL REQUESTS

MINIMUM STANDARDS:

The local EMS agency shall determine criteria for classifying medical requests (e.g., emergent, urgent, and non-emergent) and shall determine the appropriate level of medical response to each.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

The Alameda County EMS System continues to utilize EMD and MPDS in both of our ACE Accredited Dispatch Centers. Alameda County EMS implements tools to analyze MPDS and clinical data to inform the decision-making process used in developing deployment strategies tied to MPDS call types and severity codes. The Medical Dispatch Review Committee – MDRC meets quarterly to review data and QI/QA directives.

Refer to Alameda County EMS System sections and plans:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 3.09 (Interfacility Transfer)
- 2024 QI PLAN

NEED(S):

OBJECTIVE:

Implement and maintain a fully tiered, MPDS based 9-1-1 response system that ensures the appropriate emergency resource.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year): ongoing

4.04 PRESCHEDULED

MINIMUM STANDARDS:

Service by emergency medical transport vehicles that can be prescheduled without negative medical impact shall be provided only at levels that permit compliance with local EMS agency policy.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Non-Emergency Ambulance Providers

- Currently, Alameda County EMS utilizes an Alameda County Emergency Medical Services Ambulance Ordinance. In Order to Transport within and from an Alameda County Facility, the Transport Provider is required to become an Alameda County Permitted Provider. To become Permitted by Alameda County EMS, the Provider is required to comply with this Ordinance and submit an application for review. If Approved, Certification of Operation and Ambulance Permits will be issued. Compliance is monitored. Refer to the Alameda County EMS Website links below:
- The organizations listed below are ambulance providers approved by the Alameda County EMS Agency to provide service requested outside of the 911 system. These services include requests such as transfers between medical facilities, and to and from medical appointments:
 - [American Medical Response](#)
 - [America West Medical Transportation](#)
 - [Arcadia Ambulance](#)
 - [Bay Medic Transportation](#)
 - [Eagle Ambulance](#)
 - [Falck Northern California](#)
 - [Falcon Critical Care Transport](#)
 - [LIFWest Ambulance Service](#)
 - [NorCal Ambulance](#)
 - [Pro Transport-1](#)
 - [Royal Ambulance](#)
 - [Westmed Ambulance](#)
- [Ambulance Ordinance Chapter 6.114](#)
- [Certificate of Operation Application](#)

CRITICAL CARE PARAMEDIC (CCP) INTER-FACILITY TRANSPORT

- California EMSA allows Critical Care Paramedic (CCP) Inter-Facility Transport of Patients and requires Alameda County EMS to monitor and regulate all Paramedic Prehospital Care providers. The CCP Inter-Facility Transport Agreement with American Medical Response incorporates County EMS Guidelines and Standards, Patient Transfer Protocols, Data Collection and Reporting Requirements that ensure Patient Safety.

INVESTIGATIONS

- Alameda County Unusual Occurrence (UO) Reports and Investigations are used to assist In addressing compliance Issues. All UO Reports are tracked and investigated.

CRITICAL MEDICAL PATIENT TRANSFER POLICY

- Critical Medical Patient Transfer Policy- Provides Guidelines and Resources for use of Non-911 transport Providers.
 - [2024 Alameda County EMS Field Manual](#)
 - [The 2024 Alameda County EMS Field Manual is also available via an app.](#)

NEED(S): NONE

OBJECTIVE:

Review current Ambulance Ordinance for possible needs and revisions.

Expand Alameda County Quality Improvement Plan to be more inclusive of BLS providers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.05 RESPONSE TIME STANDARDS

MINIMUM STANDARDS:

Each local EMS agency shall develop response time standards for medical responses. These standards shall take into account the total time from receipt of call at the primary public safety answering point (PSAP) to arrival of the responding unit at the scene, including all dispatch time intervals and driving time.

RECOMMENDED GUIDELINES:

Emergency medical service areas (response zones) shall be designated so that, for ninety percent of emergency responses, response times shall not exceed:

| | Metropolitan/Urban Area | Suburban/Rural Area | Wilderness Area |
|--|-------------------------|------------------------|------------------------|
| BLS and CPR Capable First Responder | 5 minutes | 15 minutes | As quickly as possible |
| Early Defibrillation – Capable Responder | 5 minutes | As quickly as possible | As quickly as possible |
| ALS Capable Responder (not functioning as first responder) | 8 minutes | 20 minutes | As quickly as possible |
| EMS Transportation Unit (not functioning as first responder) | 8 minutes | 20 minutes | As quickly as possible |

CURRENT STATUS: MEETS MINIMUM STANDARD

ALCO EMS has established response time requirements to which FRALS and 9-1-1 ambulance transport providers must adhere to and not exceed ninety percent of the time. These requirements are delineated within the executed provider agreements and are broken down by dispatch priority which is informed by MPDS and historical clinical and operational data under EMS Medical Director medical control, and for the private 9-1-1 ambulance provider by service areas or response zones. For FRALS or fire transport providers that do not utilize the priority system, all calls are held to the priority 1 standard, with the exception of ambulance response to priority 5, non-medical 5150, calls.

For the FRALS providers the response time standard, for ninety percent of emergency responses, shall not exceed:

| DISPATCH PRIORITY | RESPONSE TIME |
|-------------------|----------------------|
| Priority 1 | 8 minutes 30 seconds |
| Priority 2 | 8 minutes 30 seconds |
| Priority 3 | 8 minutes 30 seconds |
| Priority 4 | N/A |
| Priority 5 (5150) | N/A |

For the fire 9-1-1 ambulance transport providers the response time standard, for ninety percent of emergency responses, shall not exceed:

| DISPATCH PRIORITY | RESPONSE TIME |
|-------------------|---------------|
| Priority 1 | 10 minutes |
| Priority 2 | 10 minutes |
| Priority 3 | 10 minutes |
| Priority 4 | 18 minutes |
| Priority 5 | 40 minutes |

For the private 9-1-1 ambulance transport provider the response time standard, for ninety percent of emergency responses, shall not exceed:

| DISPATCH PRIORITY | LEVEL OF CARE | METRO | SUBURBAN | RURAL/OPEN SPACE |
|-------------------|-------------------|------------|------------|------------------|
| Priority 1 | ALS | 10 minutes | 14 minutes | 16 minutes |
| Priority 2 | ALS | 12 minutes | 16 minutes | 20 minutes |
| Priority 3 | ALS | 14 minutes | 18 minutes | 20 minutes |
| Priority 4 | ALS or BLS | 20 minutes | 30 minutes | 40 minutes |
| Priority 5 (5150) | ALS, BLS, or Alt. | 40 minutes | 50 minutes | 60 minutes |

COORDINATION WITH OTHER EMS AGENCIES:

- Response time standards are not coordinated with other EMS agencies.

NEED(S):

Develop system for automated call priority review.

OBJECTIVE:

Actively working with vendor to develop automated call priority review platform.

Continually monitor prioritization system.

Continually monitor and report response time compliance for all providers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.06 STAFFING

MINIMUM STANDARDS:

All emergency medical transport vehicles shall be staffed and equipped according to current state and local EMS agency regulations and appropriately equipped for the level of service provided.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: *(INDICATE 'MEETS MINIMUM STANDARD' OR 'DOES NOT MEET MINIMUM STANDARD')*

- Meets minimum standard
 - Staffing requirements are in the “Staffing- ALS and BLS Providers” Policy
 - The 2024 EMS field policies define transport provider staffing and equipment requirements
 - Staffing requirements
 - Equipment requirements and inspection
 - Equipment list

Refer to the 2024 EMS field policies: [2024 Alameda County EMS Field Policies](#)

NEED(S): None

OBJECTIVE:

Provide the right resource to the right patient at the right time. Improve the efficient use of resources.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.07 FIRST RESPONDER AGENCIES

MINIMUM STANDARDS:

The local EMS agency shall integrate qualified EMS first responder agencies (including public safety agencies and industrial first aid teams) into the system.

RECOMMENDED GUIDELINES:

None.

CURRENT STATUS: **MEETS MINIMUM STANDARD**

Alameda County EMS System Providers are listed below:

ALS GROUND TRANSPORT PROVIDERS

- City of Alameda
- City of Albany
- City of Berkeley
- City of Piedmont
- Falck Alameda County

FIRST RESPONDER ALS (FRALS)

- Alameda County Fire Department (ACFD)
- City of Alameda
- City of Albany
- City of Berkeley
- City of Dublin (Contracts with ACFD)
- City of Emeryville (Contracts with ACFD)
- City of Fremont
- City of Hayward
- City of Livermore
- City of Newark (Contracts with ACFD)
- City of Oakland
- City of Piedmont
- City of Pleasanton
- City of San Leandro (Contracts with ACFD)
- City of Union City (Contracts with ACFD)

RECEIVING FACILITIES

- Alta Bates Summit Medical Center – Berkeley Campus
- Alta Bates Summit Medical Center – Oakland Campus
- UCSF Benioff Children’s Hospital
- Kaiser Permanente Oakland Medical Center
- Alameda Hospital – Alameda Health System
- Highland Hospital – Alameda Health System
- San Leandro Hospital – Alameda Health System
- John George Psychiatric Pavilion
- Willow Rock
- Sutter-Eden Medical Center
- Stanford Healthcare Tri-Valley Medical Center, Pleasanton
- Kaiser Permanente – San Leandro Hospital
- Kaiser Permanente – Fremont Medical Center
- Washington Hospital

AIR TRANSPORT PROVIDERS

- Reach
- CALSTAR
- LifeFlight
- East Bay Regional Parks

BASIC LIFE SUPPORT (BLS) INTERFACILITY TRANSPORT PROVIDERS

- Eagle Ambulance
- AMR (responds in ALCO—based out of SF)
- Royal Ambulance
- NorCal Ambulance
- Falcon CCT
- Pro-Transport 1
- Arcadia Ambulance
- Bay Medic Ambulance
- WestMed Ambulance
- LifeWest Ambulance
- America West Transportation

NEED(S): NONE CURRENTLY

OBJECTIVE:

Continue to implement and sustain credentialing program as required by state regulation for Public Safety First Aid programs.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.08 MEDICAL & RESCUE AIRCRAFT

MINIMUM STANDARDS:

The local EMS agency shall have a process for categorizing medical and rescue aircraft and shall develop policies and procedures regarding:

- authorization of aircraft to be utilized in pre-hospital patient care,
- requesting of EMS aircraft,
- dispatching of EMS aircraft,
- determination of EMS aircraft patient destination,
- orientation of pilots and medical flight crews to the local EMS system, and
- addressing and resolving formal complaints regarding EMS aircraft.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

- 911 Aircraft requests are initiated by either first responding or transporting agencies via ACRECC in accordance with ALCO “EMS Aircraft Transport” Field Policy.
- ACRECC relays the request and coordinates the response of the appropriate Aircraft Provider.

COORDINATION WITH OTHER EMS AGENCIES:

- Refer to EMS System Plan Section 4.09 (Air Dispatch Center)

NEED(S):

Review and revise this policy in accord with current practice and standard

OBJECTIVE:

Ensure EMS Aircraft Transport policy and protocol is updated.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.09 AIR DISPATCH CENTER

MINIMUM STANDARDS:

The local EMS agency shall designate a dispatch center to coordinate the use of air ambulances or rescue aircraft.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Refer to EMS System Plan Sections 4.08 (Medical & Rescue Aircraft) and 4.10 (Aircraft Availability)
- Refer to **2024 QI Plan**

-
- 911 Aircraft requests are initiated by either first responding or transporting agencies via ACRECC in accordance with ALCO “EMS Aircraft Transport” Field Policy
 - [2024 FIELD PROTOCOLS](#)
 - [ALAMEDA COUNTY EMS FIELD MANUAL 2024](#) (Pages 95-98)
- ACRECC relays the request and coordinates the response of the appropriate Aircraft Provider.

NEED(S):

Dispatch the closest aircraft to the emergency

OBJECTIVE:

Review and update Alameda County EMS Dispatch policy to improve patient outcomes

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.10 AIRCRAFT AVAILABILITY

MINIMUM STANDARDS:

The local EMS agency shall identify the availability and staffing of medical and rescue aircraft for emergency patient transportation and shall maintain written agreements with aeromedical services operating within the EMS area.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Refer to EMS System Plan Sections 4.08 (Medical and Rescue Aircraft) and 4.09 (Air Dispatch Center)
- Refer to the 2024 QI Plan - [Alameda County EMS QI Plan 2024](#)
- Refer to [2024 ALAMEDA COUNTY EMS FIELD PROTOCOLS](#)

COORDINATION WITH OTHER EMS AGENCIES: YES

NEED(S):

Review and revise current protocols and procedures for aircraft response. Update dispatch to closest available aircraft

OBJECTIVE:

Improve aircraft response to improve patient outcomes

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.11 SPECIALTY VEHICLES

MINIMUM STANDARDS:

Where applicable, the local EMS agency shall identify the availability and staffing of all-terrain vehicles, snow mobiles, and water rescue and transportation vehicles.

RECOMMENDED GUIDELINES:

The local EMS agency should plan for response by and use of all-terrain vehicles, snow mobiles, and water rescue vehicles areas where applicable. This plan should consider existing EMS resources, population density, environmental factors, dispatch procedures and catchment area.

CURRENT STATUS: MEETS MINIMUM STANDARD

- **COORDINATION WITH OTHER AGENCIES:**

- ALCO Based Fire Departments,
- Local Law Enforcement Agencies,
- Coast Guard and
- Search and Rescue (SAR) has needed equipment and specialized vehicles.

NEED(S): NONE

OBJECTIVE:

Continue partnership with allied agencies

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.12 DISASTER RESPONSE

MINIMUM STANDARDS:

The local EMS agency, in cooperation with the local office of emergency services (OES), shall plan for mobilizing response and transport vehicles for disaster.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

• **ALAMEDA COUNTY EMS DISASTER RESPONSE PLANS**

- Alameda County EMS coordinates with Alameda County OES and supports the Alameda County OA Emergency Operations Plan (EOP)

- **Alameda County EMS response plans, policies, and annexes are listed below:**

- EMS Medical Surge Plan
- EMS Field Treatment Policy Manual 2024
- Disaster Preparedness Healthcare Coalition (DPHC) Response Plan and Annexes
- Pediatric Medical Surge Annex - Supports the Disaster Preparedness Healthcare Coalition (DPHC) Response Plan and integrates the Western Regional Alliance for Pediatric Emergency Management (WRAP-EM) PLAYBOOK
- Burn Surge Annex (Supports Disaster Preparedness Healthcare Coalition (DPHC) Response Coalition Plan
- Chemical and Radiological Surge Plan
- Medical Health Operational Area Coordinator (MHOAC) Manual (Integrated in HCSA EOP)

- **Select plan links are provided below:**

- [DPHC Response Plan 2021](#)
- [HCC Medical Countermeasure Dispensing Plan](#)
- [HCC Burn Surge Annex](#)
- [HCC Pediatric Surge Annex - with WRAP-EM Pediatric Surge PLAYBOOK](#)
- [EMS Surge Plan](#)
- [Multiple Casualty Incident \(MCI\) Policy](#)
- [ReddiNet Utilization Policy](#)

Refer to the Alameda County EMS website:

[DISASTER](#)

- [Multiple Casualty Incident \(MCI\) Policy](#)
- [ReddiNet Utilization Policy](#)
- [Resource Request Form](#)
- [Pediatric Medical Surge Plan](#)
- [Situation Status Form](#)

- **VEOCI Disaster Situation Status and Request Forms are provided below:**

- Situation Status Form (All Participants): <https://veoci.com/v/p/230715/workflow/cybv485at8d7>
- Resource Request Form (All Participants): <https://veoci.com/v/p/230715/workflow/4mmnbpu7agcu>
- [Storefront for requesting PPE and Medical Supplies Specific for COVID-19](#) - This storefront is for EMS Provider Agencies and Healthcare Facilities based in Alameda

- **CALIFORNIA MEDICAL AND PUBLIC HEALTH EOM ANNEXES**

- Alameda County EMS contributed to development of the California Medical Health EOM annexes including Behavioral Health.

- **CALIFORNIA PATIENT MOVEMENT PLAN** (Alameda County EMS aligns and supports these plans)

- https://emsa.ca.gov/wp-content/uploads/sites/71/2019/03/Patient-Movement-Plan_Final-3-6-19.pdf

- California Perinatal, Neonatal, and Pediatric Surge Annex

- <https://emsa.ca.gov/wp-content/uploads/sites/71/2022/02/CA-Pediatric-Surge-Annex-9.30.21-FINAL.pdf>

- **MEDICAL HEALTH OPERATIONS AREA COORDINATOR (MHOAC) & REGIONAL DISASTER MEDICAL HEALTH SPECIALIST (RDMHS)**

- Alameda County EMS staff members serve as both the Medical Health Operations Area Coordinator (MHOAC) for Alameda County and as Regional Disaster Medical Health Specialists (RDMHS) for California OES Mutual Aid Region II.

| Role | Identified EMS Staff Member |
|--|--|
| Medical Health Operations Area Coordinator (MHOAC) | Jim Morrissey, Supervising EMS Coordinator |
| Regional Disaster Medical Health Specialists (RDMHS) | Andrew Sulyma, EMS Coordinator |
| Regional Disaster Medical Health Specialists (RDMHS) | Ryan Preston, EMS Coordinator |

- **AMBULANCE STRIKE TEAMS (AST) Coordination**

- Alameda County EMS supports the EMSA planning and response as needed

NEED(S):

Ongoing Emergency / Surge Plan updates adapted to realtime current events, expanded regional partner integration, and multi-level training for the Alameda County EMS Health Care System

OBJECTIVE:

Continue strengthening current partnerships and build new ones appropriate to closing gaps in response - (Long-Range)

- Continue to strengthen MHOAC program with EMS, Public Health, and other Health Care Services Agency partners. Priority focus – Strengthen Medical Surge Plan. EMS to continue to provide EMS Duty Officer, MHOAC, RDMHS and EOC Medical/Health Branch leadership response capability 24/7.
- Continue to develop and test framework to co-locate EMS treatment sites at a community-based primary care clinic to mitigate medical surge at acute care facilities and optimize use of limited available resources after a catastrophic event.

Review and update Alameda County EMS Plans - (Short-Range and Long-Range)

- Update Pediatric Surge Annex as needed
- Update EMS Surge Plan as needed
- Continue to test new VEOCI Status and Resource Request forms for ALL-Hazard events
- Support Ebola and Infectious Disease Preparedness for California Frontline Healthcare Facilities and EMS Providers. Update and test plans as needed.
- Support CDPH / EMSA MHCC RSV and Respiratory Illness response and update plans as needed

Continue surge and disaster training with Alameda County OES, EMS transport providers, and other health system partners in exercises and “real events”

- Plan annual Medical Response and Surge Exercise (MRSE). Held a MRSE Exercise April 17, 2024 (Short- Range)
- Conduct on-going Pediatric Readiness and Surge Site Visits with Alameda County Receiving Hospitals. Contract with UCSF Benioff Children’s Hospital to assess pediatric readiness with simulations and surge training. Integrate prehospital pediatric readiness.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.13 INTERCOUNTY RESPONSE

MINIMUM STANDARDS:

The local EMS agency shall develop agreements permitting inter-county response of emergency medical transport vehicles and EMS personnel.

RECOMMENDED GUIDELINES:

The local EMS agency should encourage and coordinate development of mutual aid agreements that identify financial responsibility for mutual aid responses.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

- Refer to Alameda County EMS System Plan Section 4.07 First Responder Agencies

- Alameda County EMS has developed agreements permitting inter-county response of emergency medical transport vehicles and EMS personnel. Alameda County EMS Ambulance Ordinance provides planning and regulations for EMS ambulance providers for inter-county response.
- Vehicles and personnel have responded through direct provider to provider request for mutual aid and must notify the EMS on-call "Duty Officer" personnel via the Alameda County Regional Emergency Communications Center (ACRECC) based upon pre-identified trigger points such that the MHOAC in conjunction with the RDMHS can coordinate medical mutual aid as needed per regulation

Non-Emergency Ambulance Providers

The organizations listed below are ambulance providers approved by the Alameda County EMS Agency to provide service requested outside of the 911 system. These services include requests such as transfers between medical facilities, and to and from medical appointments:

- [American Medical Response](#)
- [America West Medical Transport](#)
- [Arcadia Ambulance](#)
- [Bay Medic Transportation](#)
- [Eagle Ambulance](#)
- [LIFEWest Ambulance Services](#)
- [Falcon Critical Care Transport](#)
- [Norcal Ambulance](#)
- [Pro Transport-1](#)
- [Royal Ambulance](#)
- [Westmed Ambulance](#)

Ambulance service provider approval requirements to operate in Alameda County

- [Ambulance Ordinance Chapter 6.114](#)
- [Certificate of Operation Application](#)

For additional information on Non-Emergency Transport, contact [Ambulance Ordinance Officer](#).

-
- *Andrew Sulyma, Alameda County EMS Coordinator*
 - *Monitors EMS System Operations and Communications, EMS Dispatch Liaison, tests EBRCs Radio Communications and Unusual Occurrence Management as needed*
 - *Leslie Simmons, Alameda County EMS Coordinator*
 - *Oversees the Non-Emergency Permitted Ambulance Ordinance; IFT/BLS Communications Liaison; and ensures Unusual Occurrence Management; Continues to monitor compliance and overall performance by all EMS Non-911 Emergency Permitted transport providers.*

NEED(S):

Improve Inter-Agency Coordination

OBJECTIVE:

Continue to Work with Transportation Subgroup on mutual aid agreements between fire transport agencies and private contracted providers.

Continued integration of BLS Providers into the County surge/disaster plans to assist large-scale movement of patients

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.14 INCIDENT COMMAND SYSTEM

MINIMUM STANDARDS:

The local EMS agency shall develop multi-casualty response plans and procedures that include provision for on-scene medical management using the Incident Command System.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Refer to EMS Field Manual 2024 for the MCI Policy

2024 FIELD PROTOCOLS

- [2024 Alameda County Field Manual](#) (Refer to p. 153)
 - MCI NOTIFICATIONS: Incident Commanders shall make notifications through ACRECC.
 - For the duration of the MCI, the Transportation Unit Leader under ICS will determine transportation methods and destinations
- Alameda County EMS System MCI Policy and Procedures Include
 - Medical Group Supervisor
 - Transport Group Supervisor
 - Other MCI Roles Under Incident Command
- Refer to Alameda County EMS Website for training opportunities and links below:
 - [Bay Area UASI Training and Exercise Program](#)
 - [California Specialized Training Institute](#)
 - [FEMA Center for Domestic Preparedness](#)

NEED(S):

Update MCI Policy and provide training as needed

OBJECTIVE:

Promote appropriate MCI and ICS training amongst all Alameda County EMS providers

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.15 MCI PLANS

MINIMUM STANDARDS:

Multi-casualty response plans and procedures shall utilize state standards and guidelines.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: **MEETS MINIMUM STANDARD**

- Refer to EMS System Plan Section 4.14 Incident Command System

Alameda County Multi-casualty response plans and procedures utilize state standards and guidelines.

- Alameda County EMS completed the **Alameda County 2024 EMS Policy Manual focused on the MCI Policy** including:
 - Ambulance Strike Team (AST) Utilization
 - Mutual aid via SEMS
 - **Refer to the 2024 ALCO EMS Field Manual**
 - [PDF Version of the 2024 ALCO EMS Field Manual](#) (MCI Policy p. 159 – Resource Ordering table)
- Revised the Alameda County Pediatric Surge Annex which includes pediatric considerations and strategies for an MCI and the WRAP-EM Pediatric Surge PLAYBOOK
 - [HCC Pediatric Surge Annex](#)
- The Alameda County Health Care Services Agency HCSA EOP includes the MHOAC Program Manual with Incident Response guides aligned and supporting the state Medical and Public Health EOM.
 - Contact Alameda County EMS for HCSA EOP – MHOAC Program Manual Section (p.16 and 46)

NEED(S):

The local EMS agency shall encourage all responding entities (including hospitals) to prepare for mass casualty response aligned with state standards / guidelines, and Alameda County EMS plans.

Provide ongoing Alameda County MCI Policy and Pediatric Surge Annex updates

OBJECTIVE:

Continue to assess and revise the MCI policy consistent with state standards.

Continue to coordinate and plan for MCIs with Health Care Facilities and EMS providers

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.16 ALS STAFFING

MINIMUM STANDARDS:

All ALS ambulances shall be staffed with at least one person certified at the advanced life support level and one person staffed at the EMT-I level.

RECOMMENDED GUIDELINES:

The local EMS agency should determine whether advanced life support units should be staffed with two ALS crew members or with one ALS and one BLS crew member.

On an emergency ALS unit which is not staffed with two ALS crew members, the second crew member should be trained to provide defibrillation, using available defibrillators.

CURRENT STATUS: *(INDICATE 'MEETS MINIMUM STANDARD' OR 'DOES NOT MEET MINIMUM STANDARD')*

Meets minimum requirements

NEED(S):

None.

OBJECTIVE:

All ALS ambulances shall be staffed with at least one person certified at the advanced life support level. The other person may either be an EMT-1 or another person certified at the advanced life support level. On an emergency ALS unit which is not staffed with two ALS crew members, the second crew member must be trained to provide defibrillation, using available defibrillators.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.17 ALS EQUIPMENT

MINIMUM STANDARDS:

All emergency ALS ambulances shall be appropriately equipped for the scope of practice of its level of staffing.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Refer to the Alameda County EMS 2024 QI Plan
- Written agreements with ALS transport providers ensure appropriate ALS vehicles with ALS/BLS equipment as specified in policy

911 Emergency Medical Services Ambulance Transport Agreements:

- [Emergency Medical Services Ambulance Transport Agreement - City of Alameda](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Albany](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Berkeley](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Piedmont](#)
- [Emergency Medical Services Ambulance Transport Provider Agreement - Falck Northern California](#)

The Alameda County EMS Equipment and Supply Specifications Policy establishes the equipment that must be stocked on each BLS and ALS vehicle.

- Refer to the **Alameda County EMS Field Policy Manual 2024** “Equipment and Supply Specifications - ALS/BLS” (p, 99)

NEED(S):

Review and revise policy for equipment for all vehicles including an updated comprehensive listing of equipment and supplies to be maintained.

OBJECTIVE:

Revise and maintain a comprehensive policy for all equipment and supplies utilized in the county

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.18 TRANSPORT COMPLIANCE

MINIMUM STANDARDS:

The local EMS agency shall have a mechanism (e.g., an ordinance and/or written provider agreements) to ensure that EMS transportation agencies comply with applicable policies and procedures regarding system operations and clinical care.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County EMS has a mechanism to ensure that EMS transportation agencies comply with applicable policies and procedures. Refer to [Quality Improvement Plan 2023](#) and [911 Transport Agreements/Contracts](#) which focus on compliance with Alameda County EMS Policies.

911 Emergency Medical Services Ambulance Transport Agreements:

- [Emergency Medical Services Ambulance Transport Agreement - City of Alameda](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Albany](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Berkeley](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Piedmont](#)
- [Emergency Medical Services Ambulance Transport Provider Agreement - Falck Northern California](#)

NEED(S):

Execute extension agreements prior to expiration of current agreement on 6/30/2024.

OBJECTIVE:

Ensure EMS Transport Provider Compliance with Alameda County Policies and Agreements.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.19 TRANSPORTATION PLAN

MINIMUM STANDARDS:

Any local EMS agency that desires to implement exclusive operating areas, pursuant to Section 1797.224, H&S Code, shall develop an EMS transportation plan which addresses: a) minimum standards for transportation services; b) optimal transportation system efficiency and effectiveness; and c) use of a competitive bid process to ensure system optimization.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

911 TRANSPORT – FALCK

- The Ambulance Transport Provider Agreement with Falck contains details of the Alameda County EMS Transportation Plan.
- Falck began 911 Emergency Ground Ambulance Service on July 1, 2019

911 Emergency Medical Services Ambulance Transport Agreements:

- [Emergency Medical Services Ambulance Transport Agreement - City of Alameda](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Albany](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Berkeley](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Piedmont](#)
- [Emergency Medical Services Ambulance Transport Provider Agreement - Falck Northern California](#)

In 1984, the Alameda County Board of Supervisors designated the EMS Agency as the Local Emergency Medical Services Agency (LEMSA) for the County of Alameda, as authorized by California Health & Safety Code section 1797.200. In this role, the EMS Agency has the exclusive authority over and sole responsibility for planning, implementing, and evaluating the County's EMS System. This authority includes the power to designate a 911 Ambulance service provider selected through a competitive procurement process.

Four of the EOAs are granted through an exclusive non-competitive process due to grandfathering city fire departments that provided ambulance services prior to The Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980. The four grandfathered EOAs are the cities of Alameda, Albany, Berkeley, and Piedmont. The city of Berkeley EOA includes the state property of UC Berkeley and the federal property at Lawrence Berkeley Lab. The fifth EOA encompasses the remainder of Alameda County and is granted through an exclusive competitive process. This EOA was last competitively bid in 2018 with the winning contractor, Falck, implementing service in July of 2019. Falck has been awarded the EOA for a 5-year term ending in June of 2024. Lawrence Livermore National Lab (LLNL) is federal property and is exempted from the EOAs. Ambulance transport services for LLNL is provided through a federal contract with Alameda County Fire District.

Alameda County EMS has signed, executed transport agreements with all of the 9-1-1 ambulance providers with the exception of Alameda County Fire District which operates under a federal contract. All of the agreements are effective through June 30, 2024, and the fire transport providers are eligible for a five-year extension. ALCO EMS is currently in an RFP process to select and implement a contract for services to the Exclusive Operating Area (EOA) for the future.

NEED(S):

Conclude the process of getting all of the first responder and transport provider agreements extended to allow for the time needed to complete the current competitive process to select a 911 EOA transport provider.

OBJECTIVE:

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.20 “GRANDFATHERING”

MINIMUM STANDARDS:

Any local EMS agency which desires to grant an exclusive operating permit without use of a competitive process shall document in its EMS transportation plan that its existing provider meets all of the requirements for non-competitive selection ("grandfathering") under Section 1797.224, H&SC.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Pursuant to Section 1797.224 of the California Health and Safety Code, Alameda County EMS has established 5 Exclusive Operating Areas (EOAs) for 9-1-1 Ambulance Transport Services.
 - Four of The EOAs are granted through an Exclusive Non-Competitive Process due to grandfathering City Fire Departments that provided Ambulance Services prior to the Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980.
 - The four Grandfathered EOAs are the Cities of Alameda, Albany, Berkeley, and Piedmont.
 - The City of Berkeley EOA includes the State Property of UC Berkeley and the Federal Property at Lawrence Berkeley Lab.
 - The Fifth EOA Encompasses the remainder of Alameda County and is granted through an Exclusive Competitive Process. this EOA was last competitively Bid In 2018 with the winning Contractor, Falck, implementing service
 - In July Of 2019. Falck has Been awarded the EOA for 5-Year Term with a 2-Year extension ending in June of 2026.
 - Lawrence Livermore National Lab (LLNL) is Federal Property and is exempted from the EOAs.
 - Ambulance Transport Services for LNLL Is provided through a Federal Contract with Alameda County Fire District.
 - Alameda County EMS has Signed, Executed Transport Agreements with all of the 9-1-1 Ambulance Providers with the exception of Alameda County Fire District which operates under a Federal Contract.
 - All of the Agreements are Effective through June 30, 2024, and will be extended for 2 years until June 30, 2026 in alignment with the Falck agreement.

NEED(S):

Execute extension agreements with 911 fire transport providers prior to June 30, 2024.

OBJECTIVE:

Maintain current executed agreements with all 9-1-1 providers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.21 EOA COMPLIANCE

MINIMUM STANDARDS:

The local EMS agency shall have a mechanism to ensure that EMS transportation and/or advanced life support agencies to whom exclusive operating permits have been granted, pursuant to Section 1797.224, H&SC, comply with applicable policies and procedures regarding system operations and patient care.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Refer to the QI PLAN 2023

QUALITY IMPROVEMENT (QI) AND MANAGEMENT OF DATA

- In 2021, Alameda County EMS, in partnership with ESO, began implementation of the **Health Data Exchange (HDE) project**. The HDE project links prehospital electronic health records to the hospital patient care records in the hospital. Once linked, prehospital data will automatically be securely imported into the hospital data collection systems and hospital data such as updated demographics, billing, and outcome information will be securely exported out to the prehospital data system. This exchange of data will facilitate improved and efficient access to prehospital records for the hospitals and provide valuable follow up information on patients to prehospital providers. Currently seven receiving hospitals are connected to HDE: Highland Medical Center, Alameda Hospital, San Leandro Hospital, John George Psychiatric Hospital, Washington Hospital, UCSF Benioff Children's Hospital and St. Rose Hospital. The remaining in-county hospitals are working towards connecting their systems with the HDE, with the hope to have all receiving centers connected by end of fiscal year 2024-2025.

AMBULANCE PATIENT OFFLOAD TIME (APOT)

- Ambulance patient offload times (APOT) continue to be a challenge in Alameda County. To address this systemic concern, Alameda County EMS has engaged all of its transport providers and executive level management at all of the receiving facilities to participate in regular APOT meetings in order to actively work to lower APOT and share best practices across all stakeholders. The mission of the group is to strive to get APOT down to 20 mins or less ninety percent of the time systemwide. Additionally, ALCO EMS is actively negotiating a contract with a consultant to provide an analysis of patient offloads in our system.

RESPONSE TIME REQUIREMENTS

- ALCO EMS has established response time requirements to which FRALS and 9-1-1 ambulance transport providers must adhere to and not exceed ninety percent of the time. These requirements are delineated within the executed provider agreements and are broken down by dispatch priority which is informed by MPDS and historical clinical and operational data under EMS Medical Director medical control, and for the private 9-1-1 ambulance provider by service areas or response zones. For FRALS or fire transport providers that do not utilize the priority system, all calls are held to the priority 1 standard, with the exception of ambulance response to priority 5, non-medical 5150, calls.

Alameda County EMS has [PROVIDER AGREEMENTS & CONTRACTS](#) to ensure compliance with policies and procedures as follows:

911 Emergency Medical Services Ambulance Transport Agreements:

- [Emergency Medical Services Ambulance Transport Agreement - City of Alameda](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Albany](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Berkeley](#)
- [Emergency Medical Services Ambulance Transport Agreement - City of Piedmont](#)
- [Emergency Medical Services Ambulance Transport Provider Agreement - Falck Northern California](#)

Emergency Medical Dispatch Services Agreement:

- [Emergency Medical Dispatch Service Agreement - Alameda County Fire Department](#)

Emergency Medical Services First Responder Advanced Life Support (Paramedic) Services Agreements:

- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Alameda](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Albany](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Berkeley](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Dublin](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Emeryville](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Fremont](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Hayward](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Livermore](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Newark](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Oakland](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Piedmont](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Pleasanton](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of San Leandro](#)
- [Emergency Medical Services First Responder Advanced Life Support Services Agreement - City of Union City](#)

- Refer to the 2023 Alameda County Executive Summary and the EMS System Plan 4.01 Form.

NEED(S):

Extension of fire FRALS and transport agreements prior to the expiration of June 30, 2024

OBJECTIVE:

Maintain EOA standards and operations.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

4.22 EOA EVALUATION

MINIMUM STANDARDS:

The local EMS agency shall periodically evaluate the design of exclusive operating areas.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Pursuant to Section 1797.224 of the California Health and Safety Code, ALCO EMS has established 5 exclusive operating areas (EOAs) for 9-1-1 ambulance transport services. The EOAs, as currently configured, were implemented on June 29, 1990.

Four of the EOAs are granted through an exclusive non-competitive process due to grandfathering city fire departments that provided ambulance services prior to The Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980. The four grandfather EOAs are the city of Alameda, the city of Albany, the city of Berkeley, and the city of Piedmont. The city of Berkeley EOA includes the state property of UC Berkeley and the federal property at Lawrence Berkeley Lab. There has been no efforts or requests to re-evaluate these EOAs.

In 2019, post-implementation of the successful contractor from the last competitively bid process, the fifth EOA, which encompasses the remainder of Alameda County, except for the federal LLNL property, was re-evaluated by a LEMSA initiated work group comprised of system stakeholders which included representatives from ambulance providers, fire departments, hospitals, and elected officials from both the cities and county. The work group determined that it was important to maintain the EOA as is to provide equitable and consistent delivery of high-quality EMS services to our communities.

The fifth EOA was last competitively bid in 2018 with the winning contractor, Falck, implementing service in July of 2019. Falck has been awarded the EOA for a 5-year term and a 2-year extension ending in June of 2026.

Alameda County EMS is now planning for the next RFP Process for 911 EOA Emergency Ambulance Services, with the goal of ensuring an EMS System driven by clinical and operational excellence as well as financial viability.

NEED(S):

2019 evaluation is informing development of current RFP. No needs at this time.

OBJECTIVE:

Alameda County EMS evaluates the design of exclusive operating area. (LONG-RANGE)

- Periodic evaluation of EOAs.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.01 ASSESSMENT OF CAPABILITIES

MINIMUM STANDARDS:

The local EMS agency shall assess and periodically reassess the EMS related capabilities of acute care facilities in its service area.

RECOMMENDED GUIDELINES:

The local EMS agency should have written agreements with acute care facilities in its service area.

CURRENT STATUS: MEETS MINIMUM STANDARDS

The Alameda County EMSC and pediatric readiness project update is provided below:

- All Alameda County Receiving hospitals participated in the pediatric readiness site visits scheduled through June 2023. In 2024, all ALCO Receiving hospitals are or will be scheduled to participate in the post site visit follow-up call with UCSF Benioff Children’s Hospital and ALCO EMS. Each hospital received the pediatric readiness feedback summary reports (including the ImPACT simulation results) and customized pediatric readiness packets. These feedback reports are reviewed on the post visit calls.
- Alameda County EMS is preparing for a new UCSF Benioff Children’s Hospital Contract with UCSF Benioff Children’s Hospital Mission Bay and Oakland. The new contract will ensure pediatric readiness site visits every two years and integration of the prehospital pediatric readiness project.
- Alameda County is planning biannual Pediatric Receiving Center (PedRC) / EMSC meetings with health system partners in 2024. The pediatric QI data metrics and EMSC Regulation requirements will be reviewed at these meetings.

Specialty Center Designations and MOUs (Trauma, Stroke, and STEMI Center)

- All Receiving Hospitals with Specialty Center Designations have current MOUs In Place.
 - Alameda County Receiving Hospitals designated as Specialty Centers must comply with the following in orders:
 - California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7. Trauma Care Systems
 - California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7.2 Stroke Critical Care System
 - California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7.1 St-Elevation Myocardial Infarction Critical Care System

Receiving Facilities (Hospitals)

The Alameda County EMS Agency works closely with the receiving hospital facilities to assure the continuum of medical care and assists them with integration of specialized care programs including trauma, stroke, and cardiac services into the EMS System.

- [Alameda Hospital](#) | Basic Emergency Services, Primary Stroke Center
- [Alta Bates Summit Medical Center- Ashby Campus](#) | Basic Emergency Services, Labor and Delivery
- [Alta Bates Summit Medical Center- Summit Campus](#) | Basic Emergency Services, Primary Stroke Center, STEMI Center
- [Eden Medical Center](#) | Basic Emergency Services, Level II Adult Trauma Center, Primary Stroke Center, Labor and Delivery
- [Highland Hospital](#) | Basic Emergency Services, Level I Adult Trauma Center, STEMI Center, Labor and Delivery
- [Kaiser Oakland](#) | Basic Emergency Services, Primary Stroke Center, STEMI Center, Labor and Delivery
- [Kaiser Fremont](#) | Basic Emergency Services, Primary Stroke Center, STEMI Center
- [Kaiser San Leandro](#) | Basic Emergency Services, Primary Stroke Center, Labor and Delivery
- [St. Rose Hospital](#) | Basic Emergency Services, STEMI Center, Labor and Delivery
- [San Leandro Hospital](#) | Basic Emergency Services
- [Stanford Health Care Tri-Valley](#) | Basic Emergency Services, STEMI Center, Primary Stroke Center, Labor and Delivery

- [John George Psychiatric Hospital](#) | Psychiatric Emergency Services for Adults
- [UCSF Benioff Children’s Hospital- Oakland](#) | Basic Emergency Services, Level I Trauma Center, and Psychiatric Emergency Services for Children
- [Washington Hospital](#) | Basic Emergency Services, Primary Stroke Center, STEMI Center, Labor and Delivery
- [Willow Rock Center](#) | Psychiatric Emergency Services for Adolescents and Teens

Refer To Previous Sections and Plans:

- 1.07 (Trauma Planning)
- 1.27 (Pediatric System Plan)
- 5.04 Specialty Care Facilities

REAL EVENTS AND EXERCISES IMPACTING CHILDREN - Pediatric Surge Response

- Given the National RSV and Respiratory Illness impact on pediatric surge, a weekly ALCO surge pulse check was conducted to determine pediatric capability and capacity for all ALCO Receiving hospitals. Pediatric Surge expansion resources were provided to strengthen the pediatric capacity and capability in real time (starting in 11/2022).
- To increase situation awareness, the ReddiNet bed capacity module was updated to include Surge capability for all receiving hospitals including pediatrics.
- The ALCO Pediatric Surge Lead and EMS for Children Coordinator facilitated the Surge Group for the Western Regional Alliance for Pediatric Emergency Management. Ongoing assessment tools and resources are provided by CDPH and WRAP-EM to ALCO health system partners
- The ALCO EMS Pediatric Surge Lead is the EMS liaison to the National Pediatric Disaster Coalition (NPDC)

NEED(S): NONE

Ongoing hospital pediatric surge and readiness assessments to strengthen pediatric capability and capacity

OBJECTIVE:

Alameda County EMS conducts assessments and reassessments of acute care facilities to increase system-wide pediatric capability.

Continue ALCO hospital “real event” pediatric surge pulse checks as needed and ED Pediatric Readiness Site Visits in 2024

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.02 TRIAGE & TRANSFER PROTOCOLS

MINIMUM STANDARDS:

The local EMS agency shall establish pre-hospital triage protocols and shall assist hospitals with the establishment of transfer protocols and agreements.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

ALAMEDA COUNTY EMS FIELD PROTOCOLS

- Alameda County EMS has established pre-hospital protocols and assists hospitals with the establishment of transfer protocols and agreements. The 2024 Alameda County EMS Field Manual provides policies include transport guidelines and address specialty care as follows:
 - Assault/Abuse/Domestic Violence
 - Burn Patient Criteria
 - Transport Guidelines
 - Trauma Patient Criteria
 - Acute Stroke
 - Chest Pain – Suspected Cardiac/STEMI
 - Psychiatric Evaluation-5150
 - Psychiatric and Behavioral Emergencies
 - Interfacility Transfer
 - Critical Medical Patient Transfer
 - Multi-Casualty Incident-EMS Response
 - Hazardous Materials
 - Crush Injury

Refer to the Alameda County EMS website:

- [2024 FIELD PROTOCOLS](#)
- [2024 Alameda County Field Manual](#)

TRAUMA RETRIAGE POLICIES

- Alameda County EMS Administrative Policies include Trauma Retriage procedures for adult and pediatric patients who have arrived at an inappropriate facility considering their injuries and require transport to a trauma center.

Refer to the Alameda County EMS System Plan Sections and Plans:

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-Facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)
- 5.01 (Assessment of Capabilities)

-
- 2024 QI Plan
-

COMMUNITY ASSESSMENT AND TRANSPORT TEAM (CATT)

- In July of 2020, the Community Assessment and Transport Team (CATT) officially launched in Alameda County. CATT is the synergy of behavioral health and EMS, pairing a licensed clinical social worker with an EMT in order to respond to behavioral health related incidents in the 9-1-1 system. CATT is staffed by a community-based behavioral health organization, Bonita House, and Falck. These units have the ability to complete advanced mental health assessments, link individuals with resources, and transport to a wide variety of services and facilities that are not

available to a 9-1-1 ambulance. CATT is a collaborative program with Alameda County Behavioral Health, Alameda County EMS and the current 9-1-1 Transport Provider (Falck) to provide this assessment and transport service for Behavioral Health Patients in Alameda County. CATT MOUs, Policies, Procedures, and training curriculum are in place.

COORDINATION WITH OTHER EMS AGENCIES:

Alameda County EMS coordinates with other EMS agencies, MHOACs/RDMHS, hospitals, and transfer centers during hospital surge “load leveling” to facilitate transfer support as needed.

NEED(S): NONE

OBJECTIVE:

Continue to review and revise trauma triage, transport and transfer, and MCI protocols as needed.

Monitor for compliance and issues using Unusual Occurrence Reports or issues brought forward during reoccurring meetings with Alameda County Receiving Facilities, 9-1-1 Transport Agencies and Non 9-1-1 Transport Providers.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.03 TRANSFER GUIDELINES

MINIMUM STANDARDS:

The local EMS agency, with participation of acute care hospital administrators, physicians, and nurses, shall establish guidelines to identify patients who should be considered for transfer to facilities of higher capability and shall work with acute care hospitals to establish transfer agreements with such facilities.

RECOMMENDED GUIDELINES:

Refer to California Code of Regulations / Local Policies:

- California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services, Chapter 7. Trauma Care Systems
- California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services Chapter 7.2 Stroke Critical Care System
- California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

CURRENT STATUS: MEETS MINIMUM STANDARDS:

Alameda County EMS Administrative Policies - **Transfer of Care** Focus – Refer to list below:

- Inter-facility Transfer Guidelines
- CCT-Program Standards – Updated 2019
- Emergency Re-Triage to Trauma Centers
 - Alameda County Critical Medical Patient Hospital Transfers for Specialty and/or Higher Level of Care Policy
 - Trauma Re-Triage/Transfer Policy

Alameda County EMS Disaster / Surge Plans

- Completed EMS Surge Plan 2019
- Updated Disaster Preparedness Healthcare Coalition (DPHC) Pediatric Surge Annex to Coalition Plan 2021

Pediatric Transfer Policy Education

- Providing pediatric transfer protocol education at Hospital Pediatric Site visits; aligning and supporting CA EMSC Regulations

Refer to Alameda County EMS System Plan sections and policies/plans (compliant with current CA State Trauma, Stroke, STEMI Regulations):

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)

-
- Trauma System of Care Plan
 - STEMI System of Care Plan
 - Stroke System of Care Plan

COORDINATION WITH OTHER EMS AGENCIES:

- Development and implementation of regional Trauma Re-Triage and Transfer policy/plan:
- Coordination/collaboration with Contra Costa County EMS and John Muir Medical Center, (adjacent ACS verified adult level-2 trauma center), through participation in quarterly bi-county Trauma Audit Committee (TAC) meetings.
- Coordination/collaboration with Bay Area Regional LEMSAs (Solano, Contra Costa, San Francisco, San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey, Marin) through participation in bi-monthly (every two months) Regional Trauma Coordinating Committee (RTCC) meetings.

NEED(S):

Education on transfer guidelines to ensure patients are identified for transfer to higher capability of acute care.

OBJECTIVE:

Continue education on transfer guidelines to ensure patients are identified for transfer to higher capability of acute care.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.04 SPECIALTY CARE FACILITIES

MINIMUM STANDARDS:

The local EMS agency shall designate and monitor receiving hospitals and, when appropriate, specialty care facilities for specified groups of emergency patients.

RECOMMENDED GUIDELINES:

The local EMS agency should designate appropriate facilities and execute agreements with those specialty care facilities in other jurisdictions.

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY, DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES, CHAPTER 7. TRAUMA CARE SYSTEMS

California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services Chapter 7.2 Stroke Critical Care System

California Code of Regulations Title 22. Social Security, Division 9. Prehospital Emergency Medical Services Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

CURRENT STATUS:

Meets minimum standards (compliant with current CA State Regulations: Trauma, Stroke, STEMI):

Receiving Hospitals and Designated Specialty Centers:

- Alameda County EMS has 13 designated Receiving Hospitals including Specialty Centers:
 - Receiving Hospitals
 - Trauma Centers
 - Base Hospital
 - Pediatric Critical Care Center
 - 5150 Psychiatric Facilities
 - STEMI / Cardiac Arrest Centers
 - Stroke Centers
 - Pediatric Receiving Centers (PEDRC) *

Pediatric Receiving Centers

- * PEDRC - All Alameda County Receiving hospitals have a pediatric readiness capability and capacity to receive pediatric patients consistent and aligned with CA EMSC Regulations.
- Alameda County EMS generates a contract with UCSF Benioff Children's hospital in Oakland and Mission Bay to conduct pediatric readiness site visits and simulation training.

Trauma Receiving Centers

- Alameda County EMS ensures that patients who have experienced traumatic injury are clinically assessed using current 2022 ACS Field Trauma Triage criteria (implemented January 2024) and transported to an EMS designated Trauma Receiving Center for specialty diagnostics and treatment.
- Meets minimum standards through active executed agreements (expire 6/30/24) with three EMS designated American College of Surgeons (ACS) verified (required) Trauma Receiving Centers (compliant with current CA State Trauma Regulations):
 - Alameda Health System-Highland Hospital (Adult level-1)
 - UCSF Benioff Children's Hospital (Pediatric level 1)
 - Sutter Eden Medical Center (Adult level 2)

Stroke Receiving Centers

- Alameda County EMS ensures that patients who are experiencing a possible cerebral vascular accident (Stroke) on scene, detected by clinical assessment (Cincinnati Stroke Scale), are transported to an EMS designated Primary

Stroke Receiving Center for specialty diagnostics and treatment: CT / CTA / CTP, and if needed, IV fibrinolytic and or transfer to a thrombectomy capable center for IR services.

- Meets minimum standards through active executed agreements with eight EMS designated Joint Commission (JC) certified (required) Primary Stroke Receiving Centers (compliant with current CA State Stroke Regulations):
 - Alameda Health System-Alameda Hospital
 - Alta Bates Summit Medical Center
 - Eden Medical Center
 - Kaiser-Fremont
 - Kaiser-Oakland
 - Kaiser-San Leandro
 - Stanford Health Care – Tri-Valley
 - Washington Hospital

STEMI / Cardiac Arrest Receiving Centers (CARC)

- Alameda County EMS ensures that patients who are experiencing a possible ST- elevation myocardial infarction (STEMI) receive expedited specialty care. An out-of- hospital STEMI is detected by clinical exam and 12-lead electrocardiogram that is transmitted to the closest appropriate STEMI Receiving Center (SRC). The patient is then transported to that EMS designated SRC for specialty diagnostics and treatment: coronary angiogram and if needed a Primary Percutaneous Coronary Intervention (PCI).
- Alameda County EMS also ensures that patients who experience out-of-hospital cardiac arrest on scene or during transport and received attempted resuscitation with any return of spontaneous circulation (ROSC) or presented with an initial or recurrent shockable rhythm (VF/VT) are transported to the same EMS designated SRC/CARCs. Both STEMI and Cardiac Arrest patients are transported to an SRC/CARC since these patients frequently need common interventions.
- Meets minimum standards through active executed agreements with seven EMS designated STEMI/Cardiac Arrest Receiving Centers (compliant with current CA State STEMI Regulations):
 - Alameda Health System-Highland Hospital
 - Alta Bates Summit Medical Center
 - Kaiser-Fremont
 - Kaiser-Oakland
 - St. Rose Hospital
 - Stanford Health Care Tri-Valley
 - Washington Hospital

COORDINATION WITH OTHER EMS AGENCIES:

- Coordination/collaboration with Contra Costa County EMS regarding
- Coordination/collaboration with Contra Costa County EMS and John Muir Medical Center, (adjacent ACS verified adult level-2 trauma center), through participation in quarterly bi-county Trauma Audit Committee (TAC) meetings.
- Coordination/collaboration with Bay Area Regional LEMSAs (Solano, Contra Costa, San Francisco, San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey, Marin) through participation in bi-monthly (every two months) Regional Trauma Coordinating Committee (RTCC) meetings.

NEED(S):

Real time bi-directional Healthcare Data Exchange (HDE)

Establish Bi-directional Healthcare Data Exchange (HDE) with ALCO facilities that are not yet connected: Stanford, Sutter, and Kaiser.

Establish a third ACS Verified Adult Level 2 trauma receiving center within the next 4 years.

Establish and complete an EMS pre-designation review process for Washington Hospital (future ALCO Adult Level 2 TC) prior to them receiving EMS patients.

OBJECTIVE(S):

Collaboration with Washington Hospital to ensure safe, efficient and effective implementation of trauma services.

Complete EMS pre-designation review/assessment, and ensure Washington Hospital (future ALCO Adult Level 2 TC) is compliant with all minimum current CA State Trauma Regulation requirements regarding a Level 2 adult trauma receiving center.

All specialty care facilities be certified/verified by credible/recognized third-party authority (content experts): Trauma-ACS, Stroke-JC, STEMI-JC/AHA or equivalent.

Continuous monitoring and evaluation of specialty care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

Continuous pediatric readiness “day to day” and in surge events to ensure pediatric capacity and capability. Ensure pediatric surge assessment, education, and training for all Alameda County Receiving Hospitals

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.05 MASS CASUALTY MANAGEMENT

MINIMUM STANDARDS:

The local EMS agency shall encourage hospitals to prepare for mass casualty management.

RECOMMENDED GUIDELINES:

The local EMS agency should assist hospitals with preparation for mass casualty management, including procedures for coordinating hospital communications and patient flow.

CURRENT STATUS: MEETS MINIMUM STANDARD

MASS CASUALTY MANAGEMENT PLANNING

- Alameda County (ALCO) EMS encourages hospitals and prehospital providers to prepare for mass casualty events. EMS collaborates with and facilitates hospital participation in planning, training, conferences, and exercises throughout the year.
 - The Alameda County OA receiving hospitals participated in the Disaster Preparedness Healthcare Coalition (DPHC) Medical Surge Response Exercise (MRSE) held 4/17/2024. The scenario was a “Transportation Radiological Event” which required hospital ReddiNet Message Communications, MCI patient tracking, surge bed availability, and MCI customized polling.
 - The Alameda County receiving hospitals also participated the UCSF Benioff Children’s Hospital and Pediatric Pandemic Network Chemical Surge MCI tabletop exercise held Feb. 29, 2024.
 - ALCO EMS developed the Co-Location Framework (EMS Treatment Site at Community Health Center) to mitigate surge at emergency departments to increase acute care capability.
 - Health Emergency Preparedness & Response (HEPR) within ALCO EMS supports development of mass casualty management plans and exercises that are succinct, actionable, and easily utilized by the ALCO healthcare system (including hospitals and EMS transport providers).
 - HEPR includes the HPP program which developed the Disaster Preparedness Healthcare Coalition (DPHC) Pediatric Surge and Burn Annex to support DPHC Response Plan. Refer to the resource links: <https://acphd.org/dphc/>; [HCC Burn Surge Annex](#); and [HCC Pediatric Surge Annex](#)
 - The HPP program under HEPR provides benchmarks and goals for medical surge and mass casualty planning. The HCC - Disaster Preparedness Health Coalition (DPHC) meets every quarter with monthly training webinars.
 - ReddiNet communications and hospital bi-directional situation awareness is a priority in the DPHC plans and training programs. – Refer to the Alameda County ReddiNet Administrative Policy: [Alameda County EMS ReddiNet Policy](#)
 - ALCO EMS supports and collaborates with local ALCO emergency departments to prepare for sudden medical surge events
 - The Pediatric Readiness and Surge Project provides ED pediatric education with mass casualty management resources.
 - The Alameda County Health Care Services Agency (HCSA) EOP includes the Medical/Health Emergency Operations Manual with the Mass Casualty Incident Response Guide (IRG)
- The 2024 Alameda County EMS Field Manual includes the MCI Policy: [2024 Alameda County EMS Field Manual](#) (p. 153)

MASS CASUALTY DISASTER / SURGE TRAINING

- **MHOCSA Training** - The Region 2 RDMHS developed and conducted CSTI Medical Health Operations Center Support Activities (MHOCSA) Courses in 2023
- **EOM Training** – The Region 2 RDMHS conducted several Emergency Operations Manual (EOM) training classes. Hospitals participated in the training.

- **Western Regional Alliance for Pediatric Emergency Management (WRAP-EM) and the Pediatric Pandemic Network Training** - conducts regional remote table-top exercises (TTX) with mass casualty management scenarios. DPHC Coalition members participated in the exercises in 2023 and 2024.

Refer to the Alameda County EMS System Plan Sections:

- 4.12 (Disaster Response)
- 4.15 (MCI Plans)

NEED(S):

OBJECTIVE:

Continue hospital mass casualty management and communication outreach, planning, education, and training for hospital partners

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.06 HOSPITAL EVACUATION

MINIMUM STANDARDS:

The local EMS agency shall have a plan for hospital evacuation, including its impact on other EMS system providers.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- All Alameda County receiving hospitals have evacuation plans in accordance with accreditation standards
- During an evacuation, Alameda County OA EMS transport by EMS providers and other agencies is coordinated through the Alameda County OA MHOAC program and the EMS Duty Officer.
- The Alameda County Health Care Services Agency EOP includes the MHOAC Program Manual and Incident Response Guides relevant to hospital evacuations.
- The Health Emergency Preparedness & Response (HEPR) unit within ALCO EMS supports development of hospital evacuations plans and conducts exercises that are operational, actionable, and easily customized by the ALCO healthcare system partners (including hospitals and EMS transport providers).
 - Alameda County EMS - HEPR includes the HPP program which developed the Disaster Preparedness Healthcare Coalition (DPHC) Pediatric Surge and Burn Annex to support the DPHC Response Plan. Refer to the resource links: <https://acphd.org/dphc/>; [HCC Burn Surge Annex](#); and [HCC Pediatric Surge Annex](#)
 - The TRAIN (Triage Resource Allocation for Inpatient) Model is an option for hospital evacuations and included in the Pediatric Surge Annex.
- The HPP program under HEPR provides planning benchmarks and goals for potential hospital evacuations.
 - The HCC - Disaster Preparedness Health Coalition (DPHC) meets every quarter with monthly training webinars including topics relevant to evacuations.
- ReddiNet communications and hospital bi-directional situation awareness is a priority in the DPHC plans and training programs. – Refer to the Alameda County ReddiNet Utilization Policy: [Reddinet Utilization](#)
- ALCO EMS supports and collaborates with local ALCO emergency departments to prepare for hospital evacuations
 - The Pediatric Readiness and Surge Project provides ED pediatric education with evacuation resources including the TRAIN (Triage Resource Allocation for Inpatient) Model

Refer to the Alameda County EMS System plan sections for additional information below:

- 4.12 (Disaster Response) Form
- 4.14 (Incident Command System) Form
- 5.05 (Mass Casualty Management) Form

NEED(S):

OBJECTIVE:

Continue to support hospital and EMS transport provider evacuation planning and exercises to strengthen and test evacuation plans.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.07 BASE HOSPITAL DESIGNATION

MINIMUM STANDARDS:

The local EMS agency shall, using a process which allows all eligible facilities to apply, designate base hospitals or alternative base stations as it determines necessary to provide medical direction of pre-hospital personnel.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: *MEETS MINIMUM STANDARD*

- Alameda Health System – Highland Hospital continues to be the single base hospital for all of Alameda County.
- Alameda County EMS continues to have online medical direction provided by Alameda Health System – Highland Hospital by contractual agreement through 2024 and that contract is currently be updated.
- Refer to the Alameda County EMS System Plan – Sections 1.25 and 2.07
- Refer to the 2024 QI Plan (Quality Improvement Responsibilities – Base Hospital)

COORDINATION WITH OTHER EMS AGENCIES: Yes

NEED(S):

Update and renew base hospital contract

OBJECTIVE:

Continue to monitor Base Hospital and support strengthened capability to improve patient outcomes

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.08 TRAUMA SYSTEM DESIGN

MINIMUM STANDARDS:

Local EMS agencies that develop trauma care systems shall determine the optimal system (based on community need and available resources) including, but not limited to:

- The number and level of trauma centers (including the use of trauma centers in other counties),
- The design of catchment areas (including areas in other counties, as appropriate), with consideration of workload and patient mix,
- Identification of patients who should be triaged or transferred to a designated center, including consideration of patients who should be triaged to other specialty care centers,
- The role of non-trauma center hospitals, including those that are outside of the primary triage area of the trauma center, and a plan for monitoring and evaluation of the system.

RECOMMENDED GUIDELINES:

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY, DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES, CHAPTER 7. TRAUMA CARE SYSTEMS

CURRENT STATUS: MEETS MINIMUM STANDARDS

Refer to the Alameda County EMS System Plan Sections and local policies/plans (compliant with current CA State Trauma Regulations):

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)
- 5.05 (Specialty Care Facilities)

-
- 2023 Trauma System Plan
 - Alameda County Critical Medical Patient Hospital Transfers for Specialty and/or Higher Level of Care Policy
 - Trauma Re-Triage/Transfer Policy

Alameda County EMS Meets minimum standards through active executed agreements with five transporting ALS agencies/departments (compliant with current CA State Trauma Care Systems Regulations) as follows:

- Falck Ambulance
- Berkeley FD
- Alameda City FD
- Albany FD
- Piedmont FD

Nine first responder ALS fire departments include:

- Berkeley FD
- Alameda City FD
- Alameda County FD
- Albany FD
- Piedmont FD
- Oakland FD
- Hayward FD
- Fremont FD

- Livermore/Pleasanton FD

All ALS agencies/departments, first response and transport, use ALCO EMS trauma triage (CDC criteria) and transport protocols, providers must maintain ITLS, PHTLS, or equivalent trauma education/training certification.

- Alameda County EMS ensures that patients who have experienced traumatic injury are clinically assessed using current 2022 ACS Field Trauma Triage criteria (implemented January 2024) and transported to an EMS designated Trauma Receiving Center for specialty diagnostics and treatment.

Alameda County EMS meets minimum standards through active executed agreements (expire 6/30/24) with three EMS designated American College of Surgeons (ACS) verified (required) Trauma Receiving Centers (compliant with current CA State Trauma Regulations) as follows:

- Alameda Health System-Highland Hospital-Oakland (Adult level-1)
- UCSF Benioff Children’s Hospital-Oakland (Pediatric level 1)
- Sutter Eden Medical Center-Castro Valley (Adult level 2)

On June 14, 2022, Alameda County Emergency Medical Services Agency (ACEMSA) approved Washington Hospital Healthcare System (WHHS) to be designated as the county’s next level II Adult Trauma Center Within five years. While this decision follows an extensive year-long evaluation of the county’s current trauma system and trauma needs, Washington Hospital has been preparing to become a trauma center for over two decades. The study commissioned by ACEMSA found that Alameda County’s trauma system is currently functioning well. The County will need one additional level II trauma center in the next five years based on projected population growth and trauma volume, and to minimize the number of patients sent to another county for trauma care. WHHS’s trauma-ready facilities and decades of preparation to become a trauma center are well-positioned to meet the needs of trauma victims in the South County Area within five years. WHHS will be Alameda County’s fourth trauma center, joining Highland Hospital, Eden Medical Center, and UCSF Benioff Children’s Hospital Oakland. This new proposed South Alameda County trauma service area covers Hayward south of Industrial Blvd., Union City, Fremont, Newark, Sunol, and the southern portion of the Tri-Valley Area. This change to the countywide trauma system is the first since ACEMSA designated the current trauma centers in 1987.

NEED(S):

Alameda County EMS Trauma System ongoing assessment and support for Washington Hospital transition to a Level II Trauma Center.

Establish Bi-directional Healthcare Data Exchange (HDE) with the one TC not yet connected: Eden

Establish and complete an EMS pre-designation review/evaluation process for Washington Hospital prior to them receiving EMS trauma patients.

OBJECTIVE:

Continued evaluation of the trauma system design and support for the Washington Hospital transition to a Level II Trauma Center.

Collaboration with Washington Hospital to ensure safe, efficient and effective implementation of trauma services.

Complete EMS pre-designation review / evaluation and ensure Washington Hospital is compliant with all minimum current CA State Trauma Regulation requirements regarding a Level 2 adult trauma receiving center.

Continue to work with ALCO receiving facilities and ESO to broaden bidirectional HDE availability to all facilities, including existing and future trauma receiving centers.

Continuous monitoring and evaluation of trauma care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.09 PUBLIC INPUT

MINIMUM STANDARDS:

In planning its trauma care system, the local EMS agency shall ensure input from both pre-hospital and hospital providers and consumers.

RECOMMENDED GUIDELINES:

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY
DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES
CHAPTER 7. TRAUMA CARE SYSTEMS.
ARTICLE 4. QUALITY IMPROVEMENT

CURRENT STATUS: MEETS MINIMUM STANDARDS

Alameda County EMS ensures input from both pre-hospital and hospital providers as follows:

- Meet and confer with Alameda County Trauma Centers (TC) as well as Contra Costa County EMS and John Muir Medical Center (Contra Costa County) through participation in quarterly bi-county Trauma Audit Committee (TAC). These multidisciplinary meetings include EMS, TC and at times, Law Enforcement/Coroner personnel.
- Coordination/collaboration with Bay Area Regional LEMSAs (Solano, Contra Costa, San Francisco, San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey, Marin) through participation in bi-monthly (every two months) Regional Trauma Coordinating Committee (RTCC) meetings. These multidisciplinary meetings include EMS and TC personnel.
- ALCO EMS Trauma Coordinator works closely with the Trauma Program Medical Director, Manager and Process Improvement Nurses and attends monthly internal trauma center multidisciplinary quality oversight/improvement meetings as well as clinical morbidity/mortality meetings at all Alameda County designated trauma centers.

Refer to Alameda County EMS System Plan Sections and plans:

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)
- 5.09 (Specialty Care Facilities)
- 2023 Trauma Plan

NEED(S):

Ongoing monitoring and evaluation of trauma care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

OBJECTIVE:

Continuous monitoring and evaluation of trauma care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.10 PEDIATRIC SYSTEM DESIGN

MINIMUM STANDARDS:

Local EMS agencies that develop pediatric emergency medical and critical care systems shall determine the optimal system, including:

- The number and role of system participants, particularly of emergency departments,
- The design of catchment areas (including areas in other counties, as appropriate), with consideration of workload and patient mix,
- Identification of patients who should be primarily triaged or secondarily transferred to a designated center, including consideration of patients who should be triaged to other specialty care centers,
- Identification of providers who are qualified to transport such patients to a designated facility,
- Identification of tertiary care centers for pediatric critical care and pediatric trauma,
- The role of non-pediatric specialty care hospitals including those which are outside of the primary triage area, and
- A plan for monitoring and evaluation of the system.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: ***MEETS MINIMUM STANDARD***

Refer to sections and plans:

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)
- 5.01 (Assessment of Capabilities)

CA EMSC REGULATIONS AND EMSC SYSTEM PLAN

- Planning to submit EMSC System plan in 2024
- Implementing Pediatric System Design changes to strengthen EMSC program.
- Preparing new 2024 contract with UCSF Benioff Children’s Hospital Oakland and SF Mission Bay for continued Pediatric Readiness Site visits, IMPACT Simulation training, and “just in time” pediatric clinical expertise with pediatric resource packets
- Scheduling bi-annual ALCO EMS PedRC / EMSC meeting with healthcare system partners

PEDIATRIC SURGE PREPAREDNESS AND EXERCISES

- Developed and revised the Alameda County Pediatric Surge Annex with the Western Regional Alliance for Pediatric Emergency Management (WRAP-EM) Pediatric Surge PLAYBOOK 2023. ALCO EMS Coordinator is a contributor author to the WRAP-EM Surge PLAYBOOK
- Provided training to the ALCO DPHC on the Pediatric Surge Annex, WRAP-EM Pediatric Surge PLAYBOOK & CA CDPH Pediatric Surge Annex to Patient Movement Plan.
- Leveraging partnerships with pediatric experts including WRAP-EM, Pediatric Pandemic Network (PPN), and National Pediatric Disaster Coalition (NPDC). ALCO EMSC Coordinator is the EMS Liaison to NPDC
- ALCO EMS Surge Lead presented the Pediatric Surge PLAYBOOK poster at the October 22, 2023 AAP Conference in Washington DC and at the CDPH Emergency Preparedness Training Workshop 2023.
- Completed, disseminated, and tested pediatric surge annex components with healthcare system partners in the 2/29/2024 Chemical / Pediatric Surge VTTX and Medical Response Surge Exercise (MRSE).

RECEIVING HOSPITAL PEDIATRIC READINESS AND SURGE CAPABILITY

- *Pediatric Critical Care Trauma Center – Level 1 – UCSF Benioff Children’s Hospital is the designated Trauma Center*
- Hospitals – Required to have pediatric receiving center readiness capability (PedRC) aligned with the CA EMSC regulations
- All receiving hospital pediatric site visits were conducted in 2023 with UCSF Benioff Children’s Hospital Oakland and Mission Bay. The feedback reports and customized pediatric resource packets were disseminated to all participating

hospitals. In 2024, follow-up conference calls have been or will be scheduled in 2024 to provide feedback and to identify pediatric needs

- Preparing new contract with UCSF Benioff Children’s Hospital, Oakland and Mission Bay, San Francisco, for Hospital Site Visits and ImpACT simulation training. Planning to integrate EMSC regulation requirements and prehospital assessments with PECC designations
- Shared CA EMSC Regulations EMSA implementation plan with Receiving Hospital partners
- All receiving hospitals completed the National Pediatric Readiness Project (NPRP) Survey in 2023
- Pediatric Site Visits will provide data on trauma re-triage. Education provided on Trauma Re-triage policy.

PEDIATRIC QI - CQI DATA COLLECTION

- CHILDREN INTEGRATED IN EMS QI DATA COLLECTION:

- Refer to ALCO EMSC System Plan for pediatric data metrics (to be submitted in 2024_
- Pediatric Hospital and Prehospital QI Data includes:

| Alameda County EMS Pre-Hospital Metrics_Pediatric (≤14yrs) | | |
|--|-------------|--|
| Category | Metric Name | Metric Description |
| Cardiac | PCAR -1 | Cardiac Arrest Survival - Non-Traumatic Arrest |
| | PCAR -2 | Cardiac Arrest Hospital Admissions - Non-Traumatic Arrest |
| Respiratory / Airway | PRESP-1 | Respiratory Assessment for Respiratory Distress |
| | PRESP-2 | Bronchodilator Administration for Bronchospasm (Transports Only) |
| | PRESP-3 | Supraglottic Airway Device - i-GEL Success Rates |
| Trauma | PTRA-1 | 90th Percentile Scene Times for Trauma Alerts |
| | PTRA-2 | Trauma Alerts Transported to a Pediatric Trauma Receiving Center |
| | PTRA-3 | Patients Meeting Critical Trauma Criteria documented as a Trauma Alert |
| | PTRA-4 | Appropriate Use of Pediatric Trauma Re-Triage |
| Medication Administration | PMED-1 | Accuracy for all Weight-Based Pediatric Medication Administrations |
| Seizures | PSEIZ-1 | Midazolam Administration for Active Seizures |
| Pain | PPAIN-1 | Fentanyl Administered for Pain ≥ 7 |
| Other | PEDS-1 | Treatment Administered for Hypoglycemia with Altered Mental Status |
| | PEDS-2 | Blood Pressure Assessment for Patients < 3 years of age |
| | PEDS-3 | Weight or Pedatape Color for all Patients Receiving a Weight-Based Medication |
| | PEDS-4 | Blood Glucose Level Assessment for Altered Mental Status |
| | PEDS-5 | Appropriate Destination for Pediatric’s on an Involuntary Psychiatric Hold (5685) (≤17yrs) |

- Other pediatric data systems, metrics and reports include:
 - APOT Report and Change in Wall time- control chart
 - QI Reports = Pediatric Destinations/Transports (by Primary Impression); Trauma Reports and Psych patients
 - ED Pediatric Readiness Site Visit Reports
 - First Watch

ALAMEDA COUNTY EMS POLICIES AND PROCEDURES

EMSC AUDIT PROCESS INTEGRATED IN EMS QI ACTIVITIES

- Alameda County QI Plan 2024 (Pediatric System of Care integrated in EMSC and QI Plans)
- PedRC recommendations aligns with EMSC Regulations
- ALCO EMS Administrative Policies include:
 - Hospital Responsibilities and Policy and Skills Competency
 - Trauma Audit Process Policy
 - Unusual Occurrence Policy
- National Pediatric Readiness Project (NPRP) Reports and Hospital Pediatric Site Visit Reports

ALCO EMS QI

Activities with focus on children and pediatric transports include:

- Contract compliance monitoring – UCSF Benioff Children’s’ Hospital Pediatric Readiness Project.
 - Hospital Assessment and QI provided by Pediatric Readiness Project with UCSF Benioff Children’s Hospital and Mission Bay Hospital
- Review – Unusual occurrence impacting children process
-

INVESTIGATIONS

- Contract compliance monitoring – UCSF Benioff Children’s’ Hospital Pediatric

- Investigation of all incidents reported via the Alameda County Unusual Occurrence reporting process, and coordination with all EMS providers and allied agencies to provide educational follow-up or disciplinary actions (where applicable).
- Tracked, investigated, and managed numerous Unusual Occurrences (real/potential reported threats to health and safety as per State regulation) reported to the EMS Agency
- EMS QI Coordinator Role collaboration with EMS for Children Coordinator
- Monitor hospital bypass and ambulance “wait times” – with consideration for children

PEDIATRIC COMMUNICATIONS - REDDINET

- Developed customized assessment polls with pediatrics
- Conducted remote virtual training with multiple hospital sites during the real events and exercises.
- Prepared to implement pediatric bed polling and customized assessments.

PEDIATRIC INTEGRATION DURING “REAL EVENT” RESPONSE

- The goals included ALCO EOC to Hospital Command Center coordination, pediatric medical surge, and communications with cross sector healthcare partners.
- EMSC Coordinator facilitated COVID-19 Therapeutic allocation including with UCSF Benioff Children’s Hospital, Oakland and will support in future if needed

ALAMEDA COUNTY EMS POLICIES

- 2024 EMS Field Manual – Reviewed and updated pediatric policies as needed

TRAIN – TRIAGE RESOURCE ALLOCATION FOR INPATIENT

- Promoting the Triage by Resource Allocation for In-patients (TRAIN) project. Supporting Sutter Hospital TRAIN implementation project in Alameda County

PEDIATRIC INTEGRATION - COMMITTEES

- EMSC and Pediatric Readiness integration in quarterly Receiving Hospital Meetings
- UCSF Benioff Children’s Hospital & Mission Bay, San Francisco Pediatric Readiness Project Contract meeting occurs quarterly
- Updated Pediatric Resources and ensure access with system partners via ED Receiving Hospital Committee, HCC - Disaster Preparedness Coalition (DPHC), QI Meetings, EMSC, and Hospital Disaster Preparedness Committees
- Ensure pediatric issues are addressed in all EMS programs and committees: Quality Improvement, Trauma, Disaster, Injury Prevention, IFT, Falck 911, and Region II ABAHO Projects

PEDIATRIC RESOURCES AND LOGISTICS

- EMS and MHOAC Procurement Center (established during COVID-19) continues to include pediatric resource procurement to meet operational needs

NEED(S):

Implement the new UCSF Pediatric Readiness Contract and Project Site Visits.

Facilitate Health Data Exchange (HDE) with UCSF Benioff Children’s Hospital, Oakland

OBJECTIVE:

ALAMEDA COUNTY EMS FOR CHILDREN BENCHMARKS:

- Implementation EMSC Regulations with PedRC benchmarks
- Ensure pediatric ALS/BLS equipment and supplies
- Adopt evidence based pediatric policies and protocols
- Leverage hospitals to strengthen pediatric readiness for “day to day” and medical surge readiness
- Ensure pediatric competency
- Strengthen pediatric medical surge and disaster plans including the Pediatric Surge Annex to the HCC Pediatric Response Plan Annex

- Ensure pediatric resources are disseminated to healthcare partners via Alameda County EMS Website; google list serve, and coalitions/committees
- Ensure Pediatric Quality Improvement
- Ensure Injury Prevention and education Projects
- Pediatric Medical Surge capability and system-wide readiness
- Sustain EMSC, Pediatric Readiness, QI, and Surge Advisory Committee
- Strengthen HDE with all hospitals with pediatric benchmarks

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.11 EMERGENCY DEPARTMENTS

MINIMUM STANDARDS:

Local EMS agencies shall identify minimum standards for pediatric capability of emergency departments including:

- Staffing,
- Training,
- Equipment,
- Identification of patients for whom consultation with a pediatric critical care center is appropriate,
- Quality assurance/quality improvement, and
- Data reporting to the local EMS agency.

RECOMMENDED GUIDELINES:

Local EMS agencies should develop methods of identifying emergency departments which meet standards for pediatric care and for pediatric critical care centers and pediatric trauma centers.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County EMS has identified minimum standards for pediatric capability for hospital emergency departments including Staffing; Training; Equipment; Identification of patients for whom consultation with a pediatric critical care center is appropriate; Quality assurance/quality improvement, and data reporting to the local EMS agency. Alameda County is facilitating the planned 2024 National Prehospital Pediatric Readiness Project (NPPRP) Assessment. Refer to the projects below:

ALCO ED Pediatric Readiness Project and CA EMS for Children Regulations

Alameda County EMS aligns and supports CA EMSC Regulations to strengthen pediatric capacity and capability as follows:

- The EMS for Children Coordinator is facilitating an EMSC and Pediatric Surge Work Plan with focus on strengthening pediatric capability and capacity in the EDs and compliance with state EMS for Children Standards. The EMSC System plan will be submitted to EMSA in 2024.
- Alameda County (ALCO) is supporting and aligning with the CA EMSA Regulations <https://emsa.ca.gov/ems-for-children/>
 - **Chapter 14. Emergency Medical Services for Children**
 - [Article 1. Definitions](#)
 - [Article 2. Local EMS Agency EMSC Program Requirements](#)
 - [Article 3. Pediatric Receiving Centers](#)
 - [Article 4. Data Management, Quality Improvement and Evaluations](#)
- Alameda County EMS implemented a Pediatric Readiness Contract with UCSF Benioff Children’s Hospital Oakland and Mission Bay (Jan. 2021 – Dec. 31, 2023)
 - The contract is titled “Improving Pediatric Acute Care through Simulation ImPACTS / Pediatric Readiness Preparedness, Assessment, Education, and Partnership Project”
 - Per the contract, the UCSF and ALCO EMS assessment team conducted ED Pediatric Readiness and Surge Site Visits with pediatric simulations for 12 hospitals. All hospitals participated in the 2023 pediatric readiness site visits. Each hospital received the feedback reports and a customized pediatric resource packet. In 2024, each hospital has or will participate in a post site visit conference call to discuss summary reports and identify pediatric needs moving forward.
 - *Each hospital is required to complete the National Pediatric Readiness Project (NPRP) pediatric assessment and have an on-site visit every two years to evaluate and provide training on pediatric staffing; training; equipment; identification of patients for whom consultation with a pediatric critical care center is appropriate; quality assurance/quality improvement, and data reporting.*
- Alameda County EMS is developing a new UCSF Benioff Children’s Hospital with SF Mission Bay and Oakland to continue the pediatric readiness site visits starting in 2024. The new contract will integrate requirements to comply with the CA EMSC regulations, pediatric data metric requirements, and integration of the prehospital provider pediatric readiness project.

- Hospital Pediatric Emergency Care Coordinators (PECCs) are invited to the EMSC, QI, and DPHC Quarterly Meetings. Pediatric issues are integrated in the ALCO Receiving Hospital Committee and QI Meetings. PedRC / EMSC meetings will be conducted bi-annually with hospital and prehospital provider partners.
- Alameda County Receiving Hospitals participated in the 2/29/2024 UCSF Chemical / Pediatric Surge Virtual Tabletop Exercise (VTTX) and the 2024 Medical Response Surge Exercises (MRSEs).

For additional information, refer to the Alameda County EMS System Plan Sections and Plans:

- 1.07 (Trauma Planning)
- 1.19 (Policies, Procedures, Protocols)
- 1.23 (Inter-facility Transfer)
- 1.26 (Trauma System Plan)
- 1.27 (Pediatric System Plan)
- 5.01 (Assessment of Capabilities)
- 5.10 (Pediatric System Design)

-
- Alameda County Pediatric Surge Annex to support Disaster Preparedness Healthcare Coalition (DPHC) Response Plan
 - 2024 Trauma Plan
 - Alameda County Administrative Policies – Hospital ReddiNet Administrative Policy
 - 2024 Alameda County EMS Field Manual - [2024 Alameda County EMS Field Manual](#)
 - 2024 Alameda County QI Plan - [2024 Alameda County EMS QI Plan](#)
 - Pediatric Re-Triage Policy
-

REAL EVENT AND EXERCISE PEDIATRIC SURGE PREPAREDNESS AND RESPONSE

- All Receiving hospitals are expected to share pediatric data (ie via ReddiNet) for situation awareness and “real time” polling metrics. Refer to the Administrative ReddiNet Utilization Policy and the Alameda County DPHC Pediatric Surge Annex
- The Receiving Hospitals have received training on the ALCO Pediatric Surge Annex and the WRAP-EM Pediatric Surge PLABOOK.

NEED(S):

PLAN FOR NEW UCSF BENIOFF CHILDREN’S HOSPITAL PEDIATRIC READINESS CONTRACT (EXPECTED TO BEGIN JULY 2024).

SUBMIT 2024 EMS FOR CHILDREN SYSTEM PLAN

OBJECTIVE:

To strengthen pediatric readiness capability to care for children for Alameda County Hospitals and Prehospital providers aligned with and in compliance with the state EMS for Children regulations

SHORT AND LONG -RANGE GOALS - PEDIATRIC READINESS PROJECT

- To conduct ALCO Receiving Hospital pediatric readiness and surge assessments to strengthen ED pediatric capabilities including: 1) review the site-visit self-assessment tool from the NPRP pediatric readiness project; 2) provide an ED on-site simulation training with expert feedback, post site visit hospital specific customized feedback reports which includes recommendations on strategies for improvement and resource packets; and 3) facilitate on-going collaboration and future training for PECCs with UCSF Benioff Children’s Hospital and ALCO EMS.
- To facilitate prehospital provider pediatric readiness assessments and identify PECCs.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.12 PUBLIC INPUT

MINIMUM STANDARDS:

In planning its pediatric emergency medical and critical care system, the local EMS agency shall ensure input from both pre-hospital and hospital providers and consumers.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

Alameda County EMS ensures pediatric emergency care and critical care public input with receiving hospitals and EMS provider representation. Ongoing committee collaborations include: Alameda County EMS Quality Council; Emergency Medical Oversight Committee (EMOC); Receiving Hospital Committee; Trauma Audit Committee; Regional Trauma Audit Committee; Data Steering Committee; ePCR Change Committee; EMS Section Chiefs Committee; Alameda County Fire Chiefs Committee; EMSAAC/EMDAAC; CA EMS for Children TAC Committee; LEMSA PedRC / EMSC Meeting; Western Regional Pediatric Alliance for Emergency Management (WRAP-EM), and other ad-hoc committees (i.e. ReddiNet and Association of Bay Area Health Officers (ABAHO) Workgroup Committee)

Alameda County EMS has developed the EMS for Children System Plan. The PedRC / EMSC meeting will be held biannually to ensure input from prehospital and hospital providers and stakeholders. UCSF Benioff Children's Hospital is a pivotal stakeholder in the pediatric emergency medical and critical care system.

Alameda County EMS ensure public input for planning the DPHC pediatric surge annex. Hospital and prehospital partners participated in the 2/29/24 WRAP-EM Chemical / Pediatric Surge VTTX and the 3/13/24 DPHC Radiological tabletop exercise to provide plan and exercise feedback.

New committees and tasks forces are developed to address the adult and pediatric emergency medical and critical care system needs. These working groups include the UCSF Children's Hospital Pediatric Readiness Site Visit Team, Therapeutics Group, exercise planning committees, and other ad hoc groups.

Alameda County EMS identified WRAP-EM, Pediatric Pandemic Network (PPN), and the National Pediatric Disaster Coalition (NPDC) Pediatric Subject Matter Experts across the country as advisors to address immediate pediatric EMS and critical surge needs. The Alameda County EMSC and HPP LEMSA Liaison is the EMS Liaison for NPDC.

NEED(S):

OBJECTIVE:

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.13 SPECIALTY SYSTEM DESIGN

MINIMUM STANDARDS:

Local EMS agencies developing specialty care plans for EMS-targeted clinical conditions shall determine the optimal system for the specific condition involved, including:

- The number and role of system participants,
- The design of catchment areas (including inter-county transport, as appropriate) with consideration of workload and patient mix,
- Identification of patients who should be triaged or transferred to a designated center,
- The role of non-designated hospitals including those which are outside of the primary triage area, and
- A plan for monitoring and evaluation of the system.

RECOMMENDED GUIDELINES:

- CALIFORNIA CODE OF REGULATIONS, TITLE 22. SOCIAL SECURITY

DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES, CHAPTER 7. TRAUMA CARE SYSTEMS

- California Code of Regulations, Title 22. Social Security

Division 9. Prehospital Emergency Medical Services, Chapter 7.2 Stroke Critical Care System

- California Code of Regulations, Title 22. Social Security

Division 9. Prehospital Emergency Medical Services, Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

CURRENT STATUS: MEETS MINIMUM STANDARDS:

Refer to Alameda County EMS System Plan sections and local policies/plans (compliant with current CA State Trauma, Stroke, STEMI, and EMSC Regulations):

| | |
|---|--|
| • 1.07 (Trauma Planning) | • 1.19 (Policies, Procedures, Protocols) |
| • 1.23 (Inter-facility Transfer) | • 1.26 (Trauma System Plan) |
| • 1.27 (Pediatric System Plan) | • 5.01 (Assessment of Capabilities) |
| • 5.04 (Specialty Care Facilities) | • 5.10 (Pediatric System Design) |
| • 5.13 (Specialty System Design) | • 2024 Trauma Care System Plan |
| • 2024 Stroke Critical Care System Plan | • 2024 STEMI Critical Care System Plan |

Alameda County EMS meets minimum standards through active executed agreements with five **transporting ALS agencies/departments**:

| | |
|-------------------|---------------|
| • Falck Ambulance | • Berkeley FD |
| • Alameda City FD | • Albany FD |
| • Piedmont FD | |

Nine first responder **ALS fire departments**:

| | |
|---------------------------|-------------------|
| • Berkeley FD | • Alameda City FD |
| • Alameda County FD | • Albany FD |
| • Piedmont FD | • Oakland FD |
| • Hayward FD | • Fremont FD |
| • Livermore/Pleasanton FD | |

TRAUMA RECEIVING CENTERS

- Alameda County EMS ensures that patients who have experienced traumatic injury are clinically assessed using current 2022 ACS Field Trauma Triage criteria (implemented January 2024) and transported to an EMS designated Trauma Receiving Center for specialty diagnostics and treatment.

Alameda County EMS meets minimum standards through active executed agreements (expire 6/30/24) with three EMS designated American College of Surgeons (ACS) verified (required) **Trauma Receiving Centers** (compliant with current CA State Trauma Regulations):

- Alameda Health System-Highland Hospital (Adult level-1)
- UCSF Benioff Children’s Hospital (Pediatric level 1)
- Sutter Eden Medical Center (Adult level 2)

The fourth trauma center, Washington Hospital, is in the process of putting their services in place to receive provisional designation in 2024.

STROKE RECEIVING CENTERS

- Alameda County EMS ensures that patients who are experiencing a possible cerebral vascular accident (Stroke) on scene, detected by clinical assessment (Cincinnati Stroke Scale), are transported to an EMS designated Primary Stroke Receiving Center for specialty diagnostics and treatment: CT / CTA / CTP, and if needed, IV fibrinolytic and or transfer to a thrombectomy capable center for IR services.
- Alameda County EMS meets minimum standards through active executed agreements (expire 12/31/25) with eight EMS designated Joint Commission (JC) certified (required) **Primary Stroke Receiving Centers** (compliant with current CA State Stroke Regulations):

| | |
|--|------------------------------------|
| • Alameda Health System-Alameda Hospital | • Alta Bates Summit Medical Center |
| • Eden Medical Center | • Kaiser-Fremont |
| • Kaiser-Oakland | • Kaiser-San Leandro |
| • Stanford Valley Care | • Washington Hospital |

STEMI / CARDIAC ARREST RECEIVING CENTERS (CARC)

- Alameda County EMS ensures that patients who are experiencing a possible ST- elevation myocardial infarction (STEMI) receive expedited specialty care. An out-of- hospital STEMI is detected by clinical exam and 12-lead electrocardiogram that is transmitted to the closest appropriate STEMI Receiving Center (SRC). The patient is then transported to that EMS designated SRC for specialty diagnostics and treatment: coronary angiogram and if needed a Primary Percutaneous Coronary Intervention (PCI).
- Alameda County EMS also ensures that patients who experience out-of-hospital cardiac arrest on scene or during transport and received attempted resuscitation with any return of spontaneous circulation (ROSC) or presented with an initial or recurrent shockable rhythm
- (VF/VT) are transported to the same EMS designated SRC/CARCs. Both STEMI and Cardiac Arrest patients are transported to an SRC/CARC since these patients frequently need common interventions.

Alameda County EMS meets minimum standards through active executed agreements (expire 12/31/2025) with seven EMS designated **STEMI/Cardiac Arrest Receiving Centers** (compliant with current CA State STEMI Regulations):

- Alameda Health System-Highland Hospital
- Alta Bates Summit Medical Center
- Kaiser-Fremont
- Kaiser-Oakland
- St. Rose Hospital
- Stanford Health Care Tri-Valley
- Washington Hospital

PEDIATRIC RECEIVING CENTERS

- The ALCO 13 Receiving Hospitals support the CA EMS for Children Regulations and ALCO Pediatric Readiness Surge Workplan
- Alameda County (ALCO) EMS is implementing the ALCO Pediatric Readiness Site Visit assessments with UCSF Benioff Children’s Hospital Oakland and SF Mission Bay for all ALCO Receiving hospitals
 - The project design and methodology are aligned with and supporting the CA EMSC Regulations and the National Pediatric Readiness Project (NPRP)
 - All 13 ALCO Receiving hospitals participate in the Pediatric Readiness Site Visit project
 - Each participating hospital receives a comprehensive post site visit report with recommendations for improvement and a pediatric resource packet.
- ALCO Receiving hospitals (Trauma centers) are required to have pediatric readiness assessments and site visits every two years
 - Pediatric Critical Care Trauma Center – Level 1 – UCSF Benioff Children’s Hospital is the designated Trauma Center

-
- ALCO EMS completed the ALCO Pediatric Surge Annex to support the DPHC Coalition response plan consistent with and aligned with the CA Neonatal, OB, Pediatric Surge Annex. The Western Regional Alliance for Pediatric Emergency Management (WRAP-EM) Pediatric Surge PLAYBOOK was added to the annex.
 - ALCO EMS is implementing Pediatric System Design changes to strengthen the EMS for Children program to support the CA EMSC regulations, the CA Neonatal, OB, Pediatric Surge Annex, and the lessons learned from the 2022-23 RSV/Resp. Illness pediatric surge event.

NEED(S):

On-going monitoring and evaluation of specialty care systems performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

OBJECTIVE:

Continuous monitoring and evaluation of specialty care systems performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

5.14 PUBLIC INPUT

MINIMUM STANDARDS:

In planning other specialty care systems, the local EMS agency shall ensure input from both pre-hospital and hospital providers and consumers.

RECOMMENDED GUIDELINES:

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.2 Stroke Critical Care System
Article 5. Data Management, Quality Improvement and Evaluations

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System
Article 5. Data Management, Quality Improvement and Evaluations

CURRENT STATUS: MEETS MINIMUM STANDARDS:

Refer to previous sections and local policies/plans (compliant with current CA State Trauma, Stroke, STEMI, and EMSC Regulations):

ALCO EMS Specialty Systems of Care Coordinator hosts three multidisciplinary meetings per year, for both STEMI and Stroke Receiving Centers in collaboration with system stakeholders, these include EMS and Specialty Care Facility personnel. (Compliant with current CA State STEMI and Stroke Regulations):

ALCO EMS Specialty Systems of Care Coordinator (STEMI and Stroke) works closely with the STEMI and Stroke Program Medical Director, Manager and Process Improvement (QA/QI) personnel, as well attends scheduled internal multidisciplinary quality oversight/improvement meetings and clinical morbidity/mortality meetings at Alameda County designated STEMI and Stroke Receiving Centers.

ALCO EMS has instituted two new stakeholder meetings to discuss pediatric care and cardiac arrest systems of care.

NEED(S):

OBJECTIVE:

Continuous monitoring and evaluation of specialty care systems performance with multidisciplinary stakeholder input for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.01 QA/QI PROGRAM

MINIMUM STANDARDS:

The local EMS agency shall establish an EMS quality assurance/quality improvement (QA/QI) program to evaluate the response to emergency medical incidents and the care provided to specific patients. The programs shall address the total EMS system, including all pre-hospital provider agencies, base hospitals, and receiving hospitals. It shall address compliance with policies, procedures, and protocols, and identification of preventable morbidity and mortality, and shall utilize state standards and guidelines. The program shall use provider-based QA/QI programs and shall coordinate them with other providers.

RECOMMENDED GUIDELINES:

The local EMS agency should have the resources to evaluate response to, and the care provided to, specific patients.

CURRENT STATUS: MEETS MINIMUM STANDARD

Refer to the 2024 Quality Improvement Plan - [2024 Quality Improvement Plan - Alameda County EMS](#)

NEED(S):

Continuous quality improvement

OBJECTIVE:

Our purpose is to reduce pain and suffering and improve health of our patients

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.02 PREHOSPITAL RECORDS

MINIMUM STANDARDS:

Pre-hospital records for all patient responses shall be completed and forwarded to appropriate agencies as defined by the local EMS agency.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Refer to the Alameda County EMS Standard Sections and plans below:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 5.01 (Assessment of Capabilities)
- 6.01 (QA/QI Program)
- 6.03 (Prehospital Care Audits)

2024 Quality Improvement Plan (QI) PLAN - [2024 Quality Improvement Plan - Alameda County EMS](#)

DEFINITIVE NETWORKS INCORPORATED

- Zoll legacy data hosting
- Data Analytics
- Agreement till 2024

Pre-hospital records for all patient responses shall be completed and forwarded to appropriate agencies as defined by the local EMS agency

NEED(S):

Improve data entry into structured fields and improve data analytics

OBJECTIVE:

Through scientific data collection and analysis, measurably assess prehospital impact on reducing pain and suffering

SHORT RANGE PLAN:

- Establish various reports that assess the effect of prehospital interventions
- Expand analysis of MPDS
- Expand Tableau ad hoc reporting capability for EMS
- Expand use of ESO Insights platform
- Compliance monitoring
- First Watch/First Pass analytics

SHORT AND LONG RANGE PLAN:

- Alameda Health Systems and St. Rose are connected to ESO prehospital data via ESO Health Data Exchange (HDE). HDE will be expanded with other hospitals to assess patient outcomes and the effect of prehospital interventions.

Refer to 6.01 (QA/QI) and 6.03 (Prehospital Care Audits)

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.03 PREHOSPITAL CARE AUDITS

MINIMUM STANDARDS:

Audits of pre-hospital care, including both system response and clinical aspects, shall be conducted.

RECOMMENDED GUIDELINES:

The local EMS agency should have a mechanism to link pre-hospital records with dispatch, emergency department, in-patient and discharge records.

CURRENT STATUS: MEETS MINIMUM STANDARD

Refer to the standards below:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 5.01 (Assessment of Capabilities)
- 6.01 (QA/QI Program)
- 6.03 (Prehospital Records)
- 2023 QI PLAN

All Plans are Short and Long Range

Health Data Exchanges (HDE):

- To date, ALCO EMS HDE has been established with Alameda Health System (Highland Hospital, Alameda Hospital, San Leandro Hospital, John George Psychiatric), St. Rose Hospital, Washington Hospital, and UCSF Benioff Children's Hospital-Oakland, seven remaining acute care facilities to be established.

Data Metric Tools and Reviews:

- First Watch/First Pass used to assess critical bundles of care
- Tableau, First Watch and ESO analytic tools in place to audit prehospital care
- Monthly Base Call Reviews occur

NEEDS:

Utilize call reviews, audits and data analysis to assess provider intervention effectiveness

OBJECTIVE:

To assess and improve patient outcomes, maintain the one-stop data source for all clinical system data to better enable Alameda County EMS to conduct detailed research with FRALS and transport data integrated into the same system. This will reduce the time needed to implement queries and will also ensure that clinical data is not under or over counted due to the enhanced ability to match FRALS and transport data to one patient.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.04 MEDICAL DISPATCH

MINIMUM STANDARDS:

The local EMS agency shall have a mechanism to review medical dispatching to ensure that the appropriate level of medical response is sent to each emergency and to monitor the appropriateness of pre-arrival / post dispatch directions.

Refer to the Alameda County EMS System plan sections, plans, and website:

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 3.04 (Dispatch Center)
- 5.01 (Assessment of Capabilities)
- 6.01 (QA/QI Program)
- 6.04 (Prehospital Records)
- 2024 QI PLAN

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Alameda County EMS Calls are monitored and reviewed for appropriateness.
- Alameda County EMS Agency has established and continues to facilitate the Medical Dispatch Review Committee (MDRC) comprised of representatives from ACRECC and the Oakland Fire Department Dispatch center as well as field personnel, the EMS Director, EMS Medical Director and provider agency and leadership.
- The establishment of this committee has assisted in standardizing the assignment of EMS resources throughout the county.

NEED(S):

Bi-directional computer aided dispatch communications between ACRECC and OFD dispatch centers.

Consider medical provider at RN level or higher into the dispatch centers to assist with alternative destinations for EMS responses where an ambulance or an ED is required.

OBJECTIVE:

Ensure ongoing communication between FRALS, ALS, BLS/IFT, LE, and LEMSA partners

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.05 DATA MANAGEMENT SYSTEM

MINIMUM STANDARDS:

The local EMS agency shall establish a data management system that supports its system-wide planning and evaluation (including identification of high-risk patient groups) and the QA/QI audit of the care provided to specific patients. It shall be based on state standards.

RECOMMENDED GUIDELINES:

The local EMS agency should establish an integrated data management system which includes system response and clinical (both pre-hospital and hospital) data.

The local EMS agency should use patient registries, tracer studies, and other monitoring systems to evaluate patient care at all stages of the system.

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES CHAPTER 7. TRAUMA CARE SYSTEMS

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.2 Stroke Critical Care System

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

CURRENT STATUS:

Refer to previous sections and local policies/plans (compliant with current CA State Trauma, Stroke, STEMI, and EMSC Regulations):

- 1.12 (Review and Monitoring)
- 1.18 (QA/QI)
- 5.01 (Assessment of Capabilities)
- 6.01 (QA/QI Program)
- 6.05 (Prehospital Records)
- 2024 QI PLAN
- Trauma Care Plan
- Stroke Care Plan
- STEMI Care Plan
- EMSC System Plan

Meets minimum standards through active executed agreements with six transporting ALS agencies/departments, ALL use ESO Solutions for ePCR platform:

- Falck Ambulance
- Berkeley FD
- Alameda City FD
- Albany FD
- Piedmont FD

Nine first responder ALS fire departments, ALL use ESO Solutions EHR platform:

- Berkeley FD
- Alameda City FD
- Alameda County FD
- Albany FD
- Piedmont FD
- Oakland FD

- Hayward FD
- Fremont FD
- Livermore/Pleasanton FD

Trauma Receiving Centers

Meets minimum standards through active executed agreements (expire 6/30/24) with three EMS designated American College of Surgeons (ACS) verified (required) Trauma Receiving Centers (compliant with current CA State Trauma Regulations), ALL use Lancet Trauma-1 database (required for EMS designation):

- Alameda Health System-Highland Hospital (Adult level-1)
- UCSF Benioff Children’s Hospital (Pediatric level 1)
- Sutter Eden Medical Center (Adult level 2)

Stroke Receiving Centers

Meets minimum standards through active executed agreements (expire 12/31/25) with eight EMS designated Joint Commission (JC) certified (required) Primary Stroke Receiving Centers (compliant with current CA State Stroke Regulations), ALL use AHA Get With The Guidelines-Stroke registry (required for EMS designation):

- Alameda Health System-Alameda Hospital
- Alta Bates Summit Medical Center
- Eden Medical Center
- Kaiser-Fremont
- Kaiser-Oakland
- Kaiser-San Leandro
- Stanford Valley Care
- Washington Hospital

STEMI / Cardiac Arrest Receiving Centers

Meets minimum standards through active executed agreements (expire 12/31/25) with seven EMS designated STEMI/Cardiac Arrest Receiving Centers (compliant with current CA State STEMI Regulations), ALL use AHA Get With The Guidelines-CAD registry for STEMI and Cardiac Arrest Registry to Enhance Survival for out-of-hospital cardiac arrest (required for EMS designation):

- Alameda Health System-Highland Hospital
- Alta Bates Summit Medical Center
- Kaiser-Fremont
- Kaiser-Oakland
- St. Rose Hospital
- Stanford Health Care Tri-Valley
- Washington Hospital

COORDINATION WITH OTHER EMS AGENCIES:

NEEDS:

Real time bi-directional Healthcare Data Exchange (HDE)

OBJECTIVE:

The purpose of this HDE initiative is to enhance continuity of care between Alameda County Emergency Medical Services (EMS) and system receiving hospitals, provide patient outcomes to EMS providers, and optimize billing practices to reduce insurance claim issues that could financially impact the patient through connecting EMS data with receiving facility data. The platform design is on an encounter specific basis to allow timely bi-directional digital sharing of information pertinent to patient demographics, billing, and clinical care.

Establishment of the HDE would allow EMS patient care reports (PCR) to be digitally transferred in the hospital data systems and subsequently into the patient's Electronic Medical Record (EMR) in either a PDF format or by populating established fields within the system as soon as they are completed by the EMS provider. In addition, patient demographics and insurance information would be shared bi-directionally to help assure that both the EMS provider and the receiving facility both have accurate information.

Clinically, beyond the transferring of information into the hospital data collection system, patient outcome information such as diagnosis, admission/discharge status and interventions can be automatically shared with the EMS care providers involved with that specific patient encounter so that they can compare against their evaluations, assessments, interventions and treatments in order to enhance their skills as a clinical provider.

Furthermore, the bi-directional sharing of information will allow for more timely and efficient collection and reporting of program specific registry data for both EMS and specialty receiving centers. Additionally, this initiative will enhance system oversight as well as future quality and process improvement strategies.

To date, ALCO EMS HDE has been established with Alameda Health System (Highland Hospital, Alameda Hospital, San Leandro Hospital, John George Psychiatric), St. Rose Hospital, Washington Hospital, and UCSF Benioff Children's Hospital-Oakland, seven remaining acute care facilities to be established.

Continuous monitoring and evaluation of specialty care systems performance data for needed policy/protocol modification, with the intention to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.06 SYSTEM DESIGN EVALUATION

MINIMUM STANDARDS:

The local EMS agency shall establish an evaluation program to evaluate EMS system design and operations, including system effectiveness at meeting community needs, appropriateness of guidelines and standards, prevention strategies that are tailored to community needs, and assessment of resources needed to adequately support the system. This shall include structure, process, and outcome evaluations, utilizing state standards and guidelines.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARDS

Pursuant to Section 1797.224 of the California Health and Safety Code, ALCO EMS has established 5 exclusive operating areas (EOAs) for 9-1-1 ambulance transport services. The EOAs, as currently configured, were implemented on June 29, 1990.

Four of the EOAs are granted through an exclusive non-competitive process due to grandfathering city fire departments that provided ambulance services prior to The Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980. The four grandfather EOAs are the city of Alameda, the city of Albany, the city of Berkeley, and the city of Piedmont. The city of Berkeley EOA includes the state property of UC Berkeley and the federal property at Lawrence Berkeley Lab. There has been no efforts or requests to re-evaluate these EOAs.

In 2019, post-implementation of the successful contractor from the last competitively bid process, the fifth EOA, which encompasses the remainder of Alameda County, except for the federal LLNL property, was re-evaluated by a LEMSA initiated work group comprised of system stakeholders which included representatives from ambulance providers, fire departments, hospitals, and elected officials from both the cities and county. The work group determined that it was important to maintain the EOA as is to provide equitable and consistent delivery of high-quality EMS services to our communities. In addition, Alameda County EMS held further stakeholder meetings to inform our next RFP. Organizations have been cross-sectional and inclusive. The original stakeholder group included the LEMSA, fire departments, hospital leadership, city managers, representatives from labor, staff members from the Board of Supervisor districts, ambulance providers, and more. After those stakeholders met, the vision of the group was presented to community groups for feedback including access and functional needs communities, senior care providers, Public Health Commission, Mayors Conference, Board of Supervisors, at-large community meetings, and more.

The EOA was last competitively bid in 2018 with the winning contractor, Falck, implementing service in July of 2019. Falck has been awarded the EOA for a 5-year term and a 2-year extension ending in June of 2026.

Pursuant to the efforts listed above, Alameda County EMS is currently conducting an RFP Process for 911 EOA Emergency Ambulance Services, with the goal of ensuring an EMS System driven by clinical and operational excellence as well as financial viability.

NEED(S):

Continue working with RFP process for 911 EOA Emergency Ambulance Services and evaluate system recommendations. Continue to incorporate the feedback from the community listening sessions and EMS partner stakeholders.

OBJECTIVE:

Use evidence-based data to develop an RFP that moves away from the single service delivery model of a call to 911 results to a transport to a hospital. It is clear that design does not deliver the best patient care or perpetuate sustainable use of resources. Innovation and use of an alternate continuum of care is needed.

There are many hurdles to overcome to reach this envisioned system including legislation, regulations, and funding, but there are movements in all areas in the EMS efforts that may make this envisioned system a reality in the future.

Further, there needs to be a shift away from response time compliance as many well-regarded studies have found in the majority of cases, code 3 responses do not make a difference in patient outcome and, in fact, needlessly endanger the public and our field health care providers. Clinical metrics should be the performance indicators by which we measure the success of our prehospital care.

Refer to the Alameda County EMS Sections and plans:

- 1.12 Review and Monitoring
- 1.18 QA/QI
- 5.01 Assessment of Capabilities
- 6.01 QA/QI Program
- 2024 QI Plan

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.07 PROVIDER PARTICIPATION

MINIMUM STANDARDS:

The local EMS agency shall have the resources and authority to require provider participation in the system-wide evaluation program.

RECOMMENDED GUIDELINES:

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY
DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES
CHAPTER 7. TRAUMA CARE SYSTEMS

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.2 Stroke Critical Care System

California Code of Regulations Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

California Code of Regulations
Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 14. Emergency Medical Services for Children (EMSC)

CURRENT STATUS:

Refer to previous sections and local policies/plans (compliant with current CA State Trauma, Stroke, STEMI, and EMSC Regulations):

- 2024 QI Plan
- Trauma Care Plan
- Stroke Care Plan
- STEMI Care Plan
- EMSC System Plan

NEED(S):

System-wide evaluation of specialty care systems performances

OBJECTIVE:

Continuous monitoring and evaluation of specialty care systems performance for needed policy/protocol modification, with the intention to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.08 REPORTING

MINIMUM STANDARDS:

The local EMS agency shall, at least annually, report on the results of its evaluation of EMS system design and operations to the Board(s) of Supervisors, provider agencies, and Emergency Medical Care Committee(s).

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: Meets Minimum Standards

There are many ways in which we keep our stakeholders informed of our system design and operations. Below are examples:

- Publish EOA provider compliance on our EMS website
- Publish APOT data on our EMS website
- Meet regularly with the Board of Supervisors in total as well as the following subcommittees:
 - Health Committee
 - Public Protection Committee
- Meet regularly with EMS partners (monthly or quarterly)
 - Ambulance Providers (BLS and ALS)
 - STEMI Programs
 - Stroke Programs
 - Dispatch Centers
 - Receiving Hospitals
 - APOT Committee
 - EMS Quality Council
 - EMS Section Chiefs
 - Fire Chiefs

We engaged our stakeholders in future planning that resulted in the current RFP for the 911 EOA transport provider.

NEEDS:

Education for our community members and stakeholders regarding the updated system design that is reflected in the aforementioned RFP..

OBJECTIVE:

Continue reporting on the EMS system but look to the future collaboratively to implement and monitor a system that more effectively meets the needs of our communities.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.09 ALS AUDIT

MINIMUM STANDARDS:

The process used to audit treatment provided by advanced life support providers shall evaluate both base hospital (or alternative base station) and pre-hospital activities.

RECOMMENDED GUIDELINES:

The local EMS agency's integrated data management system should include pre-hospital, base hospital, and receiving hospital data.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Audit process is defined within EMS CQI Plan.
- Unusual Occurrence process established which can trigger an audit if warranted.
- All 9-1-1 providers utilize a single unified data collection system (ESO).
- Routine auditing of Base Hospital use and outcomes
- FirstPass is utilized by all 9-1-1 providers
- ESO Insights is utilized by all 9-1-1 providers.
- Refer to the 2024 EMS QI Plan - [2024 Alameda County EMS QI Plan](#)

NEED(S):

Improve and enhance data integration, data analysis and unusual occurrence reporting processes.

Expand HDE to all receiving facilities.

Complete development and roll out of Patient Centric FirstPass which allows providers to see full continuum of care from fire first response through transport.

OBJECTIVE:

Improve patient care and outcomes

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.10 TRAUMA SYSTEM EVALUATION

MINIMUM STANDARDS:

The local EMS agency, with participation of acute care providers, shall develop a trauma system evaluation and data collection program, including: a trauma registry, a mechanism to identify patients whose care fell outside of established criteria, and a process for identifying potential improvements to the system design and operation.

RECOMMENDED GUIDELINES:

CALIFORNIA CODE OF REGULATIONS TITLE 22. SOCIAL SECURITY
DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES
CHAPTER 7. TRAUMA CARE SYSTEMS

CURRENT STATUS: MEETS MINIMUM STANDARDS,

Refer to previous sections and local policies/plans (compliant with current CA State Trauma Regulations):

- 1.07 (Trauma Planning) Form
 - 1.26 (Trauma System Plan) Form
 - 5.01 (Assessment of Capabilities) Form
 - 5.04 (Specialty Care Facilities) Form
 - 6.10 (Specialty System Design) Form
 - 6.11 (Trauma Center Data) Form
 - Trauma System Plan **
-
- Alameda County EMS participates in the scheduled internal Trauma Center (TC) system and clinical oversight committee meetings (ALL). This helps to ensure inclusive representation from the stakeholders involved with care of the trauma patient.
 - The Trauma Program Coordinator for Alameda County works closely with all TC Medical Directors, Program Managers and their facilities Trauma Process Improvement Coordinator to facilitate timely case closer regarding any EMS related clinical and or operational issues that may impact patient outcomes.
 - Continuous monitoring and evaluation of trauma care system performance with multidisciplinary stakeholder input for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.
 - Comprehensive review and evaluation of Alameda County Trauma System completed in 2022 by Bishop + Associates. Recommendation of additional trauma center within the next 5 years and earliest need for a second additional trauma center would be in 10 years.

NEED(S):

EMS Agency will work collaboratively with Washington Hospital to ensure successful ACS approval and LEMSA designation as a Level II Adult Trauma Center within the next 4 years.

Alameda County EMS continuous Trauma System monitoring/evaluation and on-going support for Washington Hospital's transition to a Level II Adult Trauma Center.

Establish and complete an EMS pre-designation review/evaluation process for Washington Hospital prior to them receiving EMS trauma patients.

Continuous monitoring/evaluation of trauma system after designating an additional Level II Adult Trauma Center.

OBJECTIVES:

Continued evaluation of the trauma system design and support for the Washington Hospital transition to an EMS designated and ACS Verified Level II Adult Trauma Center.

Collaboration with Washington Hospital to ensure safe, efficient and effective implementation of trauma services.

Complete EMS pre-designation review / evaluation and ensure Washington Hospital is compliant with all minimum current CA State Trauma Regulation requirements regarding a Level 2 adult trauma receiving center.

Continue to work with ALCO receiving facilities and ESO to broaden bidirectional HDE availability to all facilities, including existing and future trauma receiving centers.

Continuous monitoring and evaluation of trauma care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

6.11 TRAUMA CENTER DATA

MINIMUM STANDARDS:

The local EMS Agency shall ensure that designated trauma centers provide required data to the EMS agency, including patient specific information that is required for quality assurance/quality improvement and system evaluation.

RECOMMENDED GUIDELINES:

The local EMS agency should seek data on trauma patients who are treated at non-trauma center hospitals and shall include this information in their QA/QI and system evaluation program.

California Code of Regulations

TITLE 22. SOCIAL SECURITY

DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES

CHAPTER 7. TRAUMA CARE SYSTEMS

CURRENT STATUS: MEETS MINIMUM STANDARDS

Meets minimum standards through active executed agreements (expire 6/30/24) with three EMS designated American College of Surgeons (ACS) verified (required) Trauma Receiving Centers (compliant with current CA State Trauma Regulations), ALL use Lancet Trauma-1 database (required for EMS designation):

- Alameda Health System-Highland Hospital (Adult level-1)
- UCSF Benioff Children's Hospital Oakland (Pediatric level 1)
- Sutter Eden Medical Center (Adult level 2)

-
- EMS monitors current active contracts and data requirements and participates in quarterly Trauma Audit Committee (TAC) meetings.
 - TAC has Implemented the use of the American College of Surgeons Trauma Quality Improvement Program (ACS TQIP®) data for TC PI.
 - Ensure appropriate feedback and action taken if / when trauma patients are transported to non-trauma center hospitals.
 - Continued enhancement of quality improvement programs including those associated with trauma specialty care systems
 - Continue to collaborate with system stakeholders in review and revision of triage, treatment, transport, and transfer protocols regarding trauma patient care.
 - Utilize TC specific as well as County and Region aggregated TQIP data to influence system change when needed.
 - EMS reviews all pediatric trauma activations transported to adult TCs

Refer to previous sections and local policies/plans (compliant with current CA State Trauma Regulations):

- 1.07 (Trauma Planning) Progress Update Form 2023-24
- 1.26 (Trauma System Plan) Progress Update 2023-24
- 5.01 (Assessment of Capabilities) Progress Update Form 2023-24
- 5.04 (Specialty Care Facilities) Progress Update Form 2023-24 **
- 6.10 (Specialty System Design) Progress Update Form 2022-23 **
- 6.11 (Trauma Center Data) Progress Update Form 2023-24 **
- Trauma System Plan **

NEED(S):

Establish real time bi-directional Healthcare Data Exchange (HDE) (EMS PCR-Hospital EMR including patient outcomes) for all acute care receiving hospitals in Alameda County, which include existing and future Trauma Centers.

OBJECTIVE:

To date, ALCO EMS HDE has been established with Alameda Health System (Highland Hospital, Alameda Hospital, San Leandro Hospital, John George Psychiatric), St. Rose Hospital, Washington Hospital, and UCSF Benioff Children’s Hospital-Oakland, seven remaining acute care facilities to be established.

Continuous monitoring and evaluation of trauma care system performance data for needed policy/protocol modification, with the intention to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

7.01 PUBLIC INFORMATION MATERIALS

MINIMUM STANDARDS

The local EMS agency shall promote the development and dissemination of information materials for the public that addresses: understanding of EMS system design and operation; proper access to the system; self-help (e.g., CPR, first aid, etc.); patient and consumer rights as they relate to the EMS system; health and safety habits as they relate to the prevention and education of health risks in target areas; and appropriate utilization of emergency departments.

RECOMMENDED GUIDELINES: None

CURRENT STATUS: MEETS MINIMUM STANDARDS

Information Dissemination

Alameda County EMS continues to develop and disseminate county-wide EMS information materials at community events and training programs. (Refer to Alameda County EMS Website).

The Alameda County EMS website includes:

- Information about our Agency and our Agency's roles.
- Information about the Alameda County EMS System and its components.
- Resources for providers to establish/maintain certification or licensure.
- Information for the public and current providers to obtain training
- Information on our various clinical care systems
- Stop the Bleed Campaign Page (www.youstopthebleed.org)
- Emergency Preparedness and Response resources
- EMS for Children (Emergency School Guidelines and ED Pediatric Readiness Site Visit Resources)
- Childhood and Senior Injury Prevention Information and resources

Social Media

- Alameda County EMS's Injury Prevention Program utilizes a variety of social media platforms to disseminate Childhood Injury Prevention information and notify the public of regulation changes, product recalls, special community events, and to promote information from community partners.

Covid-19 Response

- Alameda County EMS, in conjunction with other local governmental agencies and community based organizations, was at the forefront of information dissemination during the COVID-19 Pandemic.
- EMS provided clear and consistent communication with EMS providers, local hospitals, and skilled care facilities on best practices, CDC and local health guidelines
- Many EMS staff were deployed for the County's COVID-19 response. Positions filled by EMS staff were: Resource Request Unit, Personnel Unit, Public Health liaison, Public Health DOC Director, Med/Health Branch Director, and MOHAWK. In addition to these roles, EMS also assisted in staffing the EOC Public Information lines (emails and phone calls)

NEED(S):

OBJECTIVES:

To continue with public education, awareness, and information programs, updating information on issues as they are identified through changes in laws, best practices, community meetings, and input from partner agencies.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

7.02 INJURY CONTROL

MINIMUM STANDARDS

The local EMS agency, in conjunction with other local health education programs, shall work to promote injury control and preventive medicine.

RECOMMENDED GUIDELINES

The local EMS agency should promote the development of special EMS educational programs for targeted groups at high risk of injury or illness.

CURRENT STATUS: MEETS MINIMUM STANDARD

Real Event Surge Response and Medical Response Surge Exercises (MRSE)

EMSC Coordinator supports OA EOC Medical Health Branch and MHOAC as needed. When issues or questions arise, collaboration continues to be vital between the EMSC Coordinator and IPP to disseminate information.

Community Based AEDs HeartSAFE project

- Continuing the 3-year contract with Via Heart Foundation until September 2024, which replaced ICE Safety Solutions. Alameda County EMS is planning to continue a contract with Via in 2024-2025.
- Via Heart Foundation provides oversight and maintain 92 community-based AEDs

Stop the Bleed Campaign

- Continued Stop the Bleed public awareness and information campaign
- Continued work with CBOs who provide services for older adults to identify older adult patients from 911 system who may benefit from fall prevention programs

Alameda County Care Connect

- Assisted by access to Community Health Record, collaborate with community partners to develop strategies to connect high 911 utilizers with appropriate care

Assess and Refer

- Developed and implemented Assess and Refer policy for EMS system providers
- Collaborate with community partners to assist with referrals, develop care plans and standard messaging
- Continue outreach to relative stakeholders
- Continue education and training with EMS providers

Youth Alive Trauma Violence Intervention Program

- YOUTH ALIVE Caught in the Crossfire Trauma Violence Intervention Program contract renewed. Provides support to those physically injured by violent crime and treated at trauma centers including intervention to prevent retaliatory violence.

Childhood Injury Prevention Program

Safe Kids Alameda County

- Facilitated by Injury Prevention Program (IPP) staff, Coalition focuses on prevention of unintentional injuries to children/youth
- Coalition members include: East Oakland Health Center, Brighter Beginnings, Alameda Health Systems (Highland Hospital), Eden-Sutter Hospital, Oakland Police Department, California Highway Patrol, UCSF Benioff Children's Hospital Oakland, Asian Health Services, Alameda County Lead Program, Safe Routes to School, and numerous non-profit and community-based organizations
- The Coalition meets bi-monthly to share expertise, invite guest speakers and coordinate educational classes, public outreach, and community events

Child Passenger Safety

- Holds monthly Car Seat Inspection Station
- Hosts/participates in car seat check-up events with community partners such as CHP, UCSF Benioff Children's Hospital Oakland, West Oakland Health, Livermore Head Start, and many others
- Provides training opportunities to professionals utilizing the Nationally Standardized Child Passenger Safety Technician Training Program
- Provides a minimum of 6 units of Continuing Education to Certified Child Passenger Safety Technicians annually
- Continues to host Safe Kids Day. 250 booster seats and helmets are distributed at no cost to low-income Alameda County residents along with a robust health and safety fair connecting residents to services
- EMS IPP staff coordinates with Alameda County Social Services Agency to provide car seat education to newly hired social workers.
- EMS IPP staff coordinates with multiple Head Start agencies to provide car seat, pedestrian and wheeled sports safety trainings to staff and parents/caregivers

Walk to School Day

- Program continues to participate in International Walk to School Day

Child Care Emergency Plan

- EMS for Children Coordinator is part of the California EMS for Children Technical Advisory Committee
- Injury Prevention is inserted in the Alameda County Pediatric Surge Annex

Senior Injury Prevention Program

Senior Injury Prevention Partnership (SIPP)

Senior Injury Prevention Partnership: Facilitated by IPP staff, Partnership focuses on prevention of unintentional injuries to seniors, age 60 plus

- SIPP Partnership includes: Alameda County Area Agency on Aging, Vital Link, United Seniors Oakland-Alameda County, Alameda Health Systems, Spectrum, CityServe of the Tri-Valley, Sutter Health Systems; City of Fremont, St. Mary's Health Center, Institute on Aging, and other community based and non-profit organizations
- In addition to their networking and advocacy, SIPP plans and facilitates an annual Senior Injury Prevention Educational Forum for senior services providers.

Community Based Presentations

IPP staff conducts the following sessions for older adults in Alameda County:

- Fall Prevention Presentations
- Emergency Preparedness Presentations

Grant Funded, Evidence Based Falls Prevention Classes

- EMS IPP was awarded a 3-year grant from the Partners in Care Foundation to implement several evidence-based fall prevention programs. Grant objectives have been met prior to the conclusion of the full grant cycle which includes a one-year extension
- Classes were held in both in-person and on-line formats.
 - Matter of Balance
 - Tai Chi for Arthritis
 - Bingocize
- EMS IPP provides the following trainings for professionals and program volunteers
 - Tai Chi for Arthritis Instructor Training
 - Matter of Balance Coach Update Class
 - Matter of Balance Coach Training

- Individual Bingocize Instructor Training

Community Outreach

- EMS IPP staff assists in planning and day-of coordination of the Healthy Living Festival, sponsored by the United Seniors of Alameda County and County Supervisor Nate Miley
- EMS IPP staff participates in health fairs and community events at the request of event organizers

NEED(S):

OBJECTIVES

Based upon quantitative and qualitative data, continue outreach to low-income, racially/ethnically diverse populations

Educate and advocate for the creation of appropriate legislation improving services for and safety of children and older adults

Engage in community partnerships facilitating intervention and more comprehensive service delivery to at-risk populations to include Children, Older Adults, and Functional Needs; (connect case managers and mental health teams)

Work with other public and private agencies on children and older adult injury prevention concerns

Continue collaborations with public and private agencies on children and older adult injury prevention concerns

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

7.03 DISASTER PREPAREDNESS

MINIMUM STANDARDS:

The local EMS agency, in conjunction with the local office of emergency services, shall promote citizen disaster preparedness activities.

RECOMMENDED GUIDELINES:

The local EMS agency, in conjunction with the local office of emergency services (OES), should produce and disseminate information on disaster medical preparedness.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Stop the Bleed awareness and information campaign
- Community Stop the Bleed training
- Promote volunteer participation for local disaster preparedness activities
- Collaborate with 2-1-1 for disaster messaging and training
- Collaborate with community partners and facilitate disaster preparedness training for special populations
- EMS Coordinator serves as the DHV administrator for Alameda County

Stop the Bleed Program (funded by UASI and SHSGP)

- Conducted 19 Stop the Bleed trainings to 276 participants
- Trained 10 Stop the Bleed instructors
- Assisted with Trauma Centers to teach Stop the Bleed at different schools and events
- Community Outreach & Involvement
- Provided CPR, bleeding control and first aid training to community members at Safe Kids Day, Mentors in Medicine, National Night Out, and Piedmont Seniors
- Helped with interviews for MACRO team candidates
- Helped with set-up, safety, and tear down for Healthy Living Festival
- Participated with Domestic Violence Fatality Review Team (DVFRT)
- Participated with Homeless Mortality Review Team (HMRT)
- Developed EMS High Utilizer Workgroup (EMS agencies and community partners discussing cases to help coordinate appropriate care for individuals who frequently utilize emergency services for non-urgent needs)

NEED(S):

OBJECTIVE:

Continue outreach and collaboration with community partners

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

7.04 FIRST AID & CPR TRAINING

MINIMUM STANDARDS:

The local EMS agency shall promote the availability of first aid and CPR training for the general public.

RECOMMENDED GUIDELINES:

The local EMS agency should adopt a goal for training of an appropriate percentage of the general public in first aid and CPR. A higher percentage should be achieved in high risk groups.

CURRENT STATUS: MEETS MINIMUM STANDARD

AED/PAD Program

- A contract was implemented in October 2021 with **Via Heart Project** to manage 92 Community AEDs across the county.
 - The Via Heart Project contractor deliverables include performs site visits; replaces all community AED pads and batteries; ensure an AED coordinator has been identified at each location; and requires AED inspections tracked at each community site
 - The VIA Heart Project also tracks Alameda County EMS vehicle AEDS with required inspection checks and pad and battery replacement.
 - The VIA Heart Project offers CPR and AED training to the Alameda Community AED locations under their contract if requested. The Alameda County EMS contract with VIA Heart Project does not include the training requirement.
 - Agreement with Via Heart Project has a term of 3 years ending September 30th, 2024, at which point terms, service, and performance will be reviewed. Given the VIA Heart project vendor meets the contract deliverable requirements, the contract with Alameda County EMS is anticipated to be renewed.

CPR 9

- State legislation requires ninth graders that take health science be trained in CPR as a graduation requirement. Alameda County EMS has transitioned formerly used resources for CPR 7 to support the ongoing CPR 9 efforts.
 - Select CPR 7 sites decided to keep their programs, which Alameda County EMS continues to support if needed.

Stop the Bleed Program (funded by UASI and SHSGP)

- Conducted 19 Stop the Bleed trainings to 276 participants
- Trained 10 Stop the Bleed instructors
- Assisted with trauma centers to teach Stop the Bleed at different schools and events
- Partnership with the Alameda County Office of Emergency Services and 211 to conduct Stop the Bleed Trainings

Community Outreach & Involvement

- Provided CPR, bleeding control and first aid training to community members at Safe Kids Day, Mentors in Medicine, National Night Out, and Piedmont Seniors
- Helped with set-up, safety, and tear down for Healthy Living Festival
- Participated with Domestic Violence Fatality Review Team (DVFRT)
- Participated with Homeless Mortality Review Team (HMRT)
- Developed EMS High Utilizer Workgroup (EMS agencies and community partners discussing cases to help coordinate appropriate care for individuals who frequently utilize emergency services for non-urgent needs)

NEED(S):

Continue to support community outreach and training

OBJECTIVE:

Community resiliency particularly among high risk groups

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.01 DISASTER MEDICAL PLANNING

MINIMUM STANDARDS:

In coordination with the local office of emergency services (OES), the local EMS agency shall participate in the development of medical response plans for catastrophic disasters, including those involving toxic substances.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- The ALCO EMS MHOAC and RDMHS coordinates medical and health planning and response activities with Alameda County OA OES.
- The ALCO EMS Medical / Health Branch is activated in the OA EOC when needed with ALCO OES.
- Alameda County EMS ensures coordination with OES and contributes to the catastrophic disaster planning and testing of the OA County EOP.
- ALCO EMS ensures maintenance of inventory for all-hazards resources at the Alameda County EMS Logistics Warehouse.
- Health Emergency Preparedness and Response (HEPR) division of EMS Agency actively involved with disaster medical plan development in coordination with OES and Public Health.
 - Alameda County EMS conducted the Transportation Radiological Medical Response Surge Exercise (MRSE) on April 17, 2024.
 - Alameda County participated in the UCSF Children’s Hospital and Pediatric Pandemic exercise Feb. 29, 2024. The scenario tested a mass casualty chemical surge event.
 - HEPR developed the Disaster Preparedness Healthcare Coalition (DPHC) catastrophic plans and annexes which includes the Radiological and chemical surge and pediatric surge plans.
 - ALCO OES is represented in the ALCO DPHC. ALCO EMS has regular weekly interface with OES emergency coordination staff.
- The ALCO EMS Co-Location Project is updated and tested. Refer to the EMS System Plan sections: 5.05 (Mass Casualty Management) and 5.06 (Hospital Evacuation) for additional information.
- Alameda County EMS manages the CHEMPACK Program.
- Tactical Medical Training included coordination with ALCO OES:
 - Conducted 40-hour Tactical Medical Technician course (including Tactical Emergency Casualty Care (TECC) and Police Officer Standards and Training (POST) administration)
 - San Leandro PD active shooter training
 - Dublin (ACSO) active shooter training
 - Albany PD active shooter training
 - Cal State EB & EMS Corps active shooter exercise
- Other Disaster Preparedness & Exercises included coordination and planning with ALCO OES.
 - Oakland Airport FAA TTX
 - EMSA Maritime FSE
 - HEPR Shelter Exercise
 - Assisted with getting responder resilience program (Anticipate, Plan & Deter: PsySTART) to Cal OES Region II/SF UASI Region

NEED(S):

OBJECTIVE:

Continue to strengthen and broaden partnerships and collaboration while socializing plans and updating as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.02 RESPONSE PLANS

MINIMUM STANDARDS:

Medical response plans and procedures for catastrophic disasters shall be applicable to incidents caused by a variety of hazards, including toxic substances.

RECOMMENDED GUIDELINES:

The California Office of Emergency Services' multi-hazard functional plan should serve as the model for the development of medical response plans for catastrophic disasters.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County Fire Department has a HazMat response team for any incidents involving toxic substances.

Alameda County Emergency Operations Plan outlines a multitude of different catastrophic disaster types with specific annexes focused on incident specific guidance.

The Alameda County Disaster Preparedness Healthcare Coalition Plans include Radiological and Chemical Surge plans aligned with the ALCO EOP and the state Public Health / Medical EOM.

The Alameda County EMS Field Manual includes policies and protocols for MCI response and protocols for a variety of hazards.

2024 FIELD PROTOCOLS

[2024 Alameda County EMS Field Manual](#)

MCI/ DISASTER/ WMD TAB

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Additionally, refer to the following forms within the System Plan:

- 3.06 (MCI/Disasters)
- 4.12 (Disaster Response)
- 4.15 (MCI Plans)
- 5.05 (Mass Casualty Management)
- 8.01 (Disaster Medical Planning)

NEED(S):

OBJECTIVE:

Socialize plans and update as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.03 HAZMAT TRAINING

MINIMUM STANDARDS:

All EMS providers shall be properly trained and equipped for response to hazardous materials incidents, as determined by their system role and responsibilities.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- ALCO EMS Providers are trained to HAZMAT standards according to their response roles
- Individuals who respond to and function within the Exclusion Zone (Hot Zone) or Contamination Reduction Zone (Warm Zone) must be members of **specialty trained HazMat teams**, trained in the use of self-contained breathing apparatus, selection of appropriate chemical protective suits and how to function in them. Other rescuers should be trained in accordance with Federal OSHA standards in OSHA 29 CFR 190.120 and California OSHA as defined in the California Code of Regulations, Title 8, Section 5192.” (Refer to Alameda County EMS Field Manual). Nearly all public safety providers have received HazMat training in at least the **“First Responder Awareness Level.”** Many firefighter personnel trained to the first responder level.
- ALCO EMS Providers participated in HAZMAT exercises as follows:
 - The ALCO EMS Medical Surge Response Exercise held April 17, 2024
 - The UCSF Benioff children’s Hospital and Pediatric Pandemic Network (PPN) held Feb. 29, 2024.
- The ALCO EMS Field Manual includes HAZMAT policy requirements:
 - [2024 FIELD PROTOCOLS](#)
 - [2024 Alameda County EMS Field Manual](#) – p.151

NEED(S):

OBJECTIVE:

Update plans and training as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.04 INCIDENT COMMAND SYSTEM

MINIMUM STANDARDS:

Medical response plans and procedures for catastrophic disasters shall use the Incident Command System (ICS) as the basis for field management.

RECOMMENDED GUIDELINES:

The local EMS agency should ensure that ICS training is provided for all medical providers.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Provider contracts require ICS 100, 200, 700, and 800b for all field level personnel. Leadership is required to have ICS 300 and 400.
- ICS and SEMS are leveraged during local, regional, state, and federal disasters.
- All disaster plans utilize ICS as the basis for incident management.

NEED(S):

OBJECTIVE:

Test and update plans with ICS as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.05 DISTRIBUTION OF CASUALTIES

MINIMUM STANDARDS:

The local EMS agency, using state guidelines, shall establish written procedures for distributing disaster casualties to the medically most appropriate facilities in its service area.

RECOMMENDED GUIDELINES:

The local EMS agency, using state guidelines, and in consultation with Regional Poison Centers, should identify hospitals with special facilities and capabilities for receipt and treatment of patients with radiation and chemical contamination and injuries.

CURRENT STATUS: MEETS MINIMUM STANDARD

- The Alameda County EMS Field Manual 2024 provides guidance on first round patient distribution for multicausality events.
 - Refer to the ALCO EMS Field Manual 2024 MCI Policy [ALCO EMS Field Manual 2024](#)
- ReddiNet is leveraged for facility polling in order to aid in destination decisions.
 - Refer to new ReddiNet Administration Policy - [Alameda County ReddiNet Administrative Policy 2024](#)
- Larger scale events would engage the ALCO EMS Duty Officer, MHOAC or RDMHSs if broader distribution outside of our county was required.
 - Refer to the ALCO EMS website disaster section - [Alameda County EMS Website- Disaster Preparedness Section](#)
- Refer to the following forms within the 2024 EMS System Plan:
 - 4.12 Disaster Response
 - 4.15 MCI Plans
 - 5.05 Mass Casualty Management
 - 5.06 Hospital Evacuation
- Refer to the emergency and surge plans for specialized patient distribution
 - [HCC Radiation Surge Annex](#)
 - [HCC Burn Surge Annex](#)
 - [HCC Pediatric Surge Annex](#)

NEED(S):

OBJECTIVE:

Continue to socialize plans, test and update as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.06 NEEDS ASSESSMENT

MINIMUM STANDARDS:

The local EMS agency, using state guidelines, shall establish written procedures for early assessment of needs and shall establish a means for communicating emergency requests to the state and other jurisdictions.

RECOMMENDED GUIDELINES:

The local EMS agency's procedures for determining necessary outside assistance should be exercised yearly.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Alameda County EMS has a web-based ordering platform for requesting of PPE and other resources. Additionally, an electronic resource request form is available for medical/health partners to communicate their needs.
- Salesforce is leveraged for any requests that cannot be satisfied within our County so that they can be sourced at either the regional, state, or federal level.
- During significant incidents or disasters electronic SitStat and Flash Report forms are requested for situational awareness and to assist in anticipating any needs that may arise.
- ReddiNet is also utilized for facility communications – using either messaging or polling functionality.
- Also refer to the following forms within the EMS System Plan:
 - 3.06 MCI/Disasters
 - 4.12 Disaster Response
 - 8.07 Disaster Communications

NEED(S):

OBJECTIVE:

Socialize, test, and update plans as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.07 DISASTER COMMUNICATIONS

MINIMUM STANDARDS:

A specific frequency (e.g., CALCORD) or frequencies shall be identified for interagency communication and coordination during a disaster.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- East Bay Regional Communication System (EBRCS) and Alameda County Regional Emergency Communication Center (ACRECC) is utilized for disaster communications.
 - During a large-scale incident ACRECC can assign a TAC channel specific to the event or patch multiple channels together so that they can be leveraged across disciplines – Fire, Ambulance, and others.
- CALCORD is leveraged for all air ambulance communications.
- Additionally, communications can occur through ReddiNet as well as Med1@acgov.org which is an email address created for the sole purpose of disaster communications with Alameda County EMS or the OA Medical/Health Branch of the County EOC which EMS operates when activated.

NEED(S):

OBJECTIVE:

Ensure regular training, testing and system updates for all vital disaster communications with partners

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.08 INVENTORY OF RESOURCES

MINIMUM STANDARDS:

The local EMS agency, in cooperation with the local OES, shall develop an inventory of appropriate disaster medical resources to respond to multi-casualty incidents and disasters likely to occur in its service area.

RECOMMENDED GUIDELINES:

The local EMS agency should ensure that emergency medical providers and health care facilities have written agreements with anticipated providers of disaster medical resources.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Alameda County EMS maintains open and consistent communication regarding available and deployable disaster resources with OES, Social Services, and other County agencies.
- Alameda County EMS has been operating a PPE warehouse since the onset of the pandemic and maintains meticulous records of inventory utilizing Operative IQ software.
- Alameda County EMS has communicated with state disaster warehousing to share best practices.
- Alameda County EMS acquired a 2-acre 21,000 sq. foot high security warehouse with emergency back-up power in San Leandro. This location supports combined operations of warehousing and disaster support needs. The location houses several response trailers for various types of needs for EMS and is the home of the Alameda County EMS Mass Casualty response vehicle. This location is staffed by two full time personnel and serves as the back-up Emergency Department of Operations Center (DOC)
- A second full time employee is being onboarded to assist with inventory and warehouse management.

NEED(S):

OBJECTIVE:

Update and maintain inventories of disaster medical resources

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.09 DMAT TEAMS

MINIMUM STANDARDS:

The local EMS agency shall establish and maintain relationships with DMAT teams in its area.

RECOMMENDED GUIDELINES:

The local EMS agency should support the development and maintenance of DMAT teams in its area.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Alameda County supports the Region II DMAT teams with other Bay Area Counties.
- Additionally, two staff members from the EMS Agency, an EMS Coordinator and our Medical Director, are active DMAT team members. They are actively supported to attend trainings and deployments as needed.

NEED(S): None noted

OBJECTIVE:

Continue outreach, support and partnership building

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.10 MUTUAL AID AGREEMENTS

MINIMUM STANDARDS:

The local EMS agency shall ensure the existence of medical mutual aid agreements with other counties in its OES region and elsewhere, as needed, that ensure sufficient emergency medical response and transport vehicles, and other relevant resources will be made available during significant medical incidents and during periods of extraordinary system demand.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Alameda County EMS currently serves as the RDMHS for Region II
- RDMHS facilitated signed Mutual Support Agreements with all Region II operational areas which include:
 - Alameda, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma Counties.
- In a disaster and/or mutual aid event, Alameda County EMS supports the Alameda County Emergency Operations Plan and the California Medical/Health Emergency Operations Manual consistent with SEMS.

NEED(S):

OBJECTIVE:

Encourage signing of mutual aid (mutual support) agreement with remaining Region II counties

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.11 CCP DESIGNATION

MINIMUM STANDARDS:

The local EMS agency, in coordination with the local OES and county health officer(s), and using state guidelines, shall designate Field Treatment Sites (FTS).

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- Developed Co-Location Framework (refer to 5.05 Mass Casualty Management)

COORDINATION WITH OTHER EMS AGENCIES:

- Inclusion of advanced and basic life support transport agencies
- Inclusion of local fire departments

NEED(S):

OBJECTIVE:

Continue outreach, planning, education and training with community stakeholders

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.12 ESTABLISHMENT OF CCP

MINIMUM STANDARDS:

The local EMS agency, in coordination with the local OES, shall develop plans for establishing Casualty Collection Points (CCP) and a means for communicating with them.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

- CCP generally are established specific to each incident depending on accessibility, size of incident, any hazards or safety concerns.
- For large scale disaster the Co-Location Framework exists which pairs an EMS resource with a clinic to expand care for low acuity patients. Communication is facilitated through EMS provider radios on EBRCS.
- Refer to the following forms in the Table 1 section of the EMS System Plan:
 - 3.06 MCI / Disasters
 - 4.12 Disaster Response
 - 4.15 MCI Plans
 - 5.05 Mass Casualty Management
 - 8.07 Disaster Communications
 - 8.11 CCP Designation

NEED(S):

OBJECTIVE:

Continue socializing, testing, and updating plans as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.13 DISASTER MEDICAL TRAINING

MINIMUM STANDARDS:

The local EMS agency shall review the disaster medical training of EMS responders in its service area, including the proper management of casualties exposed to and/or contaminated by toxic or radioactive substances.

RECOMMENDED GUIDELINES:

The local EMS agency should ensure that EMS responders are appropriately trained in disaster response, including the proper management of casualties exposed to or contaminated by toxic or radioactive substances.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County EMS regularly conducts exercises in partnership with allied agencies to review and refresh disaster medical training and management of casualties. Additionally, guidance is contained within the MHOAC manual, the Alameda County EOP and the Alameda County EMS Field Manual.

Refer to the following forms in the EMS System Plan:

- 4.12 Disaster Response
- 4.14 Incident Command System
- 4.15 MCI Plans
- 8.03 HazMat Training
- 8.04 Incident Command System
- 8.05 Distribution of Casualties

Refer to the HCC Radiation Plan to support the ALCO Disaster Preparedness Healthcare Coalition (DPHC) Plans

Alameda County EMS conducted a Radiological Training webinar on 3/7/24 with EMS system partners. The Medical Surge Response Exercise (MRSE) Radiological event tabletop is scheduled for 3/13/24 and the functional exercise is schedule for 4/17/24. EMS provider responders will be participating.

Alameda County EMS participated in the UCSF Chemical and Pediatric Surge Exercise with EMS transport providers and hospitals on 2/29/24.

NEED(S):

OBJECTIVE:

Continue to socialize, test, and update plans as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.14 HOSPITAL PLANS

MINIMUM STANDARDS:

The local EMS agency shall encourage all hospitals to ensure that their plans for internal and external disasters are fully integrated with the county's medical response plan(s).

RECOMMENDED GUIDELINES:

At least one disaster drill per year conducted by each hospital should involve other hospitals, the local EMS agency, and pre-hospital medical care agencies.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County EMS actively involves facilities in exercises, trainings, and drills to ensure continuity of care and mutual understanding between pre-hospital and in-hospital providers.

Hospitals participated in multiple medical and health exercises as follows:

- UCSF Benioff Children's Hospital and the National Pediatric Pandemic Network (PPN) "Chemical and Pediatric" Table-top Exercise was held 2/29/2024 with the Northern California Bay Area Healthcare Coalitions. ALCO hospitals discussed and tested the Chemical, MCI, and pediatric surge plans and policies.
- The Alameda County Medical Response Surge Exercise (MRSE) was held 4/17/2024. The functional exercise utilized a transportation radiological incident scenario to test bi-directional situation status reports with updates, MCI patient tracking, customized polling, and communications. Hospital Command Centers (HCCs) tested coordination with the ALCO OA EOC Medical/Health Branch (including testing ReddiNet and VEOCI communications). The MRSE exercise with hospitals and other health system-wide partners is conducted annually and facilitated by the ALCO Disaster Preparedness Hospital Coalition (DPHC). ALCO EMS ensures a robust AAR improvement plan after each exercise.

When unusual occurrences arise at facilities, EMS Duty Officers engage with the facility to have situational awareness of mitigation and preventative measures and will facilitate an after action and continuity of operations plan review when appropriate.

Additionally, refer to the following sections in the EMS System Plan:

- 4.15 (MCI Plans)
- 5.05 (Data Management System)
- 5.06 (System Design Evaluation)

NEED(S):

OBJECTIVE:

Continue reviewing, validating, testing, and updating Alameda County healthcare system wide disaster and surge plans as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.15 INTERHOSPITAL COMMUNICATIONS

MINIMUM STANDARDS:

The local EMS agency shall ensure that there is an emergency system for inter-hospital communications, including operational procedures.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Alameda County EMS has multiple redundant and interoperable communication systems and operational procedures.

- **ReddiNet:** All receiving hospitals and transport providers (9-1-1 and non-9-1-1) have ReddiNet capabilities which ensure bi-directional information, emergency notifications, MCI activations, and hospital bed availability polling. ReddiNet is continually monitored daily by Alameda County EMS Duty Officers. ReddiNet systems are actively utilized daily and tested in exercises and drills. An Alameda County EMS ReddiNet policy has been developed. Refer to the link: [ReddiNet Utilization Policy 2024](#)
- **Portable Radios:** All receiving hospitals have portable radios and/or base radios with the current EBRCS programming installed. Periodic radio tests are performed monthly for the portable radios.
- **Med1** – (Alameda County EMS designated a disaster email)
- **AC ALERT** - Mass notification (Everbridge system customized for Alameda County EMS; hosted by Alameda County Officer of Homeland Security and Emergency services) and the Healthcare Emergency Preparedness and Response (HEPR) Unit
- **VEOCI** – ALCO OES and EMS oversees the VEOCI system. VEOCI is used for situation status report form submission.
- **Ham Radios** – Annual trainings are offered in Alameda County
- **CAHAN** –Healthcare Emergency Preparedness and Response (HEPR) Unit, Alameda County EMS is the primary CAHAN coordinator for ALCO EMS.
- **Cell phones**
- **Healthcare Facility (HCF) Conference Calls** via Teams, Zoom, and other platforms
- **Social Media**

POLICIES/PROCEDURES

OPERATIONAL POLICIES

- ReddiNet Utilization Policy. Refer to link: [ReddiNet Utilization Policy 2024](#)
- Ambulance Rerouting Policy. Refer to link: [Ambulance Rerouting](#)

NEED(S):

OBJECTIVE:

Monitor for compliance with continued radio tests. Continue ReddiNet training and testing in exercises.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.16 PREHOSPITAL AGENCY PLANS

MINIMUM STANDARDS:

The local EMS agency shall ensure that all prehospital medical response agencies and acute care hospitals in its service area, in cooperation with other local disaster medical response agencies, have developed guidelines for the management of significant medical incidents and have trained their staffs in their use.

RECOMMENDED GUIDELINES:

The local EMS agency should ensure the availability of training in management of significant medical incidents for all prehospital medical response agencies and acute-care hospital staff in its service area.

CURRENT STATUS: MEETS MINIMUM STANDARD

All providers in the Alameda County EMS System have been trained in ICS, involved in disaster exercises, and are familiar with the MCI Plan as well as all Alameda County EMS Field Protocols.

- [2024 FIELD PROTOCOLS - 2024 Alameda County EMS Field Manual](#)

Additionally, real events and exercises have provided opportunity to discuss and test surge / disaster response guidelines, plans and annexes. Alameda County EMS exercises include testing roles/functions and systems to include: situational status assessment; polling of facilities; MCI activation, and bi-directional communications.

Alameda County EMS has developed ALL-Hazard plans, annexes, and guidelines to include emerging infectious disease response, chemical / radiological disasters, and complex simultaneous MCIs with pediatric considerations.

Planning activities with Receiving Hospitals and EMS prehospital providers are listed below:

- Health Emergency Preparedness and Response (HEPR) division of EMS Agency actively involved with disaster medical plan development in coordination with OES, Public Health, hospitals, and prehospital providers.
- The ALCO EMS HEPR Unit developed the Disaster Preparedness Healthcare Coalition (DPHC) catastrophic plans and annexes which includes the Radiological and chemical surge and pediatric surge plans.
- Alameda County EMS manages the CHEMPACK Program.

ALCO EMS coordination with the DPHC partners, OES and EMS providers occurred in training activities listed below:

- Alameda County EMS conducted the Transportation Radiological Medical Response Surge Exercise (MRSE) on April 17, 2024.
- Alameda County participated in the UCSF Children's Hospital and Pediatric Pandemic Network (PPN) exercise Feb. 29, 2024. The scenario tested a mass casualty chemical surge event.
- Other Tactical Training and exercises provided by ALCO EMS
 - Conducted 40-hour Tactical Medical Technician course (including Tactical Emergency Casualty Care (TECC) and Police Officer Standards and Training (POST) administration)
 - San Leandro PD active shooter training
 - Dublin (ACSO) active shooter training
 - Albany PD active shooter training
 - Cal State EB & EMS Corps active shooter exercise
 - Oakland Airport FAA TTX
 - EMSA Maritime FSE
 - HEPR Shelter Exercise
 - Assisted with getting responder resilience program (Anticipate, Plan & Deter: PsySTART) to Cal OES Region II/SF UASI Region
- The ALCO EMS Co-Location Project is updated and tested.
- ALCO EMS promotes disaster related training provided by the Urban Area Security Initiative Bay Area Training and Exercise Program (UASI BATEP)
- ALCO EMS promotes pediatric education and training through the Hospital Pediatric Readiness and Surge Project and WRAP-EM/PPN Networks.

NEED(S):

OBJECTIVE:

Continue promotion and facilitation of disaster related education and training with healthcare system partners

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.17 ALS POLICIES

MINIMUM STANDARDS:

The local EMS agency shall ensure that policies and procedures allow advanced life support personnel and mutual aid responders from other EMS systems to respond and function during significant medical incidents.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

EMS FIELD MANUAL-

- 2023-2024 updates Implemented as of January 2024
- Refer to Alameda County EMS website.
 - [Field Treatment Protocols](#)
 - [2024 Alameda County EMS Protocols](#)

EMERGENCY PLANS

The Alameda County emergency plans that address mutual aid for ALS providers include:

- Alameda County EMS Surge Plan
- Alameda County Emergency Operations Plan
- Alameda County MHOAC Manual
- EMS and Clinic Field Treatment Site Co-Location Project
- ALCO Pediatric Surge Annex with WRAP-EM Pediatric Surge PLAYBOOK
- CA Medical Health EOM and Patient Movement Plan
- Radiological Plan to support the Disaster Preparedness Healthcare Coalition (DPHC) Plans

NEED(S):

OBJECTIVE:

The local EMS agency shall ensure that policies and procedures allow advanced life support personnel and mutual aid responders from other EMS systems to respond and function during significant medical incidents.

- Ensure EMS has policies and procedures are updated as needed to allow advanced life support personnel and mutual aid responders to be sent and received.
- Develop a Mass Gathering Event policy to provide better guidelines for medical personnel called to the scene of these events.
- Continue to strengthen the DPHC Response Plans (including the Pediatric Surge Annex) with patient movement plan and / or policy consistent with California Patient Movement Plan as needed

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.18 SPECIALTY CENTER ROLES

MINIMUM STANDARDS:

Local EMS agencies developing trauma or other specialty care systems shall determine the role of identified specialty centers during a significant medical incident and the impact of such incidents on day-to-day triage procedures.

RECOMMENDED GUIDELINES:

Alameda County EMS will ensure that policies and procedures identify roles and responsibilities for significant MCIs, Surge, and disaster events for specialty centers including disaster communications.

CALIFORNIA CODE OF REGULATIONS

TITLE 22. SOCIAL SECURITY

DIVISION 9. PREHOSPITAL EMERGENCY MEDICAL SERVICES

CHAPTER 7. TRAUMA CARE SYSTEMS

California Code of Regulations

Title 22. Social Security

Division 9. Prehospital Emergency Medical Services

Chapter 7.2 Stroke Critical Care System

California Code of Regulations

Title 22. Social Security

Division 9. Prehospital Emergency Medical Services

Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System

California Code of Regulations

Title 22. Social Security

Division 9. Prehospital Emergency Medical Services

Chapter 14. Emergency Medical Services for Children (EMSC)

CURRENT STATUS: MEETS MINIMUM STANDARDS:

Refer to previous sections and local policies/plans (compliant with current CA State Trauma, Stroke, STEMI, and EMSC Regulations):

For specialty centers, relevant policies and plans that include disaster provisions are listed below:

- EMS Surge Plan
- EMS Field Manual – MCI Policy; CHEMPACK Deployment
- EMS Administration Policies – Operations: Census Reporting; ReddiNet Utilization
- EMS Administrative Policies - Programs
- EMS Operations Policies
- Alameda County Emergency Operations Plan
- Alameda County MHOAC Manual (Alameda County DMOP and Medical Surge Plan now integrated in MHOAC Manual and Disaster Preparedness Health Coalition Response Plan).
- Alameda County Pediatric Surge Annex to support Disaster Preparedness Healthcare Coalition (DPHC) Response Plan
- Alameda County Trauma Plan
- Alameda County Pediatric System Plan
- 700/800 Megahertz EBRCSA Radio Policy
- California Medical/Health EOM – New Attachments (MHOAC Program)
- California Patient Movement Plan (Including the CA Perinatal, Neonatal and Pediatric Surge Annex)

Trauma Receiving Centers

- Alameda County EMS ensures that patients who have experienced traumatic injury are clinically assessed using current 2022 ACS Field Trauma Triage criteria (implemented January 2024) and transported to an EMS designated Trauma Receiving Center for specialty diagnostics and treatment.

- Meets minimum standards through active executed agreements (expire 6/30/24) with three EMS designated American College of Surgeons (ACS) verified (required) Trauma Receiving Centers (compliant with current CA State Trauma Regulations):
 - Alameda Health System-Highland Hospital (Adult level-1)
 - UCSF Benioff Children’s Hospital Oakland (Pediatric level 1)
 - Sutter Eden Medical Center (Adult level 2)

STROKE RECEIVING CENTERS

- Alameda County EMS ensures that patients who are experiencing a possible cerebral vascular accident (Stroke) on scene, detected by clinical assessment (Cincinnati Stroke Scale), are transported to an EMS designated Primary Stroke Receiving Center for specialty diagnostics and treatment: CT / CTA / CTP, and if needed, IV fibrinolytic and or transfer to a thrombectomy capable center for IR services.

Meets minimum standards through active executed agreements (expire 12/31/25) with eight EMS designated Joint Commission (JC) certified (required) Primary Stroke Receiving Centers (compliant with current CA State Stroke Regulations):

- Alameda Health System-Alameda Hospital
- Alta Bates Summit Medical Center
- Eden Medical Center
- Kaiser-Fremont
- Kaiser-Oakland
- Kaiser-San Leandro
- Stanford Health Care Tri-Valley
- Washington Hospital

STEMI / CARDIAC ARREST RECEIVING CENTERS (CARC)

- Alameda County EMS ensures that patients who are experiencing a possible ST- elevation myocardial infarction (STEMI) receive expedited specialty care. An out-of- hospital STEMI is detected by clinical exam and 12-lead electrocardiogram that is transmitted to the closest appropriate STEMI Receiving Center (SRC). The patient is then transported to that EMS designated SRC for specialty diagnostics and treatment: coronary angiogram and if needed a Primary Percutaneous Coronary Intervention (PCI).
- Alameda County EMS also ensures that patients who experience out-of-hospital cardiac arrest on scene or during transport and received attempted resuscitation with any return of spontaneous circulation (ROSC) or presented with an initial or recurrent shockable rhythm (VF/VT) are transported to the same EMS designated SRC/CARCs. Both STEMI and Cardiac Arrest patients are transported to an SRC/CARC since these patients frequently need common interventions.

Meets minimum standards through active executed agreements (expire 12/31/25) with seven EMS designated STEMI/Cardiac Arrest Receiving Centers (compliant with current CA State STEMI Regulations):

- Alameda Health System-Highland Hospital
- Alta Bates Summit Medical Center
- Kaiser-Fremont
- Kaiser-Oakland
- St. Rose Hospital
- Stanford Health Care Tri-Valley
- Washington Hospital

NEED(S):

Establish a standardized process for review/evaluation of existing STEMI Receiving Centers using “Heart Attack” or “Cardiac” center certification by American Heart Association/ The Joint Commission (AHA/TJC). AHA/TJC

OBJECTIVE:

Establish and execute a standardized process for review/evaluation of existing STEMI Receiving Centers using “Heart Attack” or “Cardiac” center certification by American Heart Association/ The Joint Commission (AHA/TJC). AHA/TJC

Continuous monitoring and evaluation of specialty care system performance for needed policy/protocol modification to improve system operations, quality/continuity of care, and optimize patient outcomes.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

8.19 WAIVING EXCLUSIVITY

MINIMUM STANDARDS:

Local EMS agencies which grant exclusive operating permits shall ensure that a process exists to waive the exclusivity in the event of a significant medical incident.

RECOMMENDED GUIDELINES: None.

CURRENT STATUS: MEETS MINIMUM STANDARD

Pursuant to Section 1797.224 of the California Health and Safety Code, ALCO EMS has established 5 exclusive operating areas (EOAs) for 9-1-1 ambulance transport services.

Four of the EOAs are granted through an exclusive non-competitive process due to grandfathering city fire departments that provided ambulance services prior to The Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act of 1980. The four grandfather EOAs are the city of Alameda, the city of Albany, the city of Berkeley, and the city of Piedmont. The city of Berkeley EOA includes the state property of UC Berkeley and the federal property at Lawrence Berkeley Lab.

The fifth EOA encompasses the remainder of Alameda County and is granted through an exclusive competitive process. This EOA was last competitively bid in 2018 with the winning contractor implementing service in July of 2019. The current contractor has been awarded the EOA for a 5-year term and 2-year extension ending in June of 2026.

In the provider agreement for the competitively bid EOA, there are provisions which allow the EMS Director to waive or suspend exclusivity in the event of a disaster or significant medical event. Provisions are in Section 3.5 of the private 9-1-1 ambulance transport agreement. The process and ability to waive or suspend exclusivity in the grandfathered non-competitive process EOAs does not exist.

NEED(S):

Competitively bid EOA has existing process. No need at this time.

OBJECTIVE:

Maintain process in future agreements.

TIME FRAME FOR MEETING OBJECTIVE:

- Short-Range Plan (one year or less)
- Long-Range Plan (more than one year)

TABLE 1: MINIMUM STANDARDS/RECOMMENDED GUIDELINES

A. SYSTEM ORGANIZATION AND MANAGEMENT

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

A. SYSTEM ORGANIZATION AND MANAGEMENT (continued)

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

B. STAFFING/TRAINING

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

C. COMMUNICATIONS

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

D. RESPONSE/TRANSPORTATION

| | | Does not currently meet standard | Meets minimum standard | Meets recommended guidelines | Short-range plan | Long-range plan |
|---|------------------------------|----------------------------------|------------------------|------------------------------|------------------|-----------------|
| Universal Level: | | | | | | |
| 4.01 | Service Area Boundaries* | | ✓ | | ✓ | |
| 4.02 | Monitoring | | ✓ | | ✓ | |
| 4.03 | Classifying Medical Requests | | ✓ | | | |
| 4.04 | Prescheduled Responses | | ✓ | | ✓ | |
| 4.05 | Response Time* | | ✓ | | | ✓ |
| 4.06 | Staffing | | ✓ | | | |
| 4.07 | First Responder Agencies | | ✓ | | | |
| 4.08 | Medical & Rescue Aircraft* | | ✓ | | ✓ | |
| 4.09 | Air Dispatch Center | | ✓ | | ✓ | |
| 4.10 | Aircraft Availability* | | ✓ | | ✓ | |
| 4.11 | Specialty Vehicles* | | ✓ | | | ✓ |
| 4.12 | Disaster Response | | ✓ | | ✓ | ✓ |
| 4.13 | Intercounty Response* | | ✓ | | | ✓ |
| 4.14 | Incident Command System | | ✓ | | | ✓ |
| 4.15 | MCI Plans | | ✓ | | | ✓ |
| Enhanced Level: Advanced Life Support: | | | | | | |
| 4.16 | ALS Staffing | | ✓ | | | |
| 4.17 | ALS Equipment | | ✓ | | ✓ | ✓ |
| Enhanced Level: Ambulance Regulation: | | | | | | |
| 4.18 | Compliance | | ✓ | | ✓ | |
| Enhanced Level: Exclusive Operating Permits: | | | | | | |
| 4.19 | Transportation Plan | | ✓ | | ✓ | ✓ |
| 4.20 | “Grandfathering” | | ✓ | | ✓ | |
| 4.21 | Compliance | | ✓ | | ✓ | |
| 4.22 | Evaluation | | ✓ | | | |

E. FACILITIES/CRITICAL CARE

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

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 | | ✓ | | ✓ | ✓ |
| 6.02 | Prehospital Records | | ✓ | | ✓ | ✓ |
| 6.03 | Prehospital Care Audits | | ✓ | | ✓ | ✓ |
| 6.04 | Medical Dispatch | | ✓ | | ✓ | ✓ |
| 6.05 | Data Management System* | | ✓ | | ✓ | ✓ |
| 6.06 | System Design Evaluation | | ✓ | | ✓ | ✓ |
| 6.07 | Provider Participation | | ✓ | | ✓ | ✓ |
| 6.08 | Reporting | | ✓ | | ✓ | ✓ |
| Enhanced Level: Advanced Life Support: | | | | | | |
| 6.09 | ALS Audit | | ✓ | | | ✓ |
| Enhanced Level: Trauma Care System: | | | | | | |
| 6.10 | Trauma System Evaluation | | ✓ | | ✓ | ✓ |
| 6.11 | Trauma Center Data | | ✓ | | ✓ | ✓ |

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 | | ✓ | | | ✓ |
| 7.02 | Injury Control | | ✓ | | | ✓ |
| 7.03 | Disaster Preparedness | | ✓ | | | ✓ |
| 7.04 | First Aid & CPR Training | | ✓ | | | ✓ |

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* | | ✓ | | | ✓ |
| 8.02 | Response Plans | | ✓ | | ✓ | ✓ |
| 8.03 | HazMat Training | | ✓ | | | ✓ |
| 8.04 | Incident Command System | | ✓ | | | ✓ |
| 8.05 | Distribution of Casualties* | | ✓ | | | ✓ |
| 8.06 | Needs Assessment | | ✓ | | | ✓ |
| 8.07 | Disaster Communications* | | ✓ | | | ✓ |
| 8.08 | Inventory of Resources | | ✓ | | | ✓ |
| 8.09 | DMAT Teams | | ✓ | | | ✓ |
| 8.10 | Mutual Aid Agreements* | | ✓ | | | ✓ |
| 8.11 | CCP Designation* | | ✓ | | | ✓ |
| 8.12 | Establishment of CCPs | | ✓ | | | ✓ |
| 8.13 | Disaster Medical Training | | ✓ | | | ✓ |
| 8.14 | Hospital Plans | | ✓ | | ✓ | ✓ |
| 8.15 | Interhospital Communications | | ✓ | | | |
| 8.16 | Prehospital Agency Plans | | ✓ | | ✓ | |
| Enhanced Level: Advanced Life Support: | | | | | | |
| 8.17 | ALS Policies | | ✓ | | | ✓ |
| Enhanced Level: Specialty Care Systems: | | | | | | |
| 8.18 | Specialty Center Roles | | ✓ | | | ✓ |
| Enhanced Level: Exclusive Operating Areas/Ambulance Regulations: | | | | | | |
| 8.19 | Waiving Exclusivity | | ✓ | | | ✓ |

TABLE 2: SYSTEM ORGANIZATION AND MANAGEMENT

SYSTEM ORGANIZATION AND MANAGEMENT-BUDGET – 2023:

Reporting Year: 2023

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

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

County: Alameda County

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

2. Type of agency:

- A. Public Health Department
- B. County Health Services Agency**
- C. Other (non-health) County Department
- D. Joint Powers Agency
- E. Private Non-Profit Entity
- F. Other _____

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

- A. Public Health Officer
- B. Health Services Agency Director/Administrator**
- C. Board of Directors
- D. Other _____

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

| | |
|---|------------|
| Implementation of Exclusive Operating Areas (Ambulance Franchising) | <u>Yes</u> |
| Designation of Trauma Centers/Trauma Care System Planning | <u>Yes</u> |
| Designation/Approval of Pediatric Facilities | <u>Yes</u> |
| Designation of Other Critical Care Centers | <u>Yes</u> |
| Development of Transfer Agreements | <u>No</u> |
| Enforcement of Local Ambulance Ordinance | <u>Yes</u> |
| Enforcement of Ambulance Service Contracts | <u>Yes</u> |

| | |
|---|-----|
| Operation of Ambulance Service | No |
| Continuing Education | Yes |
| Personnel Training | Yes |
| Operation or Oversight of EMS Dispatch Center | Yes |
| Non-medical Disaster Planning | Yes |
| Administration of Critical Incident Stress Debriefing Team (CISD) | No |
| Administration of Disaster Medical Assistance Team (DMAT) | No |
| Administration of EMS Fund [Senate Bill (SB) 12/612] | No |
| Other: _____ | N/A |
| Other: _____ | N/A |
| Other: _____ | N/A |

5. EXPENSES

| | |
|---|----------------------|
| Salaries and Benefits (All but Contracted Personnel) | \$ 6,203,196 |
| Contract Services (e.g. Medical Director) | \$ - |
| Operations (e.g. copying, postage, facilities) | \$ 3,407,913 |
| Travel | \$ 10,000 |
| Fixed Assets | \$ - |
| Indirect Expenses (Overhead) | \$ 2,409,700 |
| Subsidies (Ambulance & Fire Dept First Responder Pass Thru) | \$ - |
| EMS Fund Payments to Physicians/Hospital | \$ 9,231,343 |
| Dispatch Center Operations (Non-Staff) | \$ 4,151,405 |
| Training Program Operations | \$ - |
| Other: _____ | \$ - |
| Other: _____ | \$ - |
| Other: _____ | \$ - |
| TOTAL EXPENSES | \$ 25,413,557 |

6. SOURCES OF REVENUE

| | |
|--|---------------|
| Special Project Grant(s) [from EMSA] | \$ - |
| Preventative Health and Health Services (PHHS) Block Grant | \$ - |
| Office of Traffic Safety (OTS) | \$ - |
| State General Fund | \$ - |
| County General Fund | \$ - |
| Other Local Tax Funds (e.g. EMS District) | \$ 25,301,622 |
| County Contracts (e.g. Multi-County Agencies) | \$ - |
| Certification Fees | \$ - |
| Training Program Approval Fees | \$ - |

| | |
|--|----------------------|
| Training Program Tuition/Average Daily Attendance Funds | \$ - |
| Job Training Partnership Act (JTPA) Funds/Other Payments | \$ - |
| Base Hospital Application Fees | \$ - |
| Trauma Center Application Fees | \$ - |
| Trauma Center Designation Fees | \$ - |
| Pediatric Facility Approval Fees | \$ - |
| Pediatric Facility Designation Fees | \$ - |
| Other Critical Care Center Application Fees | \$ - |
| Other Critical Care Center Designation Fees | \$ - |
| Ambulance Service/Vehicle Fees | \$ - |
| Contributions | \$ - |
| Other: Ambulance Response Time Penalties | \$ - |
| Other: County Health Tax Subsidy | \$ - |
| Other: Refunds from Prior Overpayment | \$ - |
| Other: Grants/Donations | \$ - |
| Other: Use of Available Fund Balance | \$ 91,935 |
| Other: Interest | \$ 20,000 |
| TOTAL REVENUE | \$ 25,413,557 |

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

7. Fee Structure

A: We Do Not Charge Any Fees

B: Our Fee Structure is:

| | |
|---|----------|
| First Responder Certification | N/A |
| EMS Dispatcher Certification | N/A |
| EMT-I Certification | \$ 140 |
| EMT-I Recertification | \$ 102 |
| EMT-Defibrillation Certification | N/A |
| EMT-Defibrillation Recertification | N/A |
| AEMT Certification | N/A |
| AEMT Recertification | N/A |
| EMT-P Accreditation | \$ 100 |
| Mobile Intensive Care Nurse/Authorized RN Certification | N/A |
| MICN/ARN Recertification | N/A |
| EMT-I Training Program Approval | \$ 3,000 |
| * By Agencies of Government, Hospitals, Colleges | \$ 1,500 |
| AEMT Training Program Approval | N/A |

| | |
|--|----------|
| EMT-P Training Program Approval | \$ 4,500 |
| * By Agencies of Government, Hospitals, Colleges | \$ 2,250 |
| MICN/ARN Training Program Approval | N/A |
| Base Hospital Application | N/A |
| Base Hospital Designation | N/A |
| Trauma Center Application | N/A |
| Trauma Center Designation | N/A |
| Pediatric Facility Approval | N/A |
| Pediatric Facility Designation | N/A |
| Other Critical Care Center Application | N/A |
| Other Critical Care Center Designation | N/A |
| Ambulance Service License (Biennial) | \$ 3,000 |
| Ambulance Vehicle Permits | \$ 250 |
| Public Safety First Aid | \$ 3,000 |
| * By Agencies of Government | \$ 1,500 |
| Other: _____ | N/A |

SYSTEM ORGANIZATION AND MANAGEMENT-POSITIONS – 2023:

| CATEGORY | ACTUAL TITLE | FTE (EMS ONLY) | TOP SALARY (HRLY EQ) | BENEFITS (% Salary) | COMMENTS |
|--|--|-----------------------|-----------------------------|----------------------------|--|
| EMS Admin./ Coord./Director | EMS Director | 1 | \$92.13 | N/A | |
| Asst. Admin./ Admin. Asst ./ Admin. Mgr. | EMS Deputy Director | 1 | \$79.81 | | |
| Asst. Admin./ Admin. Asst ./ Admin. Mgr. | Retired Annuitant II | 1 | \$157.78 | | Former Medical Director |
| Operations & Regulatory Compliance | EMS Coordinator | 5 | \$71.64 | | |
| Operations & Regulatory Compliance | Information Systems Analyst | 1 | \$64.65 | | |
| Clinical Systems of Care | Physician IV | 2 | \$157.58 | | Medical Director & Deputy Medical Director |
| Clinical Systems of Care | EMS Coordinator | 2 | \$71.64 | | |
| Strategic & Specialized Response | Supervising Prehospital Care Coordinator | 1 | \$75.91 | | MHOAC |
| Strategic & Specialized Response | EMS Coordinator | 4 | \$71.64 | | RDMHS (2) EMSC (1) |
| Strategic & Specialized Response | Program Services Coordinator | 1 | \$56.26 | | Warehouse Operations |
| Strategic & Specialized Response | Supply Clerk II | 1 | \$34.58 | | Warehouse Operations |
| Administrative & Financial Support | Administrative Specialist II | 2 | \$48.13 | | |
| Administrative & Financial Support | Secretary II | 1 | \$41.61 | | |
| Administrative & Financial Support | Specialist Clerk I | 4 | \$33.33 | | |
| Administrative & Financial Support | Specialist Clerk II | 1 | \$35.70 | | |

| CATEGORY | ACTUAL TITLE | FTE (EMS ONLY) | TOP SALARY (HRLY EQ) | BENEFITS (% Salary) | COMMENTS |
|--|--------------------------------|----------------|----------------------|---------------------|------------|
| Injury Prevention | Supervising Program Specialist | 1 | \$60.89 | | |
| Injury Prevention | Program Specialist | 2 | \$54.64 | | |
| Injury Prevention | Associate Program Specialist | 1 | \$45.90 | | |
| Injury Prevention | Community Outreach Worker II | 1 | \$37.96 | | |
| Health Emergency Preparedness & Response | Supervising Program Specialist | 1 | \$60.89 | | |
| Health Emergency Preparedness & Response | Management Associate I | 1 | \$36.64 | | Vacant (1) |
| Health Emergency Preparedness & Response | Finance Services Specialist II | 1 | \$48.13 | | |
| Health Emergency Preparedness & Response | Specialist Clerk II | 1 | \$35.70 | | |
| Health Emergency Preparedness & Response | Program Specialist | 3 | \$54.64 | | |
| Health Emergency Preparedness & Response | Associate Program Specialist | 1 | \$45.90 | | |

SYSTEM ORGANIZATION AND MANAGEMENT - ORG CHART – 2023:

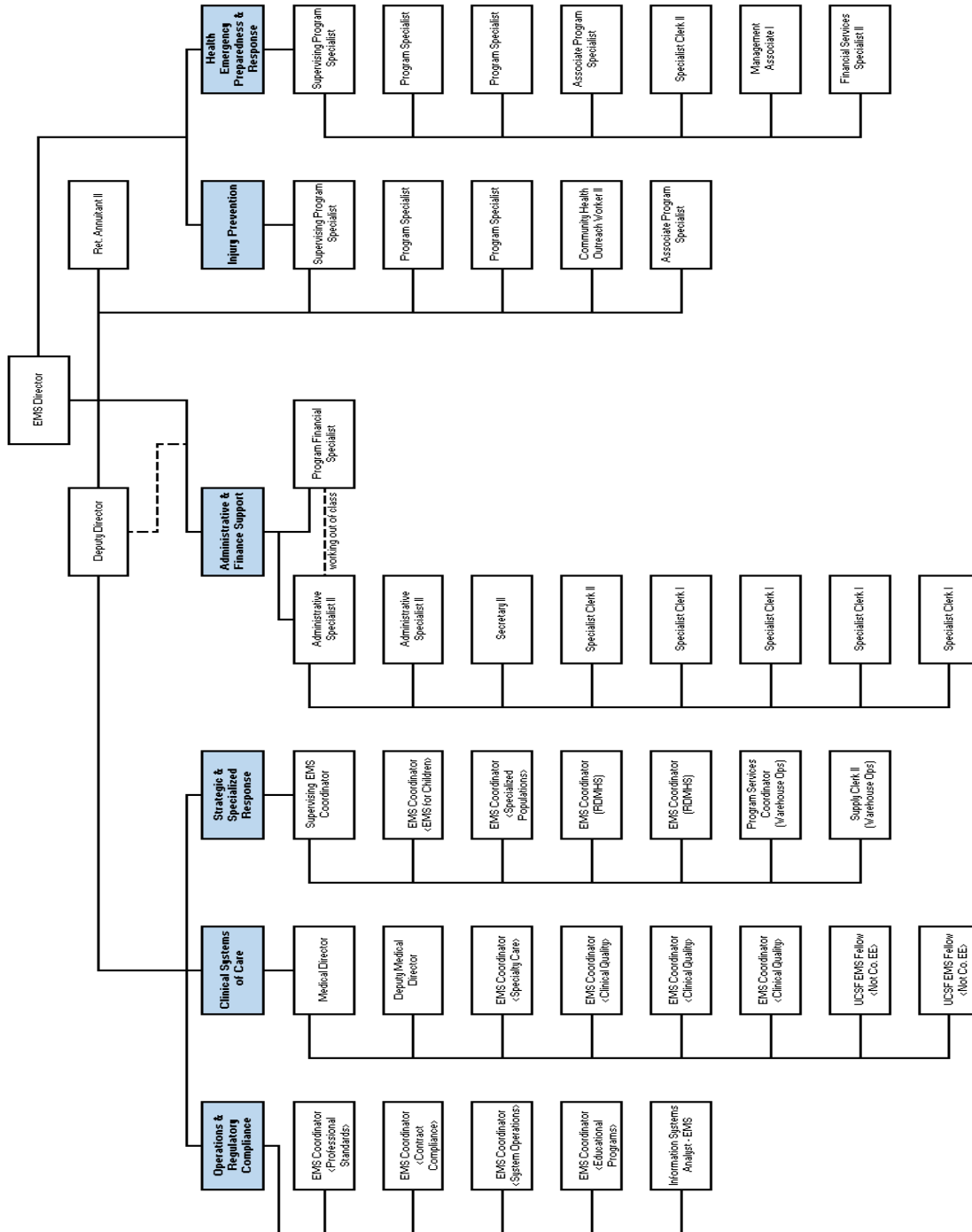


TABLE 3: STAFFING/ TRAINING – 2023

STAFFING/ TRAINING – 2023

Reporting Year: 2023

NOTE: Table 3 is to be reported by agency.

| | EMT-Is | EMT-IIIs | EMT-Ps | MICNs |
|---|--------|----------|--------|-------|
| Total Certified | 929 | | | |
| Number Newly Certified This Year | 443 | | | |
| Number Recertified This Year | 559 | | | |
| Total Number of Accredited Personnel (On July 1 of Reporting Year) | | | 54 | |
| Number of Certification Reviews Resulting In: | | | | |
| A) Formal Investigations | 27 | | | |
| B) Probation | 0 | | | |
| C) Suspensions | 0 | | | |
| D) Revocations | 0 | | | |
| E) Denials | 0 | | | |
| F) Denials or Renewal | 0 | | | |
| G) No Action Taken | 11 | | | |

1. Early

Defibrillation:

A: Number of EMT-I (Defib) Authorized to Use AEDs _____

B: Number of Public Safety (Defib) Certified (Non-EMT-I) _____

2. Do you have an EMR Training Program?

Yes, Los Positas College

Staffing/Training - 2022:

Reporting Year: 2022

NOTE: Table 3 is to be reported by agency.

| | EMT-Is | EMT-IIs | EMT-Ps | MICNs |
|---|--------|---------|--------|-------|
| Total Certified | 903 | | | |
| Number Newly Certified This Year | 391 | | | |
| Number Recertified This Year | 512 | | | |
| Total Number of Accredited Personnel (On July 1 of Reporting Year) | | | 84 | |
| Number of Certification Reviews Resulting In: | | | | |
| A) Formal Investigations | 23 | | | |
| B) Probation | 1 | | | |
| C) Suspensions | 2 | | | |
| D) Revocations | 0 | | | |
| E) Denials | 0 | | | |
| F) Denials or Renewal | 0 | | | |
| G) No Action Taken | 6 | | | |

1. Early Defibrillation:

A: Number of EMT-I (Defib) Authorized to Use AEDs _____

B: Number of Public Safety (Defib) Certified (Non-EMT-I) _____

2. Do you have an EMR Training Program? Yes, Los Positas College

TABLE 4: COMMUNICATIONS – 2023

County: Alameda County

Reporting Year: 2023

- 1. Number of primary Public Service Answering Points (PSAP) 18
- 2. Number of secondary PSAPs 2
- 3. Number of dispatch centers directly dispatching ambulances 4
- 4. Number of EMS dispatch agencies utilizing EMD guidelines 2
- 5. Number of designated dispatch centers for EMS aircraft 2
- 6. Who is your primary dispatch center for day-to-day emergencies?
Alameda County Regional Emergency Communications Center (ACRECC)
- 7. Who is your primary dispatch agency for a disaster?
Alameda County Regional Emergency Communications Center (ACRECC)
- 8. Do you have an operational area disaster communication system (DCS)? Yes
 - A: Radio Primary Frequency 700 MHz Trunked
 - B. Other Methods 800 MHz Trunked VHF
 - C: Call all medical response units communicate on the same DCS? 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 backup communication system? Yes
 - 1) Within the Operational Area (OA)? Yes
 - 2) Between OA and the region and/or state? Yes

TABLE 5: RESPONSE/ TRANSPORTATION – 2023

Reporting Year: 2023

Note: Table 5 is to be reported by agency.

Early Defibrillation Providers

All Providers are required to have EMT-Is who have had an AHA (or equivalent) BCLS course that includes defibrillation with AED.

1.Number of EMT-Defibrillation providers: 11

- [American Medical Response](#)
- [Arcadia Ambulance](#)
- [Bay Medic Transportation](#)
- [Eagle Ambulance](#)
- [Falck Northern California](#)
- [Falcon Critical Care Transport](#)
- [LifeWest Ambulance](#)
- [Norcal Ambulance](#)
- [Pro Transport-1](#)
- [Royal Ambulance](#)
- [Westmed Ambulance](#)

SYSTEM STANDARD RESPONSE TIMES (90TH PERCENTILE)

Enter the response times in the appropriate boxes:

| Falck Northern California | | | |
|----------------------------------|--------------|-----------------|-------------------------|
| MPDS Category | Metro | Suburban | Rural/Open Space |
| Priority 1 | 10:00 min. | 14:00 min. | 16:00 min. |
| Priority 2 | 12:00 min. | 16:00 min. | 20:00 min. |
| Priority 3 | 14:00 min. | 18:00 min. | 20:00 min. |
| Priority 4 | 20:00 min. | 30:00 min. | 40:00 min. |
| Non-Medical 5150 | 40:00 min. | 50:00 min. | 60:00 min. |

| Fire Department Advanced Life Support | | | | | | |
|--|-------------------------|------------------|-------------------------|------------------|-------------------------|------------------|
| MPDS CATEGORY: | Metro | | Suburban | | Rural/Open Space | |
| | First Responders | Transport | First Responders | Transport | First Responders | Transport |
| Priority 1 | 08:30 min. | 10:00 min. | 08:30 min. | 14:00 min. | 08:30 min. | 16:00 min. |
| Priority 2 | 08:30 min. | 12:00 min. | 08:30 min. | 16:00 min. | 08:30 min. | 20:00 min. |
| Priority 3 | 08:30 min. | 14:00 min. | 08:30 min. | 18:00 min. | 08:30 min. | 20:00 min. |
| Priority 4 | N/A | 20:00 min. | N/A | 30:00 min. | N/A | 40:00 min. |
| Non-Medical | N/A | 40:00 min. | N/A | 50:00 min. | N/A | 60:00 min. |

TABLE 6: FACILITIES/CRITICAL CARE NEW

Reporting Year: 2023

NOTE: Table 6 is to be reported by agency

Trauma

Trauma Patients:

- 1. Number of patients meeting (major) trauma triage criteria 1294

- 2. Number of major (anatomic/physiologic) trauma victims transported directly to a trauma center by ambulance 1194

| Total # Trauma Activations by Facility | |
|---|-------------|
| Facility Name | # |
| UCSF Benioff Children's Hospital Oakland | 965 |
| Sutter Eden Medical Center | 1711 |
| Alameda Health System - Highland Hospital | 3252 |
| TOTAL | 5928 |

- 3. Number of major trauma patients transferred to a trauma center N/A

- 4. Number of patients meeting (major) trauma criteria who weren't treated at a trauma center 100

Emergency Departments

- Total number of emergency departments 13
 - 1. Number of Referral Emergency Services 0
 - 2. Number of Standby Emergency Services 0
 - 3. Number of Basic Emergency Services 13
 - 4. Number of Comprehensive Emergency Services 0

Receiving Hospitals

- 1. Number of Receiving Hospitals with Written Agreements 11

- 2. Number of Base Hospitals with Written Agreements 1

TABLE 7: DISASTER MEDICAL

Reporting Year: 2023

County: Alameda County EMS

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

SYSTEM RESOURCES

1. Casualty Collections Points (CCP)
 - a. Where are your CCPs located? Incident Specific
 - b. How are they staffed? Agency and Provider Staff as needed
 - c. Do you have a supply system for supporting them for 72 hours? Yes No

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

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

4. Hazardous Materials
 - a. Do you have any HazMat trained medical response teams? Yes No
 - b. At what HazMat level are they trained? **“Specialty Trained” & “First Responder Awareness Level.” ***
 - c. Do you have the ability to do decontamination in an emergency room? Yes No
 - d. Do you have the ability to do decontamination in the field? Yes No

OPERATIONS

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

2. What is the maximum number of local jurisdiction EOCs you will need to interact with in a disaster? 13 (cities)

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

****“Individuals who respond to and function within the Exclusion Zone (Hot Zone) or Contamination Reduction Zone (Warm Zone) must be members of specialty trained HazMat teams, trained in the use of self-contained breathing apparatus, selection of appropriate chemical protective suits and how to function in them. Other rescuers should be trained in accordance with Federal OSHA standards in OSHA 29 CFR 190.120 and California OSHA as defined in the California Code of Regulations, Title 8, Section 5192.” (Refer to Alameda county EMS 2024 Field Manual). Nearly all public safety providers have received haz-mat training in at least the **“First Responder Awareness Level.”** Many firefighter personnel trained to the **first responder level.*****

TABLE 7: DISASTER MEDICAL (cont.)

4. List all counties with which you have a written medical mutual aid agreement:
All counties within California Mutual Aid Compact Region 2
5. Do you have formal agreements with hospitals in your operational area to participate in disaster planning and response? Yes No
6. Do you have a formal agreements with community clinics in your operational areas to participate in disaster planning and response? Yes No
7. Are you part of a multi-county EMS system for disaster response? Yes No
8. Are you a separate department or agency? Yes No
9. If not, to whom do you report? Alameda County Health
8. If your agency is not in the Health Department, do you have a plan to coordinate public health and environmental health issues with the Health Department? Yes No

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

ALAMEDA COUNTY FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: Alameda County

Provider: Alameda County Fire Department

Address: 6363 Clark Ave., Dublin, CA 94568

Phone #: 510-632-3473 # of Ambulances in Fleet: 4

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 1

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | ● |
| No | | No | | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | ● | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | ● |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|---------------|---|------------|--|------------------|--|
| Fire | ● | City | | Rotary | | ALS Rescue | |
| Law | | County | ● | Fixed Wing | | BLS Rescue | |
| Other: | | Fire District | ● | | | Auxiliary Rescue | |
| | | State | | | | Air Ambulance | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|---------------|-----------------------------------|------------|
| # of Emergency Responses | 33,164 | # of Emergency Transports | 113 |
| # of Non-Emergency Response | 358 | # of Non-Emergency Transports | 265 |
| Total Number of Responses | 33,522 | Total Number of Transports | 378 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

ALAMEDA (CITY) FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Alameda

Provider: Alameda Fire Department

Address: 1300 Park St., Alameda, CA 94501

Phone #: 510-337-2100 # of Ambulances in Fleet: 4

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 3

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | ● |
| No | | No | | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | ● | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | ● |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|---------------|---|------------------|--|------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | Fire District | ● | Auxiliary Rescue | | | |
| | | State | | Air Ambulance | | | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|--------------|-----------------------------------|--------------|
| # of Emergency Responses | 5,679 | # of Emergency Transports | 529 |
| # of Non-Emergency Response | 21 | # of Non-Emergency Transports | 4,194 |
| Total Number of Responses | 5,700 | Total Number of Transports | 4,723 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

ALBANY FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Albany

Provider: Albany Fire Department

Address: 1000 San Pablo Ave., Albany, CA 94706

Phone #: 510-528-5770 # of Ambulances in Fleet: 2

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 1

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | | Yes | ● | Public | ● |
| No | | No | ● | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | ● | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|---------------|---|------------------|--|------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | Fire District | | Auxiliary Rescue | | | |
| | | State | | Air Ambulance | | | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES – 2023 | | | |
|----------------------------------|--------------|-----------------------------------|------------|
| # of Emergency Responses | 1,282 | # of Emergency Transports | 57 |
| # of Non-Emergency Response | 10 | # of Non-Emergency Transports | 805 |
| Total Number of Responses | 1,292 | Total Number of Transports | 862 |

| AIR AMBULANCE SERVICES – 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

BERKELEY FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Berkeley

Provider: Berkeley Fire Department

Address: 2100 Martin Luther King Jr Way, Berkeley, CA 94704

Phone #: 510-981-3473 # of Ambulances in Fleet: 10

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 4

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | ● |
| No | | No | | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | ● | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|---------------|---|------------|--|------------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | Fire District | | | | Auxiliary Rescue | |
| | | State | | | | Air Ambulance | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|---------------|-----------------------------------|--------------|
| # of Emergency Responses | 17,837 | # of Emergency Transports | 678 |
| # of Non-Emergency Response | 58 | # of Non-Emergency Transports | 5,203 |
| Total Number of Responses | 17,895 | Total Number of Transports | 5,881 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

EAST BAY REGIONAL PARK DISTRICT - 2023

County: Alameda County Response Zone: N/A

Provider: East Bay Regional Park District

Address: 17930 Lake Chabot Road, Castro Valley, CA 94546

Phone #: 510-690-6607 # of Ambulances in Fleet: N/A

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: N/A

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | ● |
| No | | No | | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | | ALS | | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | ● | 7-Digit | | Air | |
| | | | | CCT | | Water | ● |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|----------|---|------------------|--|------------|--|
| Fire | ● | City | | Rotary | | ALS Rescue | |
| Law | ● | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | ● | Auxiliary Rescue | | | |
| | | State | | Air Ambulance | | | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|--------------|-----------------------------------|----------|
| # of Emergency Responses | 567 | # of Emergency Transports | 0 |
| # of Non-Emergency Response | 721 | # of Non-Emergency Transports | 0 |
| Total Number of Responses | 1,283 | Total Number of Transports | 0 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | 0 | # of Emergency Transports | 0 |
| # of Non-Emergency Response | 0 | # of Non-Emergency Transports | 0 |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

* NOTE: Currently East Bay Regional Parks does not have transport, ALS, or air ambulance services

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

FALCK ALAMEDA COUNTY - 2023

County: Alameda County Response Zone: Alameda County

Provider: Falck Alameda County

Address: 2833 Industrial Blvd., Hayward, CA 94545

Phone #: 510-876-8747 # of Ambulances in Fleet: 73

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 48

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | |
| No | | No | | No | | Private | ● |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | ● | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | | BLS | ● | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|--|----------|--|------------|--|------------------|--|
| Fire | | City | | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | | | | Auxiliary Rescue | |
| | | State | | | | Air Ambulance | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|----------------|-----------------------------------|----------------|
| # of Emergency Responses | 154,151 | # of Emergency Transports | 14,127 |
| # of Non-Emergency Response | 16,730 | # of Non-Emergency Transports | 99,932 |
| Total Number of Responses | 170,881 | Total Number of Transports | 114,059 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

FREMONT FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Fremont

Provider: Fremont Fire Department

Address: 3300 Capital Ave., Fremont, CA 94538

Phone #: 510-494-4200 # of Ambulances in Fleet: 0

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 0

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | ● |
| No | | No | | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|----------|---|------------------|--|------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | | Auxiliary Rescue | | | |
| | | | | Air Ambulance | | | |
| | | | | State | | | |
| | | | | Federal | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|---------------|-----------------------------------|----------|
| # of Emergency Responses | 13,676 | # of Emergency Transports | |
| # of Non-Emergency Response | 77 | # of Non-Emergency Transports | |
| Total Number of Responses | 13,753 | Total Number of Transports | 0 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

HAYWARD FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Hayward

Provider: Hayward Fire Department

Address: 777 B St., Hayward, CA 94541

Phone #: 510-583-4900 # of Ambulances in Fleet: 2

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 0

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | | Yes | ● | Public | ● |
| No | | No | ● | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|----------|---|------------------|--|------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | | Auxiliary Rescue | | | |
| | | | | Air Ambulance | | | |
| | | | | State | | | |
| | | | | Federal | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|---------------|-----------------------------------|----------|
| # of Emergency Responses | 15,412 | # of Emergency Transports | |
| # of Non-Emergency Response | 75 | # of Non-Emergency Transports | |
| Total Number of Responses | 15,487 | Total Number of Transports | 0 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

LIVERMORE-PLEASANTON FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: Livermore/Pleasanton

Provider: Livermore-Pleasanton Fire Department

Address: 3560 Nevada St., Pleasanton, CA 94566

Phone #: 925-454-2361 # of Ambulances in Fleet: 0

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 0

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | | Yes | ● | Public | ● |
| No | | No | ● | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|----------|---|------------|--|------------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | | | | Auxiliary Rescue | |
| | | State | | | | Air Ambulance | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|---------------|-----------------------------------|----------|
| # of Emergency Responses | 11,517 | # of Emergency Transports | |
| # of Non-Emergency Response | 192 | # of Non-Emergency Transports | |
| Total Number of Responses | 11,709 | Total Number of Transports | 0 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

OAKLAND FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Oakland

Provider: Oakland Fire Department

Address: 150 Frank H Ogawa Plaza, Oakland, CA 94612

Phone #: 510-238-3856 # of Ambulances in Fleet: 0

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 0

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | ● | Yes | ● | Public | ● |
| No | | No | | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|----------|---|------------------|--|------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | | Auxiliary Rescue | | | |
| | | | | Air Ambulance | | | |
| | | | | State | | | |
| | | | | Federal | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|---------------|-----------------------------------|----------|
| # of Emergency Responses | 51,056 | # of Emergency Transports | |
| # of Non-Emergency Response | 3,938 | # of Non-Emergency Transports | |
| Total Number of Responses | 54,994 | Total Number of Transports | 0 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 8: RESPONSE/TRANSPORTATION PROVIDERS

PIEDMONT FIRE DEPARTMENT - 2023

County: Alameda County Response Zone: City of Piedmont

Provider: Piedmont Fire Department

Address: 120 Vista Ave., Piedmont, CA 94611

Phone #: 510-420-3030 # of Ambulances in Fleet: 2

Average Number of Ambulances on Duty at 12:00PM (Noon) on Any Given Day: 1

| Written Contract | | Medical Director | | System Available 24hrs | | Ownership | |
|------------------|---|------------------|---|------------------------|---|-----------|---|
| Yes | ● | Yes | | Yes | ● | Public | ● |
| No | | No | ● | No | | Private | |

| Level of Service | | | | | | | |
|------------------|---|---------------|---|-----------------|---|------------------|---|
| Transport | | Level of Care | | Type of Service | | Mode of Response | |
| Yes | ● | ALS | ● | 9-1-1 | ● | Ground | ● |
| No | ● | BLS | | 7-Digit | | Air | |
| | | | | CCT | | Water | |
| | | | | IFT | | | |

| If Public: | | | | If Air: | | | |
|------------|---|----------|---|------------------|--|------------|--|
| Fire | ● | City | ● | Rotary | | ALS Rescue | |
| Law | | County | | Fixed Wing | | BLS Rescue | |
| Other: | | District | | Auxiliary Rescue | | | |
| | | State | | Air Ambulance | | | |
| | | Federal | | | | | |

| TRANSPORTING AGENCIES - 2023 | | | |
|----------------------------------|------------|-----------------------------------|------------|
| # of Emergency Responses | 448 | # of Emergency Transports | 52 |
| # of Non-Emergency Response | 2 | # of Non-Emergency Transports | 295 |
| Total Number of Responses | 450 | Total Number of Transports | 347 |

| AIR AMBULANCE SERVICES - 2023 | | | |
|----------------------------------|----------|-----------------------------------|----------|
| # of Emergency Responses | | # of Emergency Transports | |
| # of Non-Emergency Response | | # of Non-Emergency Transports | |
| Total Number of Responses | 0 | Total Number of Transports | 0 |

TABLE 9: FACILITIES

ALAMEDA HOSPITAL

County: Alameda County

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

Facility: Alameda Hospital (Alameda Health System)

Address: 2070 Clinton Ave., Alameda, CA 94501

Phone #: 510-522-3700

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | | Yes | ● |
| No | ● | No | ● | No | ● | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | | |
|---|--|-----|--|----|---|
| Pediatric Critical Care Center ₁ | | Yes | | No | ● |
| EDAP ₂ | | Yes | | No | ● |
| PICU ₃ | | Yes | | No | ● |

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

TABLE 9: FACILITIES

ALTA BATES SUMMIT MEDICAL CENTER - BERKELEY

County: Alameda County

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

Facility: Alta Bates Summit Medical Center - Berkeley

Address: 2450 Ashby Ave., Berkeley, CA 94705

Phone #: 510-204-4444

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | | Referral Emergency | | Standby Emergency | |
| No | ● | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | | Yes | |
| No | ● | No | ● | No | ● | No | ● |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|--|-----|--|------|
| Pediatric Critical Care Center ₁ | | Yes | | No ● |
| EDAP ₂ | | Yes | | No ● |
| PICU ₃ | | Yes | | No ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

ALTA BATES SUMMIT MEDICAL CENTER - OAKLAND

County: Alameda County

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

Facility: Alta Bates Summit Medical Center - Oakland

Address: 350 Hawthorne Ave., Oakland, CA 94609

Phone #: 510-655-4000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | ● | Yes | ● |
| No | ● | No | ● | No | | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|--|-----|--|------|
| Pediatric Critical Care Center ₁ | | Yes | | No ● |
| EDAP ₂ | | Yes | | No ● |
| PICU ₃ | | Yes | | No ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

HIGHLAND HOSPITAL

County: Alameda County

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

Facility: Highland Hospital (Alameda Health System)

Address: 1411 E31st St., Oakland, CA 94602

Phone #: 510-437-4800

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | ● | Yes | | Yes | ● | Yes | |
| No | | No | ● | No | | No | ● |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|---|----------|--|
| Yes | ● | Level I | ● | Level II | |
| No | | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|-----|--|----|---|
| Pediatric Critical Care Center ₁ | Yes | | No | ● |
| EDAP ₂ | Yes | | No | ● |
| PICU ₃ | Yes | | No | ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

KAISER PERMANENTE SAN LEANDRO MEDICAL CENTER

County: Alameda County

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

Facility: Kaiser Permanente San Leandro Medical Center

Address: 2500 Merced St., San Leandro, CA 94538

Phone #: 510-454-1000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | | Yes | ● |
| No | ● | No | ● | No | ● | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|-----|--|----|---|
| Pediatric Critical Care Center ₁ | Yes | | No | ● |
| EDAP ₂ | Yes | | No | ● |
| PICU ₃ | Yes | | No | ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

KAISER PERMANENTE OAKLAND MEDICAL CENTER

County: Alameda County

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

Facility: Kaiser Permanente Oakland Medical Center

Address: 3801 Howe St., Oakland, CA 94611

Phone #: 510-752-1000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | ● | Yes | ● |
| No | ● | No | ● | No | | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | | |
|---|--|-----|---|----|---|
| Pediatric Critical Care Center ₁ | | Yes | | No | ● |
| EDAP ₂ | | Yes | | No | ● |
| PICU ₃ | | Yes | ● | No | |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

KAISER PERMANENTE FREMONT MEDICAL CENTER

County: Alameda County

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

Facility: Kaiser Permanente Fremont Medical Center

Address: 39400 Paseo Padre Parkway, Fremont, CA 94538

Phone #: 510-248-3000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | ● | Yes | ● |
| No | ● | No | ● | No | | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | | |
|---|--|-----|--|----|---|
| Pediatric Critical Care Center ₁ | | Yes | | No | ● |
| EDAP ₂ | | Yes | | No | ● |
| PICU ₃ | | Yes | | No | ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

SAN LEANDRO HOSPITAL

County: Alameda County

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

Facility: San Leandro Hospital (Alameda Health System)

Address: 13855 E 14th St., San Leandro, CA 94578

Phone #: 510-357-6500

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | | Referral Emergency | | Standby Emergency | |
| No | ● | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | | Yes | |
| No | ● | No | ● | No | ● | No | ● |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|-----|--|----|---|
| Pediatric Critical Care Center ₁ | Yes | | No | ● |
| EDAP ₂ | Yes | | No | ● |
| PICU ₃ | Yes | | No | ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

ST. ROSE HOSPITAL

County: Alameda County

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

Facility: St. Rose Hospital

Address: 27200 Calaroga Ave., Hayward, CA 94545

Phone #: 510-264-4000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | ● | Yes | |
| No | ● | No | ● | No | | No | ● |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|--|-----|--|------|
| Pediatric Critical Care Center ₁ | | Yes | | No ● |
| EDAP ₂ | | Yes | | No ● |
| PICU ₃ | | Yes | | No ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

EDEN MEDICAL CENTER

County: Alameda County

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

Facility: Sutter Eden Medical Center

Address: 20103 Lake Chabot Rd., Castro Valley, CA 94546

Phone #: 510-537-1234

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | | Yes | ● |
| No | ● | No | ● | No | ● | No | |

| Trauma Center | | If Trauma Center, what level? | | | | |
|---------------|---|-------------------------------|--|----------|--|---|
| Yes | ● | Level I | | Level II | | ● |
| No | | Level III | | Level IV | | |

| Pediatric Capabilities | | | | | |
|---|--|-----|--|----|---|
| Pediatric Critical Care Center ₁ | | Yes | | No | ● |
| EDAP ₂ | | Yes | | No | ● |
| PICU ₃ | | Yes | | No | ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

UCSF BENIOFF CHILDREN’S HOSPITAL OAKLAND

County: Alameda County

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

Facility: UCSF Benioff's Children's Hospital Oakland

Address: 747 51st St., Oakland, CA 94609

Phone #: 510-428-3000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | | Yes | ● |
| No | ● | No | ● | No | ● | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|---|----------|--|
| Yes | ● | Level I | ● | Level II | |
| No | | Level III | | Level IV | |

| Pediatric Capabilities | | | | | |
|---|--|-----|---|----|--|
| Pediatric Critical Care Center ₁ | | Yes | ● | No | |
| EDAP ₂ | | Yes | ● | No | |
| PICU ₃ | | Yes | ● | No | |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

STANFORD HEALTH CARE TRI-VALLEY

County: Alameda County

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

Facility: Stanford Health Care Tri-Valley

Address: 5555 West Las Positas Blvd., Pleasanton, CA 94588

Phone #: 925-847-3000

| Written Contract | | Service | | | |
|------------------|---|--------------------|---|-------------------------|--|
| Yes | ● | Referral Emergency | | Standby Emergency | |
| No | | Basic Emergency | ● | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|---|-------------|---|--------------|---|---------------|---|
| Yes | | Yes | | Yes | ● | Yes | ● |
| No | ● | No | ● | No | | No | |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|---|-------------------------------|--|----------|--|
| Yes | | Level I | | Level II | |
| No | ● | Level III | | Level IV | |

| Pediatric Capabilities | | | | |
|---|--|-----|--|------|
| Pediatric Critical Care Center ₁ | | Yes | | No ● |
| EDAP ₂ | | Yes | | No ● |
| PICU ₃ | | Yes | | No ● |

₁ Meets EMSA Pediatric Critical Care Center (PCCC) Standards

₂ Meets EMS Emergency Departments Approved for Pediatrics (EDAP) Standards

₃ Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards

TABLE 9: FACILITIES

WASHINGTON HOSPITAL

County: Alameda County

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

Facility: Washington Hospital Healthcare System

Address: 2000 Mowry Ave., Fremont, CA 94538

Phone #: 510-797-1111

| Written Contract | | Service | | | |
|------------------|----------------------------------|--------------------|----------------------------------|-------------------------|--|
| Yes | <input checked="" type="radio"/> | Referral Emergency | | Standby Emergency | |
| No | <input type="radio"/> | Basic Emergency | <input checked="" type="radio"/> | Comprehensive Emergency | |

| Base Hospital | | Burn Center | | STEMI Center | | Stroke Center | |
|---------------|----------------------------------|-------------|----------------------------------|--------------|----------------------------------|---------------|----------------------------------|
| Yes | <input type="radio"/> | Yes | <input type="radio"/> | Yes | <input checked="" type="radio"/> | Yes | <input checked="" type="radio"/> |
| No | <input checked="" type="radio"/> | No | <input checked="" type="radio"/> | No | <input type="radio"/> | No | <input type="radio"/> |

| Trauma Center | | If Trauma Center, what level? | | | |
|---------------|----------------------------------|-------------------------------|--|----------|--|
| Yes | <input type="radio"/> | Level I | | Level II | |
| No | <input checked="" type="radio"/> | Level III | | Level IV | |

| Pediatric Capabilities | | | | | |
|---|--|-----|-----------------------|----|----------------------------------|
| Pediatric Critical Care Center ₁ | | Yes | <input type="radio"/> | No | <input checked="" type="radio"/> |
| EDAP ₂ | | Yes | <input type="radio"/> | No | <input checked="" type="radio"/> |
| PICU ₃ | | Yes | <input type="radio"/> | No | <input checked="" type="radio"/> |

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

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County EMS

Reporting Year: 2023

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

| | | | | |
|-----------------------|----------------------------------|--|-------------------|---------------------|
| Training Institution: | <u>American Health Education</u> | | Telephone Number: | <u>800-483-3615</u> |
| Address: | <u>3174 Constitution Dr.</u> | | | |
| | <u>Livermore, Ca 94551</u> | | | |
| Student Eligibility: | <u>General Public</u> | **Program Level | <u>EMT</u> | |
| Cost of Program: | | | | |
| Basic: | <u>\$2995</u> | Number of students completing training per year: | | |
| | | Initial training: | | <u>283</u> |
| Refresher: | <u>\$395</u> | Refresher: | | <u>123</u> |
| | | Continuing Education: | | <u>436</u> |
| | | Expiration Date: | | <u>10/31/27</u> |
| | | Number of courses: | | |
| | | Initial training: | | <u>13</u> |
| | | Refresher: | | <u>13</u> |
| | | Continuing Education: | | <u>81</u> |

| | | | | |
|-----------------------|---------------------------------------|--|-------------------|---------------------|
| Training Institution: | <u>Chabot College</u> | | Telephone Number: | <u>510-723-7090</u> |
| Address: | <u>25555 Hesperian Blvd</u> | | | |
| | <u>Hayward, CA 94545</u> | | | |
| Student Eligibility: | <u>General Public</u> | **Program Level | <u>EMT-B</u> | |
| Cost of Program: | | | | |
| Basic: | <u>7.5 units x \$46/ unit = \$345</u> | Number of students completing training per year: | | |
| Refresher: | <u>2 units x \$46/ unit = \$92</u> | Initial training: | | <u>46</u> |
| | | Refresher: | | <u>37</u> |
| | | Continuing Education: | | <u>N/A</u> |
| | | Expiration Date: | | <u>4/30/28</u> |
| | | Number of courses | | |
| | | Initial training: | | <u>2</u> |
| | | Refresher: | | <u>2</u> |
| | | Continuing Education: | | <u>N/A</u> |

| | | | | |
|-----------------------|-----------------------------|-----------------|--|---------------------|
| Training Institution: | <u>Las Positas College</u> | | Telephone Number: | <u>925-424-1257</u> |
| Address: | <u>3000 Campus Hill Dr.</u> | | | |
| | <u>Livermore, CA 94551</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>\$400</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>48</u> |
| | Refresher: | <u>\$68</u> | | |
| | | | Refresher: | <u>5</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>5/31/28</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>2</u> |
| | | | Refresher: | <u>1</u> |
| | | | Continuing Education: | <u>N/A</u> |

| | | | | |
|-----------------------|-----------------------------|-----------------|--|---------------------|
| Training Institution: | <u>Las Positas College</u> | | Telephone Number: | <u>925-424-1257</u> |
| Address: | <u>3000 Campus Hill Dr.</u> | | | |
| | <u>Livermore, CA 94551</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>Paramedic</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>\$1500</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>24</u> |
| | Refresher: | <u>N/A</u> | | |
| | | | Refresher: | <u>0</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>5/31/28</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>1</u> |
| | | | Refresher: | <u>0</u> |
| | | | Continuing Education: | |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County

Reporting Year: 2023

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

| | | | |
|-----------------------|----------------------------------|--|---------------------|
| Training Institution: | <u>Project Heartbeat</u> | Telephone Number: | <u>510-452-1100</u> |
| Address: | <u>333 Hegenberger Road #855</u> | | |
| | <u>Oakland, CA 94621</u> | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT-B</u> |
| Cost of Program: | | | |
| Basic: | <u>\$2000</u> | Number of students completing training per year: | |
| | | Initial training: | <u>140</u> |
| Refresher: | <u>\$400</u> | | |
| | | Refresher: | <u>30</u> |
| | | Continuing Education: | <u>N/A</u> |
| | | Expiration Date: | <u>4/30/26</u> |
| | | Number of courses: | |
| | | Initial training: | <u>12</u> |
| | | Refresher: | <u>2</u> |
| | | Continuing Education: | <u>N/A</u> |

| | | | |
|-----------------------|----------------------------------|--|---------------------|
| Training Institution: | <u>Alameda County Fire Dept.</u> | Telephone Number: | <u>925-833-3473</u> |
| Address: | <u>6363 Clark Avenue</u> | | |
| | <u>Dublin, CA 94568</u> | | |
| Student Eligibility*: | <u>Employees only</u> | **Program Level | <u>EMT</u> |
| Cost of Program: | | | |
| Basic: | <u>N/A</u> | Number of students completing training per year: | |
| | | Initial training: | <u>N/A</u> |
| Refresher: | <u>N/A</u> | | |
| | | Refresher: | <u>N/A</u> |
| | | Continuing Education: | <u>750+</u> |
| | | Expiration Date: | <u>6/30/24</u> |
| | | Number of courses: | |
| | | Initial training: | <u>N/A</u> |
| | | Refresher: | <u>N/A</u> |
| | | Continuing Education: | <u>60+</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County

Reporting Year: 2023

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

| | | | |
|-----------------------|--------------------------------|--|---------------------|
| Training Institution: | <u>Alameda Fire Department</u> | Telephone Number: | <u>510-755-4302</u> |
| Address: | <u>1300 Park Street</u> | | |
| | <u>Alameda, CA 94501</u> | | |
| Student Eligibility*: | <u>Employees only</u> | **Program Level | <u>EMT</u> |
| Cost of Program: | | | |
| Basic: | <u>N/A</u> | Number of students completing training per year: | |
| | | Initial training: | <u>N/A</u> |
| Refresher: | <u>N/A</u> | | |
| | | Refresher: | <u>6</u> |
| | | Continuing Education: | <u>104</u> |
| | | Expiration Date: | <u>5/31/26</u> |
| | | Number of courses: | |
| | | Initial training: | <u>N/A</u> |
| | | Refresher: | <u>2</u> |
| | | Continuing Education: | <u>16</u> |

| | | | |
|-----------------------|---|--|---------------------|
| Training Institution: | <u>Berkeley Fire Department</u> | Telephone Number: | <u>510-981-5590</u> |
| Address: | <u>2100 MLK Jr. Way, 2nd floor</u> | | |
| | <u>Berkeley, Ca 94704</u> | | |
| Student Eligibility*: | <u>Employee only</u> | **Program Level | <u>EMT</u> |
| Cost of Program: | | | |
| Basic: | <u>N/A</u> | Number of students completing training per year: | |
| | | Initial training: | <u>N/A</u> |
| Refresher: | <u>N/A</u> | | |
| | | Refresher: | <u>N/A</u> |
| | | Continuing Education: | <u>117</u> |
| | | Expiration Date: | <u>10/31/24</u> |
| | | Number of courses: | |
| | | Initial training: | <u>N/A</u> |
| | | Refresher: | <u>0</u> |
| | | Continuing Education: | <u>32</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County

Reporting Year: 2023

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

| | | | | |
|-----------------------|---------------------------------------|-----------------|--|---------------------|
| Training Institution: | <u>EMS Corps EMT Training Program</u> | | Telephone Number: | <u>510-708-9707</u> |
| Address: | <u>1000 San Leandro Blvd</u> | | | |
| | <u>San Leandro, CA 94577</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>N/A</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>36</u> |
| | Refresher: | <u>N/A</u> | | |
| | | | Refresher: | <u>N/A</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>3-31-28</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>2</u> |
| | | | Refresher: | <u>N/A</u> |
| | | | Continuing Education: | <u>N/A</u> |

| | | | | |
|-----------------------|-------------------------------------|-----------------|--|---------------------|
| Training Institution: | <u>Fremont Fire Department</u> | | Telephone Number: | <u>510-494-4203</u> |
| Address: | <u>3300 Capital Ave, Building A</u> | | | |
| | <u>Fremont, CA 94538</u> | | | |
| Student Eligibility*: | <u>Employees only</u> | **Program Level | <u>EMT</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>N/A</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>N/A</u> |
| | Refresher: | <u>N/A</u> | | |
| | | | Refresher: | <u>N/A</u> |
| | | | Continuing Education: | <u>~130</u> |
| | | | Expiration Date: | <u>8/31/27</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>N/A</u> |
| | | | Refresher: | <u>N/A</u> |
| | | | Continuing Education: | <u>12</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County **Reporting Year:** 2023

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

| | | | |
|-----------------------|--|--|----------------------|
| Training Institution: | <u>Albany Fire Department</u> | Telephone Number: | <u>510- 528-5770</u> |
| Address: | <u>1000 San Pablo Ave</u> <u>Albany, CA 94706</u> | | |
| Student Eligibility*: | <u>Employees only</u> | **Program Level | <u>EMT</u> |
| Cost of Program: | | | |
| Basic: | <u>N/A</u> | Number of students completing training per year: | |
| | | Initial training: | <u>N/A</u> |
| Refresher: | <u>N/A</u> | | |
| | | Refresher: | <u>1</u> |
| | | Continuing Education: | <u>90</u> |
| | | Expiration Date: | <u>11/30/27</u> |
| | | Number of courses: | |
| | | Initial training: | <u>N/A</u> |
| | | Refresher: | <u>1</u> |
| | | Continuing Education: | <u>6</u> |
| Training Institution: | <u>Defib This Emergency Response Training Inc.</u> | Telephone Number: | <u>831-426-9111</u> |
| Address: | <u>1543 Pacific Ave., Suite 104</u> <u>Santa Cruz, Ca 95060</u> | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT</u> |
| Cost of Program: | | | |
| Basic: | <u>\$2,250</u> | Number of students completing training per year: | |
| | | Initial training: | <u>216</u> |
| Refresher: | <u>\$385</u> | | |
| | | Refresher: | <u>47</u> |
| | | Continuing Education: | <u>N/A</u> |
| | | Expiration Date: | <u>6-30-27</u> |
| | | Number of courses: | |
| | | Initial training: | <u>13</u> |
| | | Refresher: | <u>4</u> |
| | | Continuing Education: | <u>N/A</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County

Reporting Year: 2023

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

| | | | | |
|-----------------------|----------------------------|-----------------|--|---------------------|
| Training Institution: | <u>NCTI- Livermore</u> | | Telephone Number: | <u>925-454-6184</u> |
| Address: | <u>7575 Southfront Rd.</u> | | | |
| | <u>Livermore, CA 94551</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>\$1875</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>60</u> |
| | Refresher: | <u>\$325</u> | | |
| | | | Refresher: | <u>9</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>05/31/28</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>4</u> |
| | | | Refresher: | <u>1</u> |
| | | | Continuing Education: | <u>0</u> |
| Training Institution: | <u>NCTI- Livermore</u> | | Telephone Number: | <u>925-454-6184</u> |
| Address: | <u>7575 Southfront Rd.</u> | | | |
| | <u>Livermore, CA 94551</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT-P</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>\$9,750</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>74</u> |
| | Refresher: | <u>N/A</u> | | |
| | | | Refresher: | <u>0</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>05-31-28</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>3</u> |
| | | | Refresher: | <u>0</u> |
| | | | Continuing Education: | <u>Multiple</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County Reporting Year: 2023

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

| | | | | |
|-----------------------|----------------------------------|-----------------|--|---------------------|
| Training Institution: | <u>Bay Area Training Academy</u> | | Telephone Number: | <u>888-701-7333</u> |
| Address: | <u>14275 Wicks Blvd</u> | | | |
| | <u>San Leandro, CA 94577</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>\$2285</u> | Number of students completing training per year: | |
| | | | Initial training: | <u>220</u> |
| | Refresher: | <u>\$334</u> | | |
| | | | Refresher: | <u>10</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>7-31-27</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>11</u> |
| | | | Refresher: | <u>2</u> |
| | | | Continuing Education: | <u>N/A</u> |

| | | | | |
|-----------------------|---------------------------|-----------------|--|---------------------|
| Training Institution: | <u>Merritt College</u> | | Telephone Number: | <u>510-436-2409</u> |
| Address: | <u>12500 Campus Drive</u> | | | |
| | <u>Oakland, Ca 94619</u> | | | |
| Student Eligibility*: | <u>General Public</u> | **Program Level | <u>EMT</u> | |
| | Cost of Program: | | | |
| | Basic: | <u>\$26</u> | Number of students completing training per year: | |
| | | <u>p/unit</u> | Initial training: | <u>75</u> |
| | Refresher: | <u>\$26</u> | | |
| | | <u>p/unit</u> | Refresher: | <u>0</u> |
| | | | Continuing Education: | <u>N/A</u> |
| | | | Expiration Date: | <u>6-30-25</u> |
| | | | Number of courses: | |
| | | | Initial training: | <u>3</u> |
| | | | Refresher: | <u>0</u> |
| | | | Continuing Education: | <u>N/A</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County

Reporting Year: 2023

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

| | | | | |
|-----------------------|---|--|-------------------|---------------------|
| Training Institution: | <u>Oakland Fire Department</u> | | Telephone Number: | <u>510-238-6957</u> |
| Address: | <u>47 Clay Street</u> | | | |
| | <u>Oakland, Ca 94607</u> | | | |
| Student Eligibility*: | <u>Employees only</u> | **Program Level | <u>EMT</u> | |
| Cost of Program: | | | | |
| Basic: | <u>N/A</u> | Number of students completing training per year: | | |
| | | Initial training: | | <u>0</u> |
| Refresher: | <u>N/A</u> | Refresher: | | <u>0</u> |
| | | Continuing Education: | | <u>2,226</u> |
| | | Expiration Date: | | <u>3-31-28</u> |
| | | Number of courses: | | |
| | | Initial training: | | <u>0</u> |
| | | Refresher: | | <u>0</u> |
| | | Continuing Education: | | <u>348</u> |
| Training Institution: | <u>Livermore Pleasanton Fire Department</u> | | Telephone Number: | <u>925-998-1087</u> |
| Address: | <u>3560 Nevada St</u> | | | |
| | <u>Pleasanton, CA 94566</u> | | | |
| Student Eligibility*: | <u>Employees only</u> | **Program Level | <u>EMT</u> | |
| Cost of Program: | | | | |
| Basic: | <u>N/A</u> | Number of students completing training per year: | | |
| Refresher: | <u>N/A</u> | Initial training: | | <u>N/A</u> |
| | | Refresher: | | <u>N/A</u> |
| | | Continuing Education: | | <u>112</u> |
| | | Expiration Date: | | <u>01/31/27</u> |
| | | Number of courses: | | |
| | | Initial training: | | <u>N/A</u> |
| | | Refresher: | | <u>6</u> |
| | | Continuing Education: | | <u>N/A</u> |

TABLE 10: APPROVED TRAINING PROGRAMS

County: Alameda County **Reporting Year:** 2023

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

| | | | |
|-----------------------|--|--|---------------------|
| Training Institution: | <u>Berkeley STEP</u> | Telephone Number: | <u>510-644-6130</u> |
| Address: | <u>1701 San Pablo Ave</u> <u>Berkeley, CA 94702</u> | | |
| Student Eligibility* | <u>Restricted</u> | **Program Level | <u>EMT</u> |
| | Cost of Program: | | |
| | Basic: <u>\$1,250</u> | Number of students completing training per year: | |
| | Refresher: _____ | Initial training: | <u>25</u> |
| | | Refresher: | <u>N/A</u> |
| | | Continuing Education: | <u>N/A</u> |
| | | Expiration Date: | <u>9-30-26</u> |
| | | Number of courses: | |
| | | Initial training: | <u>1</u> |
| | | Refresher: | <u>N/A</u> |
| | | Continuing Education: | <u>N/A</u> |

| | | | |
|-----------------------|--|--|---------------------|
| Training Institution: | <u>Quest Nursing</u> | Telephone Number: | <u>510-452-1444</u> |
| Address: | <u>2135 Broadway</u> <u>Oakland, CA 94612</u> | | |
| Student Eligibility* | <u>General Public</u> | **Program Level | <u>EMT</u> |
| | Cost of Program: | | |
| | Basic: <u>\$1000</u> | Number of students completing training per year: | |
| | Refresher: _____ | Initial training: | <u>0</u> |
| | | Refresher: | <u>0</u> |
| | | Continuing Education: | <u>0</u> |
| | | Expiration Date: | <u>04/30/25</u> |
| | | Number of courses: | |
| | | Initial training: | <u>0</u> |
| | | Refresher: | <u>0</u> |
| | | Continuing Education: | <u>0</u> |

TABLE 11: DISPATCH AGENCY

ACRECC

County: Alameda County Reporting Year: 2023

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

Name: Alameda County Regional Emergency Communications Center (ACRECC)

Address: 7000 East Ave., L-338, Livermore, CA 94551

Phone #: 925-423-1803

Primary Contact: Jolie Sette, Interim Dispatch Manager

| Written Contract | | Medical Director | | Availability | | Ownership | |
|------------------|----------------------------------|------------------|----------------------------------|--------------|----------------------------------|-----------|----------------------------------|
| Yes | <input checked="" type="radio"/> | Yes | <input checked="" type="radio"/> | Day-to-Day | <input checked="" type="radio"/> | Public | <input checked="" type="radio"/> |
| No | <input type="radio"/> | No | <input type="radio"/> | Disaster | <input checked="" type="radio"/> | Private | <input type="radio"/> |

| If Public: | | | | Number of Personnel Providing Services | |
|----------------------------|----------------------------------|----------|----------------------------------|--|-----|
| Fire | <input checked="" type="radio"/> | City | <input type="radio"/> | EMD Training | 33 |
| Law | <input checked="" type="radio"/> | County | <input checked="" type="radio"/> | EMT-D | 0 |
| Other: <i>Ambulance</i> | <input checked="" type="radio"/> | District | <input type="radio"/> | ALS | 0 |
| | | State | <input type="radio"/> | BLS | 0 |
| | | Federal | <input type="radio"/> | LALS | 0 |
| | | Other: | <input type="radio"/> | | N/A |

TABLE 11: DISPATCH AGENCY

OAKLAND FIRE DEPARTMENT

County: Alameda County

Reporting Year: 2023

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

Name: Oakland Fire Department Dispatch

Address: 1603 Martin Luther King Jr. Way, Oakland, CA 94612

Phone #: 510-238-6725

Primary Contact: David Ebarle, Dispatch Manager

| Written Contract | | Medical Director | | Availability | | Ownership | |
|------------------|-------------------------------------|------------------|-------------------------------------|--------------|-------------------------------------|-----------|-------------------------------------|
| Yes | <input checked="" type="checkbox"/> | Yes | <input checked="" type="checkbox"/> | Day-to-Day | <input checked="" type="checkbox"/> | Public | <input checked="" type="checkbox"/> |
| No | <input type="checkbox"/> | No | <input type="checkbox"/> | Disaster | <input checked="" type="checkbox"/> | Private | <input type="checkbox"/> |

| If Public: | | | | Number of Personnel Providing Services | |
|------------|-------------------------------------|----------|-------------------------------------|--|-----|
| Fire | <input checked="" type="checkbox"/> | City | <input checked="" type="checkbox"/> | EMD Training | 27 |
| Law | <input type="checkbox"/> | County | <input type="checkbox"/> | EMT-D | 0 |
| Other: | <input type="checkbox"/> | District | <input type="checkbox"/> | ALS | 0 |
| | <input type="checkbox"/> | State | <input type="checkbox"/> | BLS | 0 |
| | <input type="checkbox"/> | Federal | <input type="checkbox"/> | LALS | 0 |
| Other: | | | | | N/A |

TABLE 12: AMBULANCE ZONE SUMMARY FORM

COMPETITIVELY BID EOA

EMS PLAN

AMBULANCE ZONE SUMMARY FORM

In order to evaluate the nature of each area or subarea, the following information should be compiled

| |
|---|
| <p>Local EMS Agency or County Name: Alameda County EMS Agency</p> |
| <p>Area or subarea (Zone) Name or Title: Alameda County ambulance exclusive operating area</p> |
| <p>Name of Current Provider(s): Include company name(s) and length of operation (uninterrupted) in specified area or subarea. Falck Northern California (July 1st 2019-June 30th 2026)</p> |
| <p>Area or subarea (Zone) Geographic Description: The EOA includes all geographic areas of Alameda County, except for the incorporated cities of Alameda, Albany, Berkeley, and Piedmont, for which 911 ambulance services are provided through those cities' fire departments, and Lawrence Livermore National Laboratory, which contracts with the Alameda County Fire Department for ambulance services.</p> |
| <p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Exclusive See attached ambulance provider agreement 'RECITALS OF AUTHORITY' and attached first amendment to contract to show current contract dates.</p> |
| <p>Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Emergency Ambulance, 9-1-1 Emergency Response</p> |
| <p>Method to achieve Exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. If competitively-determined, method of competition, intervals, and selection process. Attach copy/draft of last competitive process used to select provider or providers. Method of competition: Competitive bid Intervals: Five years, with potential 2 year extension. Selection process. Request for Proposal (RFP).</p> |

for each zone individually. Please include a separate form for each exclusive and/or nonexclusive ambulance zone.

AMBULANCE ZONE SUMMARY FORM

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

| |
|--|
| <p>Local EMS Agency or County Name: Alameda County Emergency Medical Services</p> |
| <p>Area or subarea (Zone) Name or Title: Lawrence Livermore National Lab</p> |
| <p>Name of Current Provider(s): Include company name(s) and length of operation (uninterrupted) in specified area or subarea. Alameda County Fire Department</p> |
| <p>Area or subarea (Zone) Geographic Description: Federal property known as Lawrence Livermore National Lab located south/east of the city of Livermore.</p> |
| <p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Not applicable, Federal property</p> |
| <p>Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Not applicable, Federal property</p> |
| <p>Method to achieve Exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. Not applicable, Federal property If competitively-determined, method of competition, intervals, and selection process. Attach copy/draft of last competitive process used to select provider or providers. Not applicable, Federal property</p> |

**EMS PLAN
AMBULANCE ZONE SUMMARY FORM**

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

| |
|--|
| <p>Local EMS Agency or County Name: Alameda County Emergency Medical Services</p> |
| <p>Area or subarea (Zone) Name or Title: City of Piedmont</p> |
| <p>Name of Current Provider(s): Include company name(s) and length of operation (uninterrupted) in specified area or subarea. Piedmont Fire Department</p> |
| <p>Area or subarea (Zone) Geographic Description: City of Piedmont</p> |
| <p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Exclusive</p> |
| <p>Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Emergency Ambulance, 9-1-1 Emergency Response</p> |
| <p>Method to achieve Exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. Uninterrupted service, in the same manner and scope, prior to 1/1/81 If competitively-determined, method of competition, intervals, and selection process. Attach copy/draft of last competitive process used to select provider or providers. Not applicable</p> |

**EMS PLAN
AMBULANCE ZONE SUMMARY FORM**

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

| |
|--|
| <p>Local EMS Agency or County Name: Alameda County Emergency Medical Services</p> |
| <p>Area or subarea (Zone) Name or Title: City of Alameda</p> |
| <p>Name of Current Provider(s): Include company name(s) and length of operation (uninterrupted) in specified area or subarea. Alameda Fire Department</p> |
| <p>Area or subarea (Zone) Geographic Description: City of Alameda including the property known as Coast Guard Island</p> |
| <p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Exclusive</p> |
| <p>Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Emergency Ambulance, 9-1-1 Emergency Response</p> |
| <p>Method to achieve Exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. Uninterrupted service, in the same manner and scope, prior to 1/1/81 If competitively-determined, method of competition, intervals, and selection process. Attach copy/draft of last competitive process used to select provider or providers. Not applicable</p> |

**EMS PLAN
AMBULANCE ZONE SUMMARY FORM**

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

| |
|---|
| <p>Local EMS Agency or County Name: Alameda County Emergency Medical Services</p> |
| <p>Area or subarea (Zone) Name or Title: City of Albany</p> |
| <p>Name of Current Provider(s): City of Albany Include company name(s) and length of operation (uninterrupted) in specified area or subarea. Prior to 1/1/81</p> |
| <p>Area or subarea (Zone) Geographic Description: City of Albany</p> |
| <p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Exclusive</p> |
| <p>Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Emergency Ambulance, 9-1-1 Emergency Response</p> |
| <p>Method to achieve Exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. Uninterrupted service, in the same manner and scope, prior to 1/1/81 If competitively-determined, method of competition, intervals, and selection process. Attach copy/draft of last competitive process used to select provider or providers. Not applicable</p> |

**EMS PLAN
AMBULANCE ZONE SUMMARY FORM**

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

| |
|--|
| <p>Local EMS Agency or County Name: Alameda County Emergency Medical Services</p> |
| <p>Area or subarea (Zone) Name or Title: City of Berkeley</p> |
| <p>Name of Current Provider(s): Berkeley Fire Department Include company name(s) and length of operation (uninterrupted) in specified area or subarea. Prior to 1/1/81</p> |
| <p>Area or subarea (Zone) Geographic Description: City of Berkeley, including State property at UC Berkeley and Federal property at Lawrence Berkeley Lab</p> |
| <p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action. Exclusive</p> |
| <p>Type of Exclusivity, “Emergency Ambulance”, “ALS”, or “LALS” (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.). Emergency Ambulance, 9-1-1 Emergency Response</p> |
| <p>Method to achieve Exclusivity, if applicable (HS 1797.224): If grandfathered, pertinent facts concerning changes in scope and manner of service. Description of current provider including brief statement of uninterrupted service with no changes to scope and manner of service to zone. Include chronology of all services entering or leaving zone, name or ownership changes, service level changes, zone area modifications, or other changes to arrangements for service. Uninterrupted service, in the same manner and scope, prior to 1/1/81 If competitively-determined, method of competition, intervals, and selection process. Attach copy/draft of last competitive process used to select provider or providers. Not applicable</p> |

Alameda County EMS Agency

Agency Contact:

Lauri McFadden, EMS Director
 1000 San Leandro Blvd., Ste. 200
 San Leandro, CA 94577
 VOICE: (510) 618-2055
 FAX: (510) 618-2099
 E-MAIL: lauri.mcfadden@acgov.org

| <u>Channel Use</u> | <u>TX-Freq</u> | <u>RX-Freq</u> | <u>CTCSS</u> | <u>Prim/Alt</u> |
|---|-----------------------------------|---------------------------|---------------------|------------------------|
| Local Medical Coordination (real time) Trunked system | 700/800 MHz | N/A | N/A | N/A |
| Statewide Medical Coordination VMED 28 CALCORD | 155.340 156.075 | 155.340 156.075 | N/A 156.7 | N/A 156.7 |
| Calling Channel | 700/800 MHz | N/A | N/A | N/A |
| Dispatch (for each EMS Agency) Trunked system | 700/800 MHz | N/A | N/A | N/A |
| Direct to hospitals Trunked system, telephone | 700/800 MHz | N/A | N/A | N/A |
| Other (e.g. tactical, etc.) For disasters VMED 28 CALCORD | 700/800 MHz 155.340 156.075 | N/A 155.340 156.075 | N/A N/A 156.7 | N/A N/A 156.7 |

| <u>Emergency Department Facilities</u> | <u>Telephone</u> | <u>Helipad Latitude/Longitude</u> |
|--|-------------------------|--|
| Alameda Hospital Alameda Health System 2070 Clinton Avenue Alameda, California 94501 | (510) 522-3700 | None |
| Alta Bates Summit Medical Center Alta Bates Campus 2450 Ashby Avenue Berkeley, California 94705 | (510) 204-4444 | None |
| Alta Bates Summit Medical Center Summit Campus 350 Hawthorne Street Oakland, California 94609 | (510) 655-4000 | None |

| <u>Emergency Department Facilities</u> | <u>Helipad Telephone</u> | <u>Latitude/Longitude</u> |
|--|---------------------------------|---|
| Highland Hospital Alameda Health System 1411 E.31st Street Oakland, California 94602 | (510) 437-4800 | None |
| Kaiser Permanente Fremont Medical Center 39400 Paseo Padre Parkway Fremont, CA 94538 | (510) 248-3000 | None |
| Kaiser Permanente Oakland Medical Center 280 West Mac Arthur Blvd. Oakland, California 94611 | (510) 752-1000 | None |
| Kaiser Permanente San Leandro Medical Center 2500 Merced Street San Leandro, California 94577 | (510) 784-4000 | None |
| San Leandro Hospital Alameda Health System 13855 East 14th Street San Leandro, California 94578 | (510) 357-6500 | None |
| Stanford Healthcare Tri-Valley 5555 W. Las Positas Blvd. Pleasanton, California 94588 | (925) 847-3000 | 37° 41.39' N 121° 52.46' W TLOF – 64' X 64' |
| St. Rose Hospital 27200 Calaroga Avenue Hayward, California 94545 | (510) 264-4000 | None |
| Sutter Eden Medical Center 20103 Lake Chabot Road Castro Valley, California 94546 | (510) 537-1234 | 37° 41.93' N 122° 5.35' W TLOF - 55' Diameter |
| UCSF Benioff Children's Hospital 747 52nd Street Oakland, California 94609 | (510) 428-3273 | 37° 50.17' N 122° 16.00' W TLOF - 39' x 39' |
| Washington Hospital 2000 Mowry Avenue Fremont, California 94538 | (510) 797-1111 | 37° 33.49' N 121° 58.68' W TLOF - 50' x 50' |

VEHICLE CHARACTERISTICS

| Emergency Providers | Telephone | TYPE | AMB's | TRANS | EMT |
|--------------------------------------|------------------|-------------|---------------|--------------|------------|
| Alameda County Fire Department | (510) 632-3473 | G | 4 | yes | ALS |
| Alameda City Fire Department | (510) 337-2100 | G | 4 | yes | ALS |
| Albany Fire Department | (510) 528-5770 | G | 2 | yes | ALS |
| Berkeley Fire Department | (510) 981-3473 | G | 7 | yes | ALS |
| Falck Alameda County | (510) 566-4432 | G | 77 | yes | ALS |
| Fremont Fire Department | (510) 494-4200 | G | 0 | no | ALS |
| CALSTAR | (800) 252-5050 | GA | 2 | yes | ALS |
| CALFIRE | (925) 862-2197 | G | 0 | no | ALS |
| CHP | (707) 253-4906 | A | 1 | yes | ALS |
| East Bay Regional Parks District | (510) 690-6607 | GA | 2 Air Rescues | yes | ALS |
| Hayward Fire Department | (510) 583-4900 | G | 0 | no | ALS |
| Stanford Life Flight | (650)-723-5578 | GA | 1 | yes | ALS |
| Livermore Pleasanton Fire Department | (925) 454-2361 | G | 0 | no | ALS |
| Oakland Fire Department | (510) 238-3856 | G | 0 | no | ALS |
| Piedmont Fire Department | (510) 420-3030 | G | 2 | yes | ALS |
| Reach Helicopter | (707) 575-6886 | GA | 2 | yes | ALS |

**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
EMERGENCY MEDICAL SERVICES**



**2022-2023 (Update)
TRAUMA SYSTEM STATUS REPORT**



March 2024

(All 2022-2023 Updates in Arial Black Bold Italic Font)

2022-2023 EMS PLAN: TRAUMA SYSTEM STATUS REPORT

TRAUMA PLAN SYSTEM SUMMARY

BACKGROUND

The Alameda County Trauma System Plan was approved by the State of California and implemented in January of 1987. The purpose of the trauma system, as written in 1985, was to assure optimum preparation, response, and definitive care for the people that incur critical traumatic injuries within Alameda County. The goal remains unchanged. The many changes influencing the health care delivery system in the United States over the years have affected the trauma system in the County Operational Area. Yet, the fundamental components of the trauma system design remain intact and continue to meet the needs of the residents and visitors to Alameda County.

In November of 1986, the Board of Supervisors provisionally designated UCSF Benioff Children's Hospital, Oakland, as the pediatric trauma center and Sutter Eden Medical Center and Alameda Health System Highland Hospital Oakland as the adult trauma centers. The trauma system operations began on January 15, 1987.

The EMS Agency is responsible for overall trauma system monitoring and quality improvement, and for administration of the trauma center designation contract. The trauma system quality improvement process established by Alameda County includes a joint Alameda-Contra Costa County Trauma Audit Committee (TAC), facilitation of the region's Regional Trauma Coordinating Committee, and a trauma registry maintained both by the Trauma Center and by the County EMS Agency. The EMS Medical Director - Karl Sporer MD, and the EMS Prehospital Care Coordinator – Michael Jacobs, Paramedic, primarily conducts trauma system oversight. The Trauma Audit Committee meets quarterly to review cases treated at the four trauma centers that serve Alameda and Contra Costa Counties. The Alameda/Contra Costa County EMS Medical Directors, Trauma Service Directors, Trauma Surgeons, or members of the Pre-Trauma Audit Committees submit cases to the Trauma Audit Committee for review. During 2009, a system was developed to allow trauma surgeons to review these cases electronically.

BRIEF OVERVIEW SUMMARY - TRAUMA CARE SYSTEM

Key elements of the current Trauma System Program include the following:

- Designation of one adult Level I trauma center, one adult Level II trauma center and one Level 1 pediatric trauma center that serve all of Alameda County. The Alameda County trauma centers serve the surrounding counties on a less frequent basis, with the exception of UCSF Benioff Children's Oakland that also routinely receives patients from other areas throughout Northern California.
- Trauma center designation is determined based on an open competitive process including use of an outside team of experts to evaluate trauma center applications.
- Maintenance of verification (April 2021-2024) from the American College of Surgeons Committee on Trauma: Level 2 Adult Trauma Center status for Sutter Eden Medical Center, Level 1 Adult Trauma Center status for Alameda Health System Highland Hospital and Level 1 Pediatric Trauma Center status for UCSF Benioff Children's Hospital Oakland.
- Recognition of the Level I pediatric trauma center designated by Alameda County as the appropriate facility to serve the needs of pediatric trauma patients.
- Full integration of the trauma system into the existing EMS system.
- Field triage of all major trauma patients to a designated trauma center when possible.
- Use of air ambulance transport (helicopter) services to reduce trauma transport times when appropriate.
- Maintenance of a trauma registry to track trauma system and trauma center performance on a case-by-case basis.
- A bi-county trauma audit (quality assurance and improvement) process to assure outside expert review of the trauma center and the trauma system on an ongoing basis.
- Full participation in regional and state trauma system activities.
- Full participation in CEMESIS Trauma and EMS data sharing.
- Implementation of a countywide pediatric and neonatal disaster / surge plan to support traumatic injury as the result of catastrophic earthquake or multi-casualty events involving traumatic injury. -

- Active injury prevention activities supporting preventable injuries in children in collaboration with Sutter Health Eden Medical Center, Alameda Health System Highland Hospital and UCSF Benioff Children’s Hospital in Oakland.
- Development of an intra-facility transfer processes to support enhanced trauma patient destination workflow implemented via regional Trauma Re-Triage protocol in January 2013, last revised 2017.
- Implementation of Spinal Motion Restriction treatment protocols and equipment.
- Implementation of TXA administration (adult) adopted into EMS protocol 2018.

NUMBER AND DESIGNATION LEVEL OF TRAUMA CENTERS (2022)

TRAUMA CENTERS

- Alameda Health System (Highland) – Oakland – ACS Adult Level-1 – LEMSA Adult Level 2
- Sutter Health Eden Medical Center – Castro Valley – ACS Adult Level 2 – LEMSA Adult Level 2
- UCSF Benioff Children’s Hospital Oakland – ACS Pediatric Level 1 – LEMSA Pediatric Level 1

CHANGES IN TRAUMA SYSTEM PROGRESS TOWARD IMPLEMENTATION

RE-ORGANIZATIONS

- **Trauma Hospitals – Designations** - American College of Surgeons (ACS) Initial Verification was completed at all Alameda County Trauma Centers in April 2014: UCSF Benioff Children’s Hospital Oakland (Level-1 Pediatric). Alameda County Medical Center (Highland) and Eden (Level 2 Adult). ACS Verification is now a requirement of the Alameda County Trauma Center MOU.

NEW CONTRACTS, AMENDMENTS, & REQUIREMENT UPDATES - 2022-2023

- **ALAMEDA COUNTY BASE HOSPITAL SUBSIDY**
 - Alameda Health System (Highland) - Oakland – Amendments 2021
- **TRAUMA CENTERS** – Current Master Contract Amendments executed July 1, 2021, termed through June 30, 2024
 1. Alameda Health System (Highland) – Oakland
 2. Sutter Health Eden Medical Center – Castro Valley
 3. UCSF Benioff Children’s Hospital Oakland

 - Contract / MOUs - Master Contract amendments for the 3 Trauma Centers approved for July 2021-2024.
 - ACS Verification is now a requirement of the Alameda County EMS Trauma Center MOU.
 - All trauma centers successfully completed ACS re-verification in April 2021: Alameda Health System Highland Hospital-Level 1 Adult, Sutter Eden Medical Center-Level 2 Adult and UCSF Benioff Children’s Hospital Oakland-Level 1 Pediatric.
 - All trauma centers are scheduled for ACS re-verification in April 2024.

TRAUMA SYSTEM GOALS AND OBJECTIVES INCLUDES PROGRESS TOWARD IMPLEMENTATION

TRAUMA PLANNING

- Objective: The purpose of the trauma plan is to monitor the delivery of services, improve trauma care through use of best practices in reducing death and disability, and identify areas where improvement can be made.
 - Short-Range Plan: Maintain ACS Verification as a requirement of the MOUs with ALCO trauma centers. ***Establish and complete a pre-designation assessment/evaluation for Washington Hospital prior to them receiving EMS trauma patients. ALCO EMS to provisionally designate Washington Hospital as a Level 2 Adult Trauma Receiving Center by July 1st, 2024.***
 - Long-Range Plan – Designate one new ACS Adult Level 2 verified Trauma Center by 2027: ***Washington Hospital***

- Short Range Plan: Improve the functionality of our Trauma Audit Committee by adding a pre-TAC component. Improve our analysis of existing trauma TQIP data.
- Progress to Date: ACS verification is now a requirement in current Trauma Center contracts that were executed in 2021 expire in 2024. (Renewal July 1, 2024-June 30, 2027)
 - ALCO EMS and its county trauma centers continue to participate in RTCC x4 annually.
 - ALCO EMS and its county trauma centers continue to participate in TAC x4 annually.
 - ALCO EMS recently completed (5/2022) a yearlong assessment/evaluation of its three-decade mature trauma system. This assessment was prompted by the inquiry of two community hospitals located in Alameda County, regarding interest in becoming designated adult trauma centers. The assessment/evaluation was outsourced to a nationally recognized and reputable trauma consulting group with over thirty years of exclusive trauma content expertise.

The intent of the assessment was to evaluate the performance and operational stability of the current trauma system in Alameda County. As well, the consultants were tasked to investigate the potential need for additional trauma centers, immediate and or future, to meet the need of population growth in Alameda County over the next two decades.

At the conclusion of the assessment/evaluation, the findings/recommendation were that the current trauma system in Alameda County is stable and high performing. But considering the projected population growth over the next twenty years, the trauma system could benefit from one additional trauma center in the next five years and possibly a second in the next ten to twenty years. The data analysis from the assessment suggested that the next trauma center to be designated within the next five years by ALCO EMS should be Washington Hospital Healthcare System (WHHS) located in Fremont, southern Alameda County. ALCO EMS will be working closely in collaboration with WHHS for them to achieve ACS Adult Level 2 verification by 2027.

COMPLIANCE WITH POLICIES - TRAUMA

- Objective: Data
 - Leverage HL7 compliant software systems currently in place to get EMS data into hospital data systems, and get outcome data out of hospital systems
 - Long Range Plan. Continue Monitoring via site visits to monitor and evaluate system components; Continue 24/7 On-Call and response capabilities for unusual occurrences, MCIs, and other immediate system needs; and MCI after action reports and improvement plans
- Progress to Date:
 - **Implementation of 2022 ACS National Guidelines for Field Trauma Triage of Injured Patients January 2024. (Exhibit A)**
 - **Implementation of revised ALCO EMS notification template for Base Hospital/Physician contact, and specific receiving center ringdowns regarding specialty care patients, including trauma, January 2024 (Exhibit B)**
 - **Implementation of NEMSIS 3.5 October 2023.**
 - **Establish bidirectional Healthcare Data Exchange (HDE) with all ALCO hospitals, currently 6/13 and 2/3 TCs.**
 - Alameda County EMS plans to implement the CEMSIS data elements (“primary impression” and other elements) in 2016.
 - Ensuring overarching Monitoring Mechanism: QI Committee and Plan; Policy Review; Unusual Occurrences; Trauma Audit; Training Program and CE Provider; and System Audits – Cardiac Arrest; intubation
 - On-going Evaluation & Improvement Plans - MCI “Real Event”: Train Derailment Incident March 7, 2016 – Evaluated MCI, ReddiNet, and HAVBED Policy

QA/QI - TRAUMA

- Objectives:
 - Short Range Plan: Continue pre-hospital data analysis and reporting from EMS and providers utilizing Tableau analytic tool
 - Long-Range Plan - Integration of data with hospitals via HDE and/or other methods
 - Participate in the ACS Trauma Quality Improvement Program (TQIP) for EMS system performance
 - QI Plan includes trauma on Website, update QI plan in 2023

- Improve QI communication to field from LEMSA
- **Progress to Date:**
 - Alameda County EMS ensures QI System-Wide Procedures and Plan
 - Alameda County Trauma Centers participate in the ACS Trauma Quality Improvement Program
 - Provider based QI Plans
 - EMS QI Plan approved by state EMSA
 - CA EMSA Core Measures
 - One ePCR data collection and reporting system for all 911 providers
 - Data analysis and trend identification
 - Training based on trends
 - Policy Review
 - QI committee groups: EMSA Core Measures; Quality Council, ePCR; Equipment, Trauma Audit, and Receiving Hospital
 - EMS representation at hospital Trauma Quality Review and Process Improvement Meetings
 - **Establish bidirectional Healthcare Data Exchange (HDE) with all ALCO hospitals, currently 6/13 and 2/3 TCs.**
 - **2024 CQI Trauma Metrix:**

| | |
|--|---------|
| Scene Time (90 th Percentile) - Trauma Alerts | Process |
| Scene Time ≤ 10 Minutes | Process |
| Scene Time ≤ 20 Minutes | Process |
| Pre-Arrival Notification for Trauma Patients Meeting Trauma Triage Criteria | Process |
| Transport to a Trauma Receiving Center for Patients Meeting Trauma Triage Criteria | Process |
| ETC02 Usage - Traum Alerts | Process |
| Oxygen Administration for Hypoxia - Trauma Alerts | Process |

TRAUMA SYSTEM PLAN

- **Objective:** Review and update a trauma care system plan
- **Progress to Date:**
 - Alameda County EMS has a plan for trauma care and determines the optimal system design for trauma care.
 - **Trauma Centers:** Alameda Health System (Highland Hospital)-ACS Adult Level 1; Sutter – Eden Medical Center-ACS Adult Level 2; UCSF Benioff Children’s Hospital Oakland-ACS Pediatric Level 1.
 - **Trauma Plan Status:**
 - Trauma System Plan updated and accepted by EMSA in **2023**
 - MOU contracts with the 3 designated Trauma Centers: currently 2021-2024 (renewal, 2024-2027)
 - **Trauma Patient Volume for 2023**
 - **UCSF Benioff Children’s Hospital** **1264**
 - **Sutter Eden Medical Center** **2727**
 - **Alameda Health System – Highland Hospital** **INC**
 - **Total trauma patient volume** **INC**
 - **Total trauma activations** **INC**
 - **Total critical patient Level-1 activations** **INC**

2023 Incomplete at the time of this report: Highland Q1-3 ONLY

- **Trauma Patient Volume for 2022**
 - **UCSF Benioff Children's Hospital** **1148**
 - **Sutter Eden Medical Center** **2536**
 - **Alameda Health System – Highland Hospital** **3578**
 - **Total trauma patient volume** **7262**
 - **Total trauma activations** **5071**
 - **Total critical patient Level-1 activations** **1321**
- **Receiving Facilities/Non-Trauma Centers** – The non-trauma facilities in Alameda County receive some patients meeting Trauma Patient Criteria (CTP), as outlined in EMS Policy Trauma Triage Criteria. These facilities are directed to call 911 for emergent transfers to the closest trauma center by use of Trauma Triage/Re-Triage Policy, updated 2017 (attached).
 - Priority education and training on the Emergency Triage/Re-Triage to Trauma Center Policy – Ensure process for re-triage of patients needing trauma care from non-trauma hospitals is efficiently adhered to.

PUBLIC INPUT

- **Objective:**
 - Continue obtaining input from consumer and healthcare partners.
- **Progress to Date:**
 - Various committee collaborations are continuing to ensure public input and EMS agency representation as follows: EMS Quality Council; Emergency Medical Oversight Committee EMOC; Receiving Hospital Committee; Trauma Audit Committee; Regional Trauma Audit Committee; Data Steering Committee; ePCR Change Committee; EMS Section Chiefs Committee; Alameda County Fire Chiefs Committee; EMSAAC/EMDAAC; LEMSA Coordinators Meeting; and other ad-hoc committees

Triage & Transfer Protocols: SEE ATTACHED PROTOCOLS

2022-2024 TRAUMA PRIORITY WORKPLAN

IDENTIFIED MAJOR NEEDS

1. Facilitate Specialty Trauma Centers - Quality Improvement - Continued data collection for driving continual improvements in care; development of more robust and comprehensive collaborative trauma care quality improvement program

GOALS:

1. Continued enhancement of quality improvement programs including those associated with trauma specialty systems of care
2. Continue to host the Regional Trauma Care Committee as well as participate in local EMS system Clinical Quality Oversight and Process Improvement collaborations.

MAJOR PROGRAM SOLUTIONS – TRAUMA SYSTEM

Refer to the new changes below that will strengthen the EMS system.

- **Identify and implement solutions consistent with the Triple Aim** of the Institute for Healthcare Improvement
- **Continuous quality improvement. Strengthen Continuous Trauma Quality Improvement Program** on an ongoing basis.
- **Emergency Department Pediatric “Readiness” for Trauma** - Site Visits and Evaluations - April and June in 2016 (Completed)
- **Facilitate EMS New Policy / Procedure Update** – Disseminate annual trauma policy information update; and conduct training
- **Ensure Interoperable & Redundant Disaster Communications** - Strengthen infrastructure - interoperable and redundant communications. Expand participating partner access to ReddiNet and EBRC system.
- **Strengthen Disaster Response Capability** - Strengthen regional resource inventory and relationships with neighboring Operational Areas. Develop a framework for transportation to assist in facilitating

expansion and decompression of Operational Area (OA) medical surge capacity. Given limited transportation resources, a plan for medical surge acquisition and use of prehospital provider resources including alternative transportation vehicles is a priority. Under the HPP work plan grant, a medical surge contractor has been hired to explore prehospital BLS surge capacity - patient movement including preparing to move patients within the OP area. Given that the state and region including EMSA, CDPH, OES, ABAHO and the Bay Area UASI have several ongoing projects to expand surge capacity including the MAC Project, IRG project, and Catastrophic Earthquake Planning, EMS is participating on planning committees and aligning surge plans accordingly.

- **Enhance Bi-Directional Data Sharing Capabilities** - amongst Dispatch Centers, First Responder, Transport Providers, and hospitals – Leverage HL7 compliant software systems to get EMS data into hospital data systems and get outcome data out of hospital systems.
- **Support for ePCR system** – Provide fully functional ePCR Training System, business Intelligence Portal, Tier 4 Hosting Center and redundant hardware for servers starting April 2016 through April 2017
- **Promote Patient Care “Best Practices”** - Sustain and strengthen research and disseminate information – Ensure sustainable research funding sources. Seek revenue to enhance already existing programs and to conduct approved trials.
- **Community Awareness and Engagement** - “STOP the BLEED” campaign and courses through ALCO EMS, ALCO EMS Providers and ALCO Trauma Center involvement and support.

July 2020, a memo was disseminated countywide to ALL EMS field providers by the LEMSA, regarding Patients with Suspected COVID-19: ALCO EMS Suspected COVID-19 Interim Guidance (see attached).

Each Trauma Receiving Center has its own policy/procedure in place to manage suspected/confirmed COVID-19 patients.

2023 Incomplete at the time of this report: Highland Q1-3 ONLY

| Trauma Statistics 2023 | Children's | | Eden | | Highland | |
|--------------------------|------------|---------|-------|---------|----------|---------|
| | Total | % | Total | % | Total | % |
| PATIENT COUNT | 1264 | 100.00% | 2727 | 100.00% | 3020 | 100.00% |
| ACTIVATE - LEVEL 1 | 135 | 10.68% | 382 | 14.01% | 610 | 20.20% |
| ACTIVATE - LEVEL 2 | 830 | 65.66% | 1329 | 48.73% | 1696 | 56.16% |
| ACTIVATE - DIR ADMIT | 6 | 0.47% | 0 | 0.00% | 0 | 0.00% |
| ACTIVATE - CONSULT | 75 | 5.93% | 82 | 3.01% | 106 | 3.51% |
| ACTIVATE-OTHER/NONE | 218 | 17.25% | 0 | 0.00% | 96 | 3.18% |
| ACTIVATE--6,7,8 | 0 | 0.00% | 934 | 34.25% | 512 | 16.95% |
| ADM AFTER TRA/ED | 726 | 57.44% | 1586 | 58.16% | 1261 | 41.75% |
| ADM AFTER TRA/ED ICU | 80 | 11.02% | 268 | 16.90% | 258 | 20.46% |
| ADM AFTER TRA/ED OR | 181 | 24.93% | 193 | 12.17% | 174 | 13.80% |
| ADM AFTER TRA/ED TCU | 0 | 0.00% | 144 | 9.08% | 206 | 16.34% |
| ADM AFTER TRA/ED WARD | 460 | 63.36% | 665 | 41.93% | 623 | 49.41% |
| ADM AFTER TRA/ED UCU, IR | 1 | 0.14% | 316 | 19.92% | 0 | 0.00% |
| DISCHARGES after TRA/ED | 534 | 42.25% | 1141 | 41.84% | 1759 | 58.25% |
| DISCHARGES HOME/OTHER | 493 | 92.32% | 1035 | 90.71% | 1563 | 88.86% |
| DISHARGES AMA | 1 | 0.19% | 27 | 2.37% | 67 | 3.81% |
| DISCHARGES- ACUTE TRANS. | 29 | 5.43% | 62 | 5.43% | 92 | 5.23% |
| DISHARGES MORGUE | 9 | 1.69% | 17 | 1.49% | 37 | 2.10% |
| OUTCOME LIVED | 1244 | 98.42% | 2655 | 97.36% | 2928 | 96.95% |
| OUTCOME DIED | 20 | 1.58% | 72 | 2.64% | 92 | 3.05% |
| POS > 50% | 984 | 77.85% | 2683 | 98.39% | 2946 | 97.55% |
| POS >50% DIED | 5 | 0.40% | 46 | 1.69% | 39 | 1.29% |
| POS >50% LIVED | 5 | 0.40% | 17 | 0.62% | 8 | 0.26% |
| ISS > 15 | 82 | 6.49% | 273 | 10.01% | 257 | 8.51% |
| DOA | 0 | 0.00% | 7 | 0.26% | 39 | 1.29% |
| BLUNT | 1208 | 95.57% | 2539 | 93.11% | 2555 | 84.60% |
| PENETRATING | 56 | 4.43% | 188 | 6.89% | 465 | 15.40% |
| MALE | 759 | 60.05% | 1702 | 62.41% | 1929 | 63.87% |
| FEMALE | 505 | 39.95% | 1025 | 37.59% | 1091 | #NAME? |

| Trauma Statistics 2022 | Children's | | Eden | | Highland | |
|--------------------------|------------|---------|-------|---------|----------|---------|
| | Total | % | Total | % | Total | % |
| PATIENT COUNT | 1148 | 100.00% | 2536 | 100.00% | 3578 | 100.00% |
| ACTIVATE - LEVEL 1 | 131 | 11.41% | 329 | 12.97% | 861 | 24.06% |
| ACTIVATE - LEVEL 2 | 746 | 64.98% | 1228 | 48.42% | 1776 | 49.64% |
| ACTIVATE - DIR ADMIT | 6 | 0.52% | 1 | 0.04% | 1 | 0.03% |
| ACTIVATE - CONSULT | 73 | 6.36% | 95 | 3.75% | 99 | 2.77% |
| ACTIVATE-OTHER/NONE | 192 | 16.72% | 0 | 0.00% | 0 | 0.00% |
| ACTIVATE--6,7,8 | 0 | 0.00% | 883 | 34.82% | 841 | 23.50% |
| ADM AFTER TRA/ED | 695 | 60.54% | 1626 | 64.12% | 1571 | 43.91% |
| ADM AFTER TRA/ED ICU | 108 | 15.54% | 286 | 17.59% | 336 | 21.39% |
| ADM AFTER TRA/ED OR | 167 | 24.03% | 208 | 12.79% | 286 | 18.20% |
| ADM AFTER TRA/ED TCU | 0 | 0.00% | 126 | 7.75% | 228 | 14.51% |
| ADM AFTER TRA/ED WARD | 420 | 60.43% | 676 | 41.57% | 721 | 45.89% |
| ADM AFTER TRA/ED UCU, IR | 0 | 0.00% | 330 | 20.30% | 0 | 0.00% |
| DISCHARGES after TRA/ED | 453 | 39.46% | 910 | 35.88% | 2007 | 56.09% |
| DISCHARGES HOME/OTHER | 412 | 90.95% | 821 | 90.22% | 1779 | 88.64% |
| DISHARGES AMA | 0 | 0.00% | 23 | 2.53% | 88 | 4.38% |
| DISCHARGES- ACUTE TRANS. | 21 | 4.64% | 53 | 5.82% | 98 | 4.88% |
| DISHARGES MORGUE | 10 | 2.21% | 13 | 1.43% | 42 | 2.09% |
| OUTCOME LIVED | 1128 | 98.26% | 2466 | 97.24% | 3464 | 96.81% |
| OUTCOME DIED | 20 | 1.74% | 70 | 2.76% | 114 | 3.19% |
| POS > 50% | 874 | 76.13% | 2494 | 98.34% | 3451 | 96.45% |
| POS >50% DIED | 2 | 0.17% | 46 | 1.81% | 42 | 1.17% |
| POS >50% LIVED | 3 | 0.26% | 18 | 0.71% | 11 | 0.31% |
| ISS > 15 | 100 | 8.71% | 290 | 11.44% | 378 | 10.56% |
| DOA | 0 | 0.00% | 4 | 0.16% | 29 | 0.81% |
| BLUNT | 1105 | 96.25% | 2378 | 93.77% | 2923 | 81.69% |
| PENETRATING | 43 | 3.75% | 158 | 6.23% | 655 | 18.31% |
| MALE | 692 | 60.28% | 1537 | 60.61% | 2461 | 68.78% |
| FEMALE | 456 | 39.72% | 999 | 39.39% | 1117 | #NAME? |

TRAUMA PATIENT CRITERIA

1. **INTRODUCTION:** The goal of the Alameda County trauma system is to transport confirmed patients meeting the various criteria below to a designated trauma center in a timely manner, bypassing non-trauma centers

2. **RED CRITERIA TRAUMA PATIENTS (High Risk for Serious Injury):**

2.1 A patient is identified as at high risk for serious injury when any of the following injury patterns or mental status/vitals signs listed below are present. These patients should be transported to a designated Trauma Center rapidly.

| Injury Patterns | Mental Status & Vitals Signs |
|--|---|
| <ul style="list-style-type: none"> • Penetrating injuries to head, neck, torso, and proximal extremities • Skull deformity, suspected skull fracture • Suspected spinal injury with new motor or sensory loss • Chest wall instability, deformity, or suspected flail chest • Suspected pelvic fracture • Suspected fracture of two or more proximal long bones • Crushed, degloved, mangled, or pulseless extremity • Amputation proximal to wrist or ankle • Active bleeding requiring a tourniquet or wound packing with continuous pressure | <p>All Patients</p> <ul style="list-style-type: none"> • Total Glasgow Coma Scale \leq 13 <u>or</u>; Motor GCS < 6 (Unable to follow commands) • RR < 10 or > 29 breaths/min • Respiratory distress or need for respiratory support • Room-air pulse oximetry < 90% <p>Age 0–9 years</p> <ul style="list-style-type: none"> • SBP < 70mm Hg + (2 x age in years) <p>Age 10–64 years</p> <ul style="list-style-type: none"> • SBP < 90 mmHg or • HR > SBP <p>Age \geq 65 years</p> <ul style="list-style-type: none"> • SBP < 110 mmHg or • HR > SBP |

3. **YELLOW CRITERIA TRAUMA PATIENTS (Moderate Risk for Serious Injury):**

3.1 In addition to above criteria, the following mechanisms of injury and EMS provider judgment of risk factors can be utilized to preferentially triage a patient to a trauma center. In general, these patients are transported code 2, however, differing field circumstances and/or patient condition may require a code 3 transport

| Mechanism of Injury | EMS Judgment |
|---|--|
| <ul style="list-style-type: none"> • High-Risk Auto Crash <ul style="list-style-type: none"> – Partial or complete ejection – Significant intrusion (including roof) <ul style="list-style-type: none"> • >12 inches occupant site OR • >18 inches any site OR • Need for extrication for entrapped patient – Death in passenger compartment – Child (age 0–9 years) unrestrained or in unsecured child safety seat – Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height > 10 feet (all ages) | <p>Consider risk factors, including:</p> <ul style="list-style-type: none"> • Low-level falls in young children (age \leq 5 years) or older adult (age \geq 65 years) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy > 20 weeks • Burns in conjunction with trauma • Children should be triaged preferentially to pediatric capable centers • EMS Provider judgment - If concerned, take to a trauma center |

TRAUMA PATIENT CRITERIA

4. **TRANSPORT:** Patients that meet Red or Yellow trauma criteria in the prior sections will be transported to **the closest, most appropriate, designated Trauma Center. Exception:** The patient is identified as meeting Red or Yellow trauma criteria, but presents with one of the following:

| PATIENT PRESENTATION | ACTION | |
|---|--|---|
| <p>UNMANAGEABLE AIRWAY: <i>The patient requires advanced airway management, and the paramedic is unable to manage the patient's airway through basic or advanced interventions.</i></p> | <p>Closest Basic E.D.</p> | |
| <p>ADULT TRAUMA ARREST - BLUNT or PENETRATING:</p> | <p>Determination of Death in the Field (page 89) Note: Coroner's personnel must transport all dead bodies. If ordered to move a body by law enforcement, note the time, name, and badge number of the officer, and comply with the request. Ensure that the police officer on scene has contacted the Coroner's Bureau for permission to move the body.</p> | |
| <p>PEDIATRIC TRAUMA ARREST BLUNT or PENETRATING:</p> | <p>→ ETA to the Pediatric Trauma Center ≤ 20 minutes</p> <p>→ ETA to the Pediatric Trauma Center ≥ 20 minutes</p> | <p>Pediatric Trauma Center</p> <p>Closest Adult Trauma Center</p> |

5. **TRAUMA BASE CONTACT:** Varying field circumstances make rigid application of any set of rules impractical. These criteria should serve as guidelines. Clinical circumstances may dictate that transport be undertaken immediately with Trauma Base contact made en route

5.1 **Designated trauma base hospital** - Highland Hospital is the Base Station for all trauma patients requiring base contact

5.2 **Contact the trauma Base Physician if:**

- ▶ The patient meets the criteria listed in the "Yellow Criteria" but the provider is requesting transport to a basic ED
- ▶ The patient requires medical treatment not covered in the "Trauma Patient Care" protocol (see **page 25**)
- ▶ The patient would benefit from consultation with the Base Physician

TRAUMA PATIENT CRITERIA

6. OUT-OF-COUNTY TRANSPORT

- 6.1 Patients who meet Trauma Patient Criteria may be transported directly to an out of county Trauma Center if it is the closest, most appropriate destination for the patient
- 6.2 Prior to transporting to an out-of-county Trauma Center, the transporting provider must:
- ▶ Contact the out-of-county Trauma Center by landline to determine if they can accept the patient
 - ▶ Give a brief report including E.T.A. (See Reporting Format Protocol)
 - ▶ Contact the Alameda County Base Hospital if medical consultation is required (see #5 above)
- 6.3 **Out-of-County Trauma Centers:**

| TRAUMA CENTER | PEDIATRIC CAPABLE | LOCATION | PHONE # |
|------------------------------------|-------------------|---------------|----------------|
| STANFORD UNIVERSITY MEDICAL CENTER | X | PALO ALTO | (650) 723-7337 |
| SAN FRANCISCO GENERAL HOSPITAL | | SAN FRANCISCO | (415) 206-8111 |
| REGIONAL MEDICAL CENTER | | SAN JOSE | (408) 729-2841 |
| SANTA CLARA VALLEY MEDICAL CENTER | X | SAN JOSE | (408) 885-6912 |
| JOHN MUIR MEDICAL CENTER | | WALNUT CREEK | (925) 947-4444 |
| SAN JOAQUIN GENERAL | | FRENCH CAMP | (209) 982-1975 |

Exhibit B

| Base Physician Contact Template Highland Hospital Base Physician – 510-535-6000 | |
|--|---|
| Situation | <ul style="list-style-type: none"> ▪ Identify yourself/unit number ▪ State purpose of call: (e.g. AMA consult, destination decision, etc.) ▪ Provide basic patient demographics (e.g. age/gender) ▪ Reason for patient contact/EMS activation |
| Background | <ul style="list-style-type: none"> ▪ Provide history of present illness/injury ▪ Medical history |
| Assessment | <ul style="list-style-type: none"> ▪ Vital signs ▪ Physical findings ▪ Treatment provided |
| Recommendation/Request | <ul style="list-style-type: none"> ▪ State your recommendation/request ▪ Confirm Base Physician’s recommendation/orders |

| Hospital Notification Template | |
|---|--|
| Basic Notifications | |
| <ol style="list-style-type: none"> 1. Unit Number 2. Transport code 3. Age & Gender 4. Chief Complaint 5. V/S stable or detailed V/S if abnormal | <ol style="list-style-type: none"> 6. Pertinent negatives/positives 7. Treatment(s) 8. Repeat ETA 9. Check for questions |
| Specialty care patient notifications | |
| For each category below, include info from the basic notification template plus the appropriate category below | |
| Trauma | |
| <ol style="list-style-type: none"> 1. Mechanism of Injury 2. Injuries | <ol style="list-style-type: none"> 3. GCS – each category of E/V/M + total 4. Detailed Vital Signs |
| Cardiac Arrest / ROSC | |
| <ol style="list-style-type: none"> 1. Airway – non-patent, patent, airway placed/not-placed 2. Breathing – absent/spontaneous 3. Circulation – pulses present/absent | <ol style="list-style-type: none"> 4. Total estimated down time 5. Summary of treatment(s) given |
| Stroke Alert | |
| <ol style="list-style-type: none"> 1. Last seen normal time 2. Stroke Assessment/Scale findings | <ol style="list-style-type: none"> 3. Blood glucose |
| Sepsis | |
| <ol style="list-style-type: none"> 1. Temperature 2. Suspected source of infection (if known) | <ol style="list-style-type: none"> 3. Detailed Vital Signs |
| STEMI | |
| <ol style="list-style-type: none"> 1. Estimated onset of S/S 2. Was 12-lead ECG Transmitted | <ol style="list-style-type: none"> 3. Detailed Vital Signs |
| Pediatric Patients | |
| <ol style="list-style-type: none"> 1. Patient’s weight-based color code | <ol style="list-style-type: none"> 2. Status of parent/guardian |
| Note: Detailed Vital Signs should include: RR, HR, B/P, SpO2, GCS (number of each category E/V/M) | |

**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
EMERGENCY MEDICAL SERVICES**



**2022-2023
STEMI CRITICAL CARE SYSTEM
PLAN (Update)**



February 2024

(All 2022-2023 Updates are in Arial Black Bold Italic Font)

DEFINITIONS AND ACRONYMS

| | |
|---|---|
| AED | Automated External Defibrillator |
| AICD | Automated Implantable Cardioverter-Defibrillator |
| ALCO | Alameda County |
| BHDE | Bidirectional Healthcare Data Exchange |
| CABG | Coronary Artery Bypass Graph |
| CARC | Cardiac Arrest Receiving Center: A comprehensive cardiac care center that is able to offer needed basic and advanced life support: Cardiopulmonary Resuscitation and Post Resuscitation Care: Therapeutic Hypothermia, Emergent Primary Coronary Interventions (PCI), Metabolic Support and Rehabilitation to patients suffering from Cardiopulmonary arrest. |
| CARES | Cardiac Arrest Registry to Enhance Survival |
| § 100270.101. Cardiac Catheterization Laboratory | The setting within the hospital where diagnostic and therapeutic procedures are performed on patients with cardiovascular disease. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code |

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

| | |
|--|---|
| <p>§ 100270.102. Cardiac Catheterization Team</p> | <p>The specially-trained health care professionals that perform percutaneous coronary intervention. It may include, but is not limited to, an interventional cardiologist, mid-level practitioners, registered nurses, technicians, and other health care professionals.</p> <p>Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>CCU</p> | <p>Coronary Care Unit</p> |
| <p>CCT</p> | <p>Critical Care Transport</p> |
| <p>§ 100270.103. Clinical Staff</p> | <p>Individuals that have specific training and experience in the treatment and management of ST-Elevation Myocardial Infarction (STEMI) patients. This includes, but is not limited to, physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.</p> <p>Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>CPC</p> | <p>Cerebral Performance Category</p> |
| <p>ECMO</p> | <p>Extracorporeal Membrane Oxygenation</p> |
| <p>ECG</p> | <p>Electrocardiogram</p> |
| <p>EEG</p> | <p>Electroencephalogram</p> |
| <p>ED</p> | <p>Emergency Department</p> |
| <p>§ 100270.104. Emergency Medical Services Authority</p> | <p>The department in California responsible for the coordination and integration of all state activities concerning EMS.</p> <p>Note: Authority cited: Sections 1797.1, 1797.107 and 1797.54, Health and Safety Code. Reference: Sections 1797.100, and 1797.103, Health and Safety Code.</p> |

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

| | |
|--|---|
| HIPAA | Health Insurance Portability and Accountability Act |
| HITECH | Health Information Technology for Economic and Clinical Health Act |
| ICD | Implantable Cardiac Defibrillator |
| ICU | Intensive Care Unit |
| § 100270.105. Immediately Available | <p>(a) Unencumbered by conflicting duties or responsibilities. (b) Responding without delay upon receiving notification. (c) Being physically available to the specified area of the hospital when the patient is delivered in accordance with local EMS agency policies and procedures.</p> <p>Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| § 100270.106. Implementation | <p>The development and activation of a STEMI Critical Care System Plan by the local EMS agency, including the prehospital and hospital care components in accordance with the plan.</p> <p>Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| § 100270.107. Interfacility Transfer (IFT) | <p>The transfer of a STEMI patient from one acute general care facility to another acute specialty care facility.</p> <p>Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1798.170, Health and Safety Code</p> |
| IRB | Internal Review Board |
| § 100270.108. Local Emergency Medical Services Agency (LEMSA) | The agency, department, or office having primary responsibility for administration of emergency medical services in a county or region and which is designated pursuant Health and Safety Code commencing with section 1797.200. |

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

| | |
|---|---|
| | Note: Authority cited: Sections 1797.107, 1797.200 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code. |
| MOU | Memorandum of Understanding |
| NCDR | National Cardiovascular Data Registry |
| § 100270.109. Percutaneous Coronary Intervention (PCI) | A procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart, usually done on an emergency basis for a STEMI patient. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code. |
| PHI | Protected Health Information |
| § 100270.110. Quality Improvement (QI) | Methods of evaluation that are composed of structure, process, and outcome evaluations that focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process, and recognize excellence in performance and delivery of care. Note: Authority cited: Sections 1797.103, 1797.107, 1797.174, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code. |
| RH | Referring Hospital |
| RN | Registered Nurse |
| ROSC | Return of Spontaneous Circulation |
| SCA | Sudden Cardiac Arrest |
| § 100270.111. ST-Elevation Myocardial Infarction (STEMI) | A clinical syndrome defined by symptoms of myocardial infarction in association with ST-segment elevation on Electrocardiogram (ECG). Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code. |

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

| | |
|--|--|
| <p>§ 100270.112. STEMI Care</p> | <p>Emergency cardiac care, for the purposes of these regulations. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.113. STEMI Medical Director</p> | <p>A qualified board-certified physician by the American Board of Medical Specialties (ABMS) as defined by the local EMS agency and designated by the hospital that is responsible for the STEMI program, performance improvement, and patient safety programs related to a STEMI critical care system. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.114. STEMI Patient</p> | <p>A patient with symptoms of myocardial infarction in association with ST-Segment Elevation in an ECG. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.115. STEMI Program</p> | <p>An organizational component of the hospital specializing in the care of STEMI patients. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.116. STEMI Program Manager</p> | <p>A registered nurse or qualified individual as defined by the local EMS agency, and designated by the hospital responsible for monitoring, coordinating and evaluating the STEMI program. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.117. STEMI Receiving Center (SRC)</p> | <p>A licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.124 and is able to perform PCI. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.118. STEMI Referring Hospital (SRH)</p> | <p>A licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.125.</p> |

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

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| | Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code. |
| § 100270.119. STEMI Critical Care System | A critical care component of the EMS system developed by a local EMS agency that links prehospital and hospital care to deliver treatment to STEMI patients. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code. |
| § 100270.120. STEMI Team | Clinical personnel, support personnel, and administrative staff that function together as part of the hospital's STEMI program. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code. |
| TTM | Targeted Temperature Management (FKA: Therapeutic Hypothermia) |
| V/F | Ventricular Fibrillation: life-threatening cardiac rhythm |
| V/T | Ventricular Tachycardia: life-threatening cardiac rhythm |

This document is the STEMI Critical Care System Plan intended for submission to the EMS Authority for approval and in accordance with California Code of Regulations Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System: ARTICLE 2. LOCAL EMS AGENCY STEMI CRITICAL CARE SYSTEM REQUIREMENTS, § 100270.121. STEMI Critical Care System Plan.

NOTE: § 100270.121 (a) LEMSAs implementing a STEMI System of Care (b) develop a written STEMI System of Care plan. (c) A STEMI Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all the following components:

- (1) The names and titles of the local EMS agency personnel who have a role in a STEMI critical care system.
- (2) The list of STEMI designated facilities with the agreement (MOU) expiration dates.
- (3) A description or a copy of the local EMS agency's STEMI patient identification and destination policies.
- (4) A description or a copy of the method of field communication to the receiving hospital specific to STEMI patient, designed to expedite time-sensitive treatment on arrival.

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- (5) A description or a copy of the policy that facilitates the inter-facility transfer of a STEMI patient.
- (6) A description of the method of data collection from the EMS providers and designated STEMI hospitals to the local EMS agency and the EMS Authority.
- (7) A policy or description of how the local EMS agency integrates a receiving center in a neighboring jurisdiction.
- (8) A description of the integration of STEMI into an existing quality improvement committee or a description of any STEMI specific quality improvement committee.
- (9) A description of programs to conduct or promote public education specific to cardiac care.
- (f) The local EMS agency currently operating a STEMI critical care system implemented before the effective date of these regulations, shall submit to the EMS Authority a STEMI Critical Care System Plan as an addendum to its next annual EMS plan update, or within 180-days of the effective date of these regulations, whichever comes first.
- (g) After approval of the STEMI Critical Care System Plan, the local EMS agency shall submit an update to the plan as part of its annual EMS update, consistent with the requirements in §100270.122.

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STEMI SYSTEM OF CARE SUMMARY

Section 1. Introduction/Background/MOU

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

Alameda County EMS began to establish a countywide STEMI System of Care in 2004 by implementing 12-lead electrocardiograms by paramedics in the out-of-hospital setting. In 2005, with only one PCI-capable hospital located in the north of Alameda County, paramedics recognizing a possible STEMI patient by 12-lead ECG acquisition, transported to the geographically desirable and only STEMI Receiving Center (SRC) at that time which only served approximately 25% of the county's EMS catchment. In 2006, three more receiving hospitals within the county became PCI capable and by January of 2007 ALCO EMS was transporting ALL suspected STEMI patients to one of the four designated SRCs.

The first MOUs were executed between ALCO EMS and the four existing SRCs in 2012 and by 2013; two more SRCs were designated as specialty centers of care for STEMI. 2013 also marked the beginning of the STEMI/Cardiac Arrest Receiving Center (SRC/CARC). This model was developed and contractually executed by ALCO EMS, since many STEMI patients also suffer out-of-hospital cardiac arrest (OHCA) and others suffering cardiac arrest require the same specialty services offered by the SRC. Currently, seven high performing SRC/CARCs exist by contractual agreement as an important part of ALCO EMS's integrated specialty system of care for STEMI and Cardiac Arrest today.

The initial purpose of developing a STEMI system was to ensure preparation, timely response and definitive care for people that present with STEMI in Alameda County. A decade and a half later, the goal and objectives remain unchanged. The many changes influencing the health care delivery systems in the United States over the years have not had any negative impact on the STEMI system within the County. The fact is the desire of hospitals and geographic needs of the community have supported the increase for more STEMI Receiving Centers over the past fifteen years. The fundamental components of the STEMI system design remain intact and continue to improve performance and meet the needs of the residents and visitors to Alameda County.

Section 2. ALCO EMS Design/Administration

Alameda County is approximately 739 square miles of land and 82 of water, located in the center of the San Francisco Bay Area, with a diverse demographic and socioeconomic population of 1.6 million. The EMS system design and configuration consists of a countywide Advanced Life Support (ALS) model for first responders and transport: five First Responder ALS (FRALS) Fire Departments, four ALS Transport Fire Departments with FRALS, one private ALS transport provider agency and one Basic Life Support (BLS) First responder Fire Department.

Within the county, currently thirteen hospitals exist as emergency receiving centers for ambulance transport: 12 adult and 1 pediatric. Of the twelve adult hospitals, seven are LEMSAs designated SRC/CARCs with three having Cardiovascular Surgical Services but none being ECMO capable at this time.

The EMS Agency is responsible for oversight of the countywide STEMI System of Care including operations, performance, quality improvement, administration, and compliance monitoring of designated SRC/CARC MOUs. ALCO EMS leadership consists of the Director – Lauri McFadden, Deputy Director – William McClurg, Medical Director – Karl Sporer MD and EMS Coordinator (Specialty Systems of Care) – Michael Jacobs, Paramedic.

Section 3. ALCO EMS Designated STEMI Receiving Centers/MOU

Currently Alameda County EMS has designated seven STEMI Receiving Centers (SRC) that also function as Cardiac Arrest Receiving Centers (CARC) under the existing MOU (Exhibit A). ***ALL designated SRC/CARCs are on the same three-year agreement cycle: current term 1/1/2023-12/31/2025, next agreement cycle 1/1/2026-12/31/2028.***

- Alameda Health System Highland Hospital-(Oakland)

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- Alta Bates Summit Medical Center-(Oakland)
- Kaiser Permanente-(Fremont)
- Kaiser Permanente-(Oakland)
- St. Rose Hospital-(Hayward)
- Stanford Health Care Valley Care Medical Center-(Pleasanton)
- Washington Hospital Health System-(Fremont)

Section 4. STEMI Identification and Destination Policy/Protocol

The identification of a suspected STEMI starts in Dispatch: below are both Medical Priority Dispatch CARD 10 for Chest Pain / Discomfort and ALCO EMS Field Assessment / Treatment Protocol for Chest Pain Suspected Cardiac/STEMI. These decision pathways and protocols address and comply with § 100270.123. EMS Personnel and Early Recognition.

1. Is s/he **completely alert** (responding appropriately)?
2. Is s/he **breathing normally**?
 - a. **(No and Alert)** Does s/he have **difficulty** speaking/crying **between** breaths?
3. **(Not 1st party)** Is s/he **changing color**?
 - a. **(Yes)** Describe the color change.
4. Is s/he **clammy** or having **cold sweats**?
5. Has s/he ever had a **heart attack** or **angina** (heart pains)?
6. Did s/he take any **drugs** or **medications** in the **past 12 hours**?

Cocaine (or derivative)
Medications

- a. I'm sending the **paramedics** (ambulance) to help you now. **Stay on the line** and I'll tell you **exactly** what to do next.
- b. (**≥ 1 + D-1, 2, 3**) If there is a **defibrillator** (AED) available, **send** someone to get it **now** in case we need it later.
- c. **(Patient medication requested and Alert)** Remind her/him to do what her/his **doctor has instructed** for these situations.

*** Stay on the line** with the caller if her/his condition seems **unstable** or is **worsening**.
*** Utilize the Aspirin Diagnostic & Instruction Tool** – **if authorized** by local **Medical Control** and the chest pain/discomfort (Heart Attack Symptoms) patient is **alert**, **≥ 16 years old**, and has **no reported STROKE symptoms**.

DLS * Link to 📞 X-1 unless: ↩

Unconscious ————— 🗙 **NABC-1**
INEFFECTIVE BREATHING and **Not alert** ————— 🗙 **NABC-1**

| LEVELS | # | DETERMINANT DESCRIPTORS | CODES | RESPONSES | MODES |
|----------|---|-------------------------------------|--------|-----------|-------|
| D | 1 | Not alert | 10-D-1 | | |
| | 2 | DIFFICULTY SPEAKING BETWEEN BREATHS | 10-D-2 | | |
| | 3 | CHANGING COLOR | 10-D-3 | | |
| | 4 | Clammy or cold sweats | 10-D-4 | | |
| | 5 | Heart attack or angina history | 10-D-5 | | |
| C | 1 | Abnormal breathing | 10-C-1 | | |
| | 2 | Cocaine | 10-C-2 | | |
| | 3 | Breathing normally ≥ 35 | 10-C-3 | | |
| A | 1 | Breathing normally < 35 | 10-A-1 | | |

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|---|--|--|
| <ul style="list-style-type: none"> • Unable to complete a full sentence without taking a breath • Only able to speak a few words without taking a breath • Breathing attempts that severely hinder crying in infants and small children | <p>proven otherwise.</p> <ol style="list-style-type: none"> 5. If the caller asks whether the patient should be given their medication now, the EMD should only give instructions included in the protocol. 6. Chest pain due to trauma (current or non-recent) should be handled on Protocol 30. 7. If the complaint description involves both chest pain and STROKE symptoms, go to Protocol 10 but do not utilize the Aspirin Diagnostic & Instruction Tool. | <p>accompanied by STROKE symptoms due to the possibility of acute aortic dissection involving concurrent coronary and carotid artery damage.</p> |
| <p>CHANGING COLOR</p> <p>Changing colors of clinical significance include:</p> <ul style="list-style-type: none"> • Ashen/Gray • Blue/Cyanotic/Purple • Mottled <p>(Pale, pink, and red are not colors of clinical significance in the dispatch environment and will not, alone, change the dispatch priority. Callers failing to initially identify a listed color should not be coached by asking unlisted clarifiers such as "Well, is s/he gray?")</p> | <p>First Law of Chest or Back Pain</p> <p>"Hurts to breathe" is not considered difficulty or abnormal breathing.</p> | <p>Heart Attack Symptoms</p> <p>EMDs may initially receive non-specific complaints in heart attack cases. Due to patient denial or caller confusion, the following symptoms may not be recognized as a heart attack:</p> <ul style="list-style-type: none"> • Aching pain • Chest pain/discomfort (now gone) • Constricting band • Crushing discomfort • Heaviness • Pressure • Numbness • Tightness <p>While these symptoms are most common in the chest, they may also (or only) be present in the arm(s), jaw, neck, or upper back. These symptoms should be considered equivalent to chest pain and handled on Protocol 10.</p> |
| <p>Rules</p> <ol style="list-style-type: none"> 1. Patients with a history of angioplasty, coronary artery stents, or bypass surgery are considered to have a history of heart attack or angina in the dispatch environment. 2. When the complaint description involves both NON-TRAUMATIC chest pain/heart attack symptoms and breathing problems, choose the Chief Complaint Protocol that best fits the patient's foremost symptom, with ECHO-level conditions taking precedence. (≥ 16, alert, no reported STROKE symptoms) Use the Aspirin Diagnostic & Instruction Tool on either protocol as appropriate. 3. A patient having a heart attack may worsen at any time. Always advise to call back if condition worsens. | <p>Second Law of Chest Pain</p> <p>A little chest pain may be as bad as a lot.</p> | <p>Thrombolytic and PCI Therapy</p> <p>Thrombolytic therapy is the use of drugs such as tissue Plasminogen Activator (t-PA) and Streptokinase to break down blood clots. Percutaneous Coronary Intervention (PCI) therapy is an invasive technique to reopen blocked arteries. These are critical, time-dependent therapies for patients suffering from a developing heart attack. EMD is a vital first link in the chain of survival for these patients, as early recognition and rapid treatment are essential.</p> |
| <p>Rules</p> <ol style="list-style-type: none"> 1. Patients with a history of angioplasty, coronary artery stents, or bypass surgery may not have actually had a heart attack (myocardial infarction). However, since these patients suffer from coronary artery disease, they have a greater risk of a heart attack than the general population. 2. True heart attacks are uncommon in females < 45 and males < 35. 3. Medical Dispatch may consider heart attack (and an ALS CHARLIE response) in certain patients < 35 when the symptoms listed in Heart Attack Symptoms strongly suggest the possibility. 4. Automated external defibrillators (AEDs) might also be called "shock boxes." Other local names may be used. | <p>Axioms</p> | |

Procedures: EKG - 12 LEAD Modified May 26, 2016

INTRODUCTION: 12-lead electrocardiograms (EKGs) are used with a variety of patients and should be used with a number of patient care policies (e.g., ALOC ([page 33](#)), Chest Pain/MI ([page 37](#)), and CHF/ Pulmonary Edema ([page 43](#)). Treatment under these policies should proceed in conjunction with the application of the 12-lead EKG. Our goal is to incorporate the 12-lead EKG into our destination decision-making process with regard to the ST-elevation MI (STEMI) patient. The transmission or reporting of the ST-elevation MI should decrease "door-to-intervention" times in our community hospitals.

Approved STEMI Centers are:

| STEMI Centers | ED Phone Number |
|-------------------------------------|------------------------|
| Kaiser Walnut Creek (Out of County) | (925) 939-1788 |
| Kaiser Fremont | (510) 248-5011 |
| Kaiser Oakland | (510) 752-8869 |
| Alameda Health System-Highland | (510) 535-6000 |
| San Ramon MC (Out of County) | (925) 275-8338 |
| St. Rose Hospital | (510) 264-4251 |
| Summit Medical Center | (510) 869-8797 |
| Valley Care Medical Center | (925) 416-6518 |
| Washington Hospital | (510) 608-1367 |

Only ALS personnel who are employed by an agency with an approved 12-lead EKG program and who have received the required training may perform a 12-lead EKG. [See 12-LEAD EKG PROGRAM (#4210)]

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in the Administrative Manual for training and program requirements]. 12-lead EKG is required for ALS transport providers.

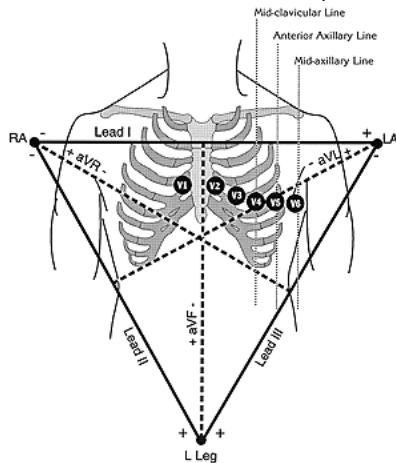
1. INDICATIONS: Any patient with known or suspected Acute Coronary Syndrome (ACS)

- ▶▶ chest pain
- ▶▶ discomfort or tightness radiating to the jaw, shoulders or arms
- ▶▶ nausea
- ▶▶ ROSC
- ▶▶ diaphoresis
- ▶▶ dyspnea
- ▶▶ anxiety
- ▶▶ syncope/dizziness
- ▶▶ other “suspicious symptoms”
- ▶▶ known treatment for ACS

2. EKG CRITERIA FOR STEMI: convex, “tombstone,” or flat ST segment elevation in two or more contiguous leads. Use the machine reading “acute MI” or the equivalent, as the principal determinant for STEMI assessment.

3. PROCEDURE:

3.1 Attach EKG leads to the patient (limb leads to the upper arms and Ankles, and six chest leads). Perform an EKG as indicated.



- ▶▶ V1: right 4th intercostal space
- ▶▶ V2: left 4th intercostal space
- ▶▶ V3: halfway between V2 and V4
- ▶▶ V4: left 5th intercostal space, mid-clavicular line
- ▶▶ V5: horizontal to V4, anterior axillary line
- ▶▶ V6: horizontal to V5, mid-axillary line
- ▶▶ V4R: right 5th intercostal space, mid-clavicular line (use in all suspected inferior MIs)

3.2 If the EKG machine is reading “Acute MI” or the equivalent, or definite new left bundle branch block, immediately transmit the EKG and notify the STEMI Receiving Center. Use the machine reading as the principal determinant for STEMI assessment. Use your clinical judgment for situations outside of those listed above

3.3 Include the following information in your report:

- ▶▶ Age and sex
- ▶▶ Interpretation of the 12-lead EKG (leads, amount of ST elevation in millimeters, “confidence” in your 12-lead assessment)
- ▶▶ Location of reciprocal changes (if applicable)
- ▶▶ Symptoms (including presence or absence of chest pain)

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- ▶▶ Presence of new left bundle branch block. Presence of imposters (early repolarization left bundle branch block, left ventricular hypertrophy, pericarditis or paced rhythms).
- ▶▶ Significant vital signs and physical findings
- ▶▶ Time of onset
- ▶▶ Estimated time of arrival to receiving STEMI Receiving Center

3.4 Transport patients with ST elevation in two or more contiguous leads and symptoms of ACS to the closest, most appropriate STEMI Receiving Center. Personnel should consider traffic and weather conditions, as well as the patient's choice of facility or physician

3.5 Attach a copy of the EKG to the hospital copy and the file copy of the PCR

3.6 Serial 12-lead EKGs, en route, are required in patients with strong symptomology and are encouraged in all other patients

3.7 Follow your agency's procedure for QI purposes

July 2020, a memo was disseminated countywide to ALL EMS field providers by the LEMSA, regrading Patients with Suspected COVID-19: ALCO EMS Suspected COVID-19 Interim Guidance (see attached).

Each STEMI Receiving Center has its own policy/procedure in place to manage suspected/confirmed COVID-19 patients.

Section 5. Field Electrocardiogram (ECG) Transmission/Communication to SRC

The below technologies address and comply with § 100270.123. EMS Personnel and Early Recognition.

- 5.1 All ALS Paramedic units are equipped with a cardiac monitor that is 12-lead and transmission capable. Early 12-lead acquisition, identification, and transmission of a suspected STEMI to a SRC is strongly encouraged and re-enforced to EMS field personnel through education and training. The early transmission allows for further scrutiny by the SRC ED Physician and on-call cardiology if needed. The early notification by 12-lead transmission also allows the SRC time to mobilize and or re-appropriate resources for patient flow.
- 5.2 An ALCO EMS designated SRC shall have the electronic ability (computer and software) to receive diagnostic quality 12-lead ECGs transmitted by prehospital personnel prior to suspected STEMI patient arrival at that SRC/CARC (not to be used for consult, unless SRC/CARC is an approved EMS Base Station).
- 5.3 Radio ring down from transporting ambulance as soon as possible for early SRC notification.
- 5.4 Designated priority telephone line to be used by prehospital personnel to contact the SRC/CARC regarding patients with suspected STEMI that are being transported to that facility for potential intervention.

Implementation of revised ALCO EMS notification template for Base Hospital/Physician contact, and specific receiving center ringdowns regarding specialty care patients, including STEMI, January 2024 (Exhibit E)

Section 6. STEMI Inter-Facility Transfer (IFT) Policy/Protocol

ALCO EMS designated SRC/CARC shall have a plan for emergency transport to a facility capable of ECMO and or Cardiovascular Surgery (cardiopulmonary bypass) that describes steps for timely transfer.

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A paramedic-staffed ALS ambulance using the 911 system for emergent transfers is strongly recommended, even for patients that require interventions that are out of scope of practice for paramedics. In these cases, a nurse from the transferring center shall accompany the patient and manage the intervention/therapy that is out of paramedic scope of practice: tpA infusion, infusion for blood pressure control or IABP. A non-911 Critical Care Transport (CCT) ambulance can also be used if appropriate and timely. If 911 EMS ALS ambulance is used, the ALCO EMS Policy shall apply:

Operations: INTERFACILITY TRANSFERS, Modified On: July 24, 2018

Note: This policy pertains to emergency transfers to a higher level of care that come through the 9-1-1 system. See "Scheduled Interfacility Transfers Using Paramedic Personnel" (policy #4605 Administration Policy Manual) for more information.

1. All patient care rendered by prehospital care personnel must be within the defined scope of practice according to Title 22 and Alameda County EMS protocols
2. A paramedic may only take orders from a base hospital physician. (See 5.2 below) There are no provisions for an EMT to take orders from a physician
3. EMT-Bs may only transfer a patient without an emergency medical condition; or, with an emergency medical condition that has been stabilized and has no potential (within reasonable probability) to deteriorate en route
4. Paramedics (in addition to 3) may only transport a patient who has not been stabilized to a facility that provides a higher level of care. The transferring physician must determine if the care that may be required during transport is within the scope of practice of a paramedic. If not, appropriate hospital staff and/or equipment should be sent with the patient
5. Base Contact by Paramedics
 - 5.1 Base Contact is required prior to transport if the transferring physician orders any ALS treatment and/or the patient has not been stabilized
 - 5.2 Paramedics may follow transferring physician's written orders ONLY when 1) the transferring physician speaks to the Base Physician, and they mutually agree on the course of treatment; 2) the proposed treatment plan is within the paramedic's scope of practice
 - 5.3 Base Physician contact shall be made:
 - ▶▶ When there is a request to transfer a patient to a higher level of care facility that is not the "closest, most appropriate" higher level of care facility.
 - 5.4 Base Contact is not required if the patient is stable, and no ALS treatment has been ordered by the transferring physician. If the patient's condition changes during transport, see the appropriate patient care policy, and treat accordingly
6. Base Contact may be made anytime a paramedic has a question regarding patient condition, destination and/or the appropriateness of the transfer
7. An Alameda County Unusual Occurrence (U.O.) form should be completed for any problem-oriented interfacility transfers. The U.O. form should be sent to the EMS office for review. [See Administration Manual UNUSUAL OCCURRENCES (#2300)]
8. Refer to "Interfacility Transfer Guidelines" [see Administration Manual INTERFACILITY TRANSFER GUIDELINES (# 5600)] for transfer approval process
9. Alameda County Critical Medical Patient Hospital Transfers for Specialty and/or Higher Level of Care: to provide a process to facilitate the emergent transfer of medical patients within a hospital, either in the ER or admitted within the facility, for specialty or higher level of care services requiring time sensitive intervention at another facility within Alameda County.

Section 7. EMS/SRC Data Collection, Analysis and Reporting

(a) ALCO EMS agency implemented a standardized data collection and reporting process for a STEMI critical care system over a decade ago.

(b) The STEMI Critical Care System includes the collection of both prehospital and hospital patient care data, as determined by ALCO EMS agency and complies with § 100270.126.

(c) The prehospital STEMI patient care elements selected by ALCO EMS are compliant with the most current version of the California EMS Information Systems (CEMSIS) database, and the National EMS Information System (NEMSIS) via ESO Electronic Patient Care Report (ePCR).

(d) All SRCs that receive STEMI patients via ALCO EMS currently participate in the data collection process in accordance with ALCO EMS policies and procedures.

(e) The prehospital care record and the hospital data elements are collected by the ALCO EMS agency and are subsequently submitted to the California EMS Authority. This will be on no less than a quarterly basis and shall include, but not be limited to, the following:

(1) The STEMI patient data elements:

- (A) EMS ePCR Number
- (B) Facility
- (C) Name: Last, First
- (D) Date of Birth
- (E) Patient Age
- (F) Patient Gender
- (G) Patient Race
- (H) Hospital Arrival Date
- (I) Hospital Arrival Time
- (J) Dispatch Date
- (K) Dispatch Time
- (L) Field ECG Performed
- (M) 1st ECG Date
- (N) 1st ECG Time
- (O) Did the patient suffer out-of-hospital cardiac arrest
- (P) CATH LAB Activated
- (Q) CATH LAB Activation Date
- (R) CATH LAB Activation Time
- (S) Did the patient go to the CATH LAB
- (T) CATH LAB Arrival Date
- (U) CATH LAB Arrival Time
- (V) PCI Performed
- (W) PCI Date
- (X) PCI Time
- (Y) Fibrinolytic Infusion
- (Z) Fibrinolytic Infusion Date
- (AA) Fibrinolytic Infusion Time
- (BB) Transfer
- (CC) SRH ED Arrival Date

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- (DD) SRH ED Arrival Time
- (EE) SRH ED Departure Date
- (FF) SRH ED Departure Time
- (GG) Hospital Discharge Date
- (HH) Patient Outcome
- (II) Primary and Secondary Discharge Diagnosis

(2) The STEMI System data elements:

- (A) Number of STEMI treated
- (B) Number of STEMI patients transferred
- (C) Number and percent of emergency department STEMI patients arriving by private transport (non-EMS)
- (D) The false positive rate of EMS diagnosis of STEMI, defined as the percentage of STEMI alerts by EMS that did not show STEMI on ECG reading by the emergency physician (Exhibit D-E)

(3) In addition, and further specified in Exhibit A, a SRC shall collect on-going aggregate data (de-identified) for patients below, submit and present to Alameda County Emergency Medical Services for quarterly and annual review:

- a) Number of patients identified with possible STEMI transported from the field by EMS for intervention
- b) Number of patients who received primary PCI
- c) Number of patients identified with possible STEMI, transferred (IFT) by EMS from another acute care hospital ED (RH) to SRC for intervention
- d) Number of patients who received primary PCI (IFT)
- e) Number of SRC walk-in patients identified in ED with possible STEMI
- f) Number of patients (walk-in) who received primary PCI
- g) For ALL STEMI patients door-to-infusion time (median) for fibrinolysis; and, door-to-intervention time (median) for primary PCI. (EMS, IFT by EMS, SRC walk-in)
- h) Provide data to the National Cardiovascular Data Registry (NCDR) using CathPCI and or American Heart Association (AHA) Get with the Guidelines Coronary Artery Disease (GWTG CAD) database
- i) Provide ALCO EMS non-specific, de-identified, aggregate NCDR rolling quarterly data via Executive Summary report
PCI volumes (number)/year by Cardiologist (de-identified)

2021 ALCO EMS STEMI Critical Care System Performance (ESO/GWTG)

Total number of suspected STEMI patients transported to ALCO SRCs: 1313

| | |
|--|----------|
| 911 call received to Time on-scene: | 9 |
| On-scene to first 12-lead ECG: | 10 |
| At patient to 12-lead ECG: | 8 |
| On scene to depart scene (transport): | 16 |
| Depart scene to Time arrive at hospital: | 11 |
| 911 call received to Time arrival at hospital: | 39 |
| 911 Call to PCI (median) | 101 Min. |
| EMS First Medical Contact to PCI (median) | 86 Min. |

False positive rate ~72% by LP15 machine read as the principal determinant for field alert: 3/10 suspected EMS STEMI patients received PCI, 4/10 go for emergent cath

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2022-2023 ALCO EMS STEMI Critical Care System Performance (ESO/GWTG)

| STEMI Performance Metrics | 2022 | | 2023 | |
|--|-----------------|-----|-----------------|------|
| | Reporting Value | N | Reporting Value | N |
| ASA Administration - STEMI Alerts | 87.4% | 585 | 86.6% | 381* |
| STEMI Alerts Transported to STEMI Receiving Centers | 97.5% | 652 | 98.4% | 425* |
| Dispatched to On Scene Time (90th Percentile) - STEMI Alerts | 19min | 652 | 18min | 425* |
| Scene Time (90th Percentile) - STEMI Alerts | 26min | 652 | 28min | 425* |
| Transport Time (90th Percentile) - STEMI Alerts | 19min | 652 | 21min | 425* |
| Arrival by EMS - STEMI Activations Receiving PCI | 66% | 375 | 62% | 384 |
| Door-to-Cath Lab Time – EMS Arrival (90th Percentile) | 56min | 223 | 56min | 205 |
| Cath Lab-to-PCI Time - EMS Arrival (90th Percentile) | 36min | 223 | 36min | 205 |
| Door-to-PCI Time – EMS Arrival (90th Percentile) | 85min | 223 | 83min | 205 |
| Dispatched Time-to-PCI Time (90th Percentile) | 156min | 223 | 162min | 205 |

**Excludes 2023 Q4 Data*

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

2022 ALCO EMS AHA/GWTG-CAD MISSION LIFELINE STEMI SYSTEM HOSPITAL LEVEL REPORT

| Main Category | Sub Category | 2022 |
|---|--|------|
| Total Number of Records | Total Number of STEMI Receiving Records | 568 |
| | Total Number of NSTEMI Records | 101 |
| Patient Demographics | Median Age | 64 |
| Race | % American Indian or Alaska Native | 1 |
| | % Black or African American | 13 |
| | % Native Hawaiian or Pacific Islander | 2 |
| | % White | 41 |
| | % UTD | 14 |
| | % Asian | 29 |
| | % Hispanic Ethnicity | 16 |
| 12 Lead ECG | % EMS Arrivals with pre-hospital 12 Lead ECG | 81 |
| | % STEMI noted on 1st ECG (all arrival mode) | 88 |
| | Median time to 1st ECG (all arrival mode) | 7 |
| Arrival Mode | % Walk In | 35 |
| | % Ambulance | 65 |
| | % Air | - |
| Transfer Status | % Transfer In | 20 |
| | % Transfer Out | 8 |
| Median Time from Symptom Onset | Time of S/S Onset to Time of 911 Call (Median Time) | 54 |
| | To Arrival (Walk In) | 172 |
| | To Arrival (EMS) | 80 |
| | Overall Median Time | 91 |
| Arrival to Reperfusion | Median Time from Symptom Onset to PCI (Overall) | 167 |
| | Median Time from Arrival to Primary PCI | 67 |
| | Median Time from Arrival to Primary PCI <= 60 minutes (females only) | 68 |
| | Median Time from Arrival to Primary PCI <= 60 Minutes (males only) | 66 |
| | % Arrival to Primary PCI <= 60 Minutes (overall) | 48 |
| Length of Stay (LOS) in ED (Median Time Minutes) | Median Time from Arrival to Thrombolytics | 31 |
| | For Patients Transferred Out-Door In Door Out | 732 |
| | For Patients Admitted(by EMS) | 46 |
| | For Patients Admitted(By Walk In) | 57 |
| Prehospital Cath Lab Activation prior to EMS arrival | For Patients Admitted(overall) | 50 |
| | EMS FMC to 1st 12 Lead ECG (Median Time) | 7 |
| | 1st STEMI Positive Pre-Hospital 12 Lead ECG to Hospital Notification (Median Ti... | 5 |
| | % Cath Lab activation prior to patient's arrival | 45 |
| EMS FMC to Reperfusion | Pre-Hospital Notification to Cath Lab Activation (Median Time) | 12 |
| | Time of 911 Call to PCI (Median Time) | 100 |
| | EMS FMC to Primary PCI (Median Time) | 83 |
| Transfer In (To STEMI Receiving Center for Primary PCI) | Arrival at First Facility to Primary PCI (Transfers, Median Time) | 95 |
| | EMS FMC to Arrival at First Facility to transfer for PCI (EMS) (Transfers, Median T... | - |
| | Walk in Arrival at First Facility to transfer for PCI (Walk in) (Transfers, Median Ti... | 79 |
| | % FMC at or Before Arrival to First Facility to Primary PCI (Overall) | 84 |
| | Median LOS in ED (Door In Door Out) | 43 |
| | % Arrived to First Facility by EMS | 16 |
| | % Arrived to First Facility by Walk In | 84 |
| | % Arrival to Primary PCI <= 30 Minutes | 40 |
| % with Door In Door Out <= 30 Minutes | 21 | |
| Reperfusion ALL Patients (at my facility including transfer in) | % Fibrinolytics | 0 |
| | % Primary PCI | 82 |
| | % Rescue PCI for STEMI (After failed full dose lytics) | 0 |
| | % Rescue PCI for STEMI (stable after successful full dose lytics) | 1 |
| | % No Reperfusion | 12 |
| Non-System Reason For Delay | % 1st ECG NSRFD (Direct and transfer in) | 8 |
| | % EMS FMC | 4 |

ALCO EMS STEMI CRITICAL CARE SYSTEM PLAN

2023 ALCO EMS AHA/GWTG-CAD MISSION LIFELINE STEMI SYSTEM HOSPITAL LEVEL REPORT

| Main Category | Sub Category | 01/01/2023 - 1... |
|---|--|-------------------|
| Total Number of Records | Total Number of STEMI Receiving Records | 567 |
| | Total Number of NSTEMI Records | 88 |
| Patient Demographics | Median Age | 62 |
| Race | % American Indian or Alaska Native | 0 |
| | % Black or African American | 11 |
| | % Native Hawaiian or Pacific Islander | 3 |
| | % White | 44 |
| | % UTD | 14 |
| | % Asian | 28 |
| | % Hispanic Ethnicity | 16 |
| 12 Lead ECG | % EMS Arrival(s) with pre-hospital 12 Lead ECG | 73 |
| | % STEMI noted on 1st ECG (all arrival mode) | 87 |
| | Median time to 1st ECG (all arrival mode) | 6 |
| Arrival Mode | % Walk In | 31 |
| | % Ambulance | 51 |
| | % Air | - |
| | % Transfer from another acute care facility | 17 |
| Transfer Status | % Transfer In | 16 |
| | % Transfer Out | 8 |
| Median Time from Symptom Onset | Time of S/S Onset to Time of 911 Call (Median Time) | 179 |
| | To Arrival (Walk In) | 189 |
| | To Arrival (EMS) | 73 |
| | Overall Median Time | 115 |
| | Median Time from Symptom Onset to PCI (Overall) | 185 |
| Arrival to Reperfusion | Median Time from Arrival to Primary PCI | 71 |
| | Median Time from Arrival to Primary PCI <= 60 minutes (females only) | 70 |
| | Median Time from Arrival to Primary PCI <= 60 Minutes (males only) | 65 |
| | % Arrival to Primary PCI <= 60 Minutes (overall) | 41 |
| | Median Time from Arrival to Thrombolytics | 351 |
| Length of Stay (LOS) in ED (Median Time Minutes) | For Patients Transferred Out-Door In Door Out | 553 |
| | For Patients Admitted(by EMS) | 27 |
| | For Patients Admitted(By Walk In) | 56 |
| | For Patients Admitted(overall) | 53 |
| Prehospital Cath Lab Activation prior to EMS arrival | EMS FMC to 1st 12 Lead ECG (Median Time) | 8 |
| | 1st STEMI Positive Pre-Hospital 12 Lead ECG to Hospital Notification (Median Ti... | 6 |
| | Pre-Hospital Notification to Cath Lab Activation (Median Time) | 8 |
| EMS FMC to Reperfusion | Time of 911 Call to PCI (Median Time) | 85 |
| | EMS FMC to Primary PCI (Median Time) | 87 |
| | Arrival at First Facility to Primary PCI (Transfers, Median Time) | 100 |
| | EMS FMC to Thrombolytics | 561 |
| Transfer In (To STEMI) Receiving Center for Primary PCI | EMS FMC to Arrival at First Facility to transfer for PCI (EMS) (Transfers, Median T... | - |
| | Walk in Arrival at First Facility to transfer for PCI (Walk in) (Transfers, Median Ti... | - |
| | % FMC at or Before Arrival to First Facility to Primary PCI (Overall) | 100 |
| | Median LOS in ED (Door In Door Out) | 44 |
| | % Arrived to First Facility by EMS | 14 |
| | % Arrived to First Facility by Walk In | 85 |
| | % Arrival to Primary PCI <= 30 Minutes | 26 |
| | % with Door In Door Out <= 30 Minutes | 18 |
| Reperfusion ALL Patients (at my facility including transfer in) | % Fibrinolytics | 0 |
| | % Primary PCI | 92 |

All seven ALCO EMS SRCs currently participate in AHA/GWTG-CAD Registry for patient and hospital specific performance and outcome data reporting, as well as contribute de-identified performance data for aggregated system level reporting (2023 Data not yet complete).

Section 8. Regional SRC Integration

ALCO EMS includes surrounding county representatives from both EMS and SRCs to Alameda County's STEMI/Cardiac Arrest System QI Meetings and attends out-of-county STEMI System meetings.

ALCO EMS supports the transport of suspected STEMI patients to out-of-county SRCs if appropriate:

“Consider transport to one of the following out-of-county centers, if appropriate. Contact the STEMI center prior to transport.”

San Ramon Medical Center, San Ramon (925) 275-8338
Kaiser Hospital, Walnut Creek (925) 939-1788

Section 9. Continued Quality Oversight and Improvement Strategies

The STEMI system quality improvement process was established by Alameda County EMS and includes contractual participation of ALL seven currently designated SRC/CARCs:

(a) ALCO EMS STEMI Critical Care System shall have a quality improvement process that complies with § 100270.127. Quality Improvement and Evaluation Process and includes, at a minimum but not limited to:

- (1) Evaluation of program structure, process, and outcome
- (2) Review of STEMI-related deaths, major complications, and transfers
- (3) A multidisciplinary STEMI Quality Improvement Committee, including both prehospital and hospital members
- (4) Participation in the QI process by all designated STEMI centers and prehospital providers involved in the STEMI critical care system
- (5) Evaluation of regional integration of STEMI patient movement
- (6) Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases

(b) ALCO EMS agency is responsible for on-going performance evaluation and quality improvement of the STEMI critical care system by continuing the following strategies that satisfy (1-6) in this section. Criteria for reviews, evaluations and benchmarking are referenced and compared to current evidence-based guidelines and recommendations for recognized standards in STEMI care: the American Heart Association (AHA) and the American College of Cardiology (ACC) described and detailed in EXHIBIT A.

9.1 STEMI/Cardiac Arrest Receiving Center Program staff shall participate in Alameda County EMS quarterly SRC/CARC QI Committee meetings, with a minimum attendance requirement of two/year.

9.2 Hospital shall maintain a written internal quality improvement plan for STEMI, Cardiac Arrest and Post Cardiac Arrest patients that includes, but is not limited to the determination and evaluation of:

- a) Death rate
- b) Complications
- c) Sentinel events
- d) System issues
- e) Organizational issues and resolution processes

9.3 Hospital shall support EMS Agency QI activities including educational activities for prehospital personnel.

9.4 ALCO EMS is in process of establishing electronic bi-directional Healthcare Data Exchange (HDE) with all Alameda County receiving hospitals: currently, 6/13 acute care facilities, 3/7 SRCs connected.

The purpose of this HDE is to enhance continuity of care between Alameda County Emergency Medical Services (EMS) and system receiving hospitals, provide patient outcomes to EMS providers, and optimize billing practices to reduce insurance claim issues that could financially impact the patient through connecting EMS data with receiving facility data. The platform design is on an encounter specific basis to allow timely bi-directional digital sharing of information pertinent to patient demographics, billing, and clinical care.

HDE allows EMS patient care reports (PCR) to be digitally transferred in the hospital data systems and subsequently into the patient's Electronic Medical Record (EMR) in either a PDF format or by populating established fields within the system as soon as they are completed by the EMS provider. In addition, patient demographics and insurance information would be shared bi-directionally to help assure that both the EMS provider and the receiving facility both have accurate information.

Clinically, beyond the transferring of information into the hospital data collection system, patient outcome information such as diagnosis, admission/discharge status and interventions can be automatically shared with the EMS care providers involved with that specific patient encounter so that they can compare against their evaluations, assessments, interventions, and treatments in order to enhance their skills as a clinical provider.

Furthermore, the bi-directional sharing of information will allow for more timely and efficient collection and reporting of program specific registry data for both EMS and specialty receiving centers. Additionally, this initiative will enhance system oversight as well as future quality and process improvement strategies.

Section 10. Cardiovascular (CV) Public Education/Awareness Strategies

For the past five years, the ALCO EMS STEMI system has worked collaboratively with the Via Heart Project to improve public awareness in both adolescent and adult populations, regarding the signs and symptoms of Acute Coronary Syndromes. The strategy used for this community outreach initiative has been through co-sponsoring "Screen a Teen" heart screening. These events use personnel from fire, EMS and SRCs to take and review medical histories, measure height and weight, take blood pressures, teach CPR and AED, acquire and review 12-lead electrocardiograms, acquire and review echocardiograms as well as help identify any electrical and/or structural abnormalities found. ALCO EMS also offers a monthly new provider orientation as a venue for SRC staff to provide EMS STEMI education to field personnel. ***EMS is also working closely with ALCO SRCs to develop educational opportunities regarding STEMI/Cardiac Arrest: virtual/recoded lectures as well as case studies that are available via web-based platform for CE.***

**Emergency Medical Services
STEMI/Cardiac Arrest Receiving Center
Agreement**

County of Alameda

And

“INSERT Hospital Name”

Effective Date: January 1, 2023

DEFINITIONS AND ACRONYMS

| | |
|---|--|
| AED | Automated External Defibrillator |
| AICD | Automated Implantable Cardioverter-Defibrillator |
| ALCO | Alameda County |
| BHDE | Bidirectional Healthcare Data Exchange |
| CABG | Coronary Artery Bypass Graph |
| CARC | Cardiac Arrest Receiving Center: A comprehensive cardiac care center that is able to offer needed basic and advanced life support: Cardiopulmonary Resuscitation and Post Resuscitation Care: Therapeutic Hypothermia, Emergent Primary Coronary Interventions (PCI), Metabolic Support and Rehabilitation to patients suffering from Cardiopulmonary arrest. |
| CARES | Cardiac Arrest Registry to Enhance Survival |
| Cardiac Catheterization Laboratory | “Cardiac catheterization laboratory” or “Cath lab” means the setting within the hospital where diagnostic and therapeutic procedures are performed on patients with cardiovascular disease. 22 CCR § 100270.101. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code |
| Cardiac Catheterization Team | “Cardiac catheterization team” means the specially trained health care professionals that perform percutaneous coronary intervention. It may include, but is not limited to, an interventional cardiologist, mid-level practitioners, registered nurses, technicians, and other health care professionals. 22 CCR § 100270.102. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and |

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| | |
|---|---|
| | 1797.176, Health and Safety Code. |
| CCU | Coronary Care Unit |
| CCT | Critical Care Transport |
| Clinical Staff | <p>“Clinical staff” means individuals that have specific training and experience in the treatment and management of ST-Elevation Myocardial Infarction (STEMI) patients. This includes, but is not limited to, physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.</p> <p>22 CCR § 100270.103. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| CPC | Cerebral Performance Category |
| ECMO | Extracorporeal Membrane Oxygenation |
| ECG | Electrocardiogram |
| EEG | Electroencephalogram |
| ED | Emergency Department |
| Emergency Medical Services Authority | <p>“Emergency Medical Services Authority” or “EMS Authority” or “EMSA” means the department in California responsible for the coordination and integration of all state activities concerning EMS.</p> <p>22 CCR § 100270.104. Note: Authority cited: Sections 1797.1, 1797.107 and 1797.54, Health and Safety Code. Reference: Sections 1797.100, and 1797.103, Health and Safety Code.</p> |
| GWTG-CAD | Get With The Guidelines Coronary Artery Disease is a registry offered by the American Heart Association to capture data regarding STEMI patients |

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| | |
|---|---|
| HIPAA | Health Insurance Portability and Accountability Act |
| HITECH | Health Information Technology for Economic and Clinical Health Act |
| ICD | Implantable Cardiac Defibrillator |
| ICU | Intensive Care Unit |
| Immediately Available | <p>“Immediately available” means: (a) Unencumbered by conflicting duties or responsibilities. (b) Responding without delay upon receiving notification. (c) Being physically available to the specified area of the hospital when the patient is delivered in accordance with local EMS agency policies and procedures.</p> <p>22 CCR § 100270.105. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| Implementation | <p>“Implementation,” “implemented,” or “has implemented” means the development and activation of a STEMI Critical Care System Plan by the local EMS agency, including the prehospital and hospital care components in accordance with the plan.</p> <p>22 CCR § 100270.106. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| Interfacility Transfer (IFT) | <p>“Interfacility transfer” means the transfer of a STEMI patient from one acute general care facility to another acute general care facility.</p> <p>22 CCR § 100270.107. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1798.170, Health and Safety Code</p> |
| IRB | Internal Review Board |
| Local Emergency Medical Services | “Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility |

Alameda County Emergency Medical Services

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| | |
|---|---|
| Agency (LEMSA) | <p>for administration of emergency medical services in a county or region and which is designated pursuant Health and Safety Code commencing with section 1797.200.</p> <p>22 CCR § 100270.108. Note: Authority cited: Sections 1797.107, 1797.200 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| MOU | Memorandum of Understanding |
| NCDR | National Cardiovascular Data Registry |
| Percutaneous Coronary Intervention (PCI) | <p>“Percutaneous coronary intervention” or “PCI” means a procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart, usually done on an emergency basis for a STEMI patient.</p> <p>22 CCR § 100270.109. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| PHI | Protected Health Information |
| Quality Improvement (QI) | <p>“Quality improvement” or “QI” means methods of evaluation that are composed of structure, process, and outcome evaluations that focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process, and recognize excellence in performance and delivery of care.</p> <p>22 CCR § 100270.110. Note: Authority cited: Sections 1797.103, 1797.107, 1797.174, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.</p> |
| RH | Referring Hospital |
| RN | Registered Nurse |

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| | |
|---|--|
| ROSC | Return of Spontaneous Circulation |
| SCA | Sudden Cardiac Arrest |
| ST-Elevation Myocardial Infarction (STEMI) | <p>“ST-Elevation Myocardial Infarction” or “STEMI” means a clinical syndrome defined by symptoms of myocardial infarction in association with ST-segment elevation on Electrocardiogram (ECG).</p> <p>22 CCR § 100270.111. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| STEMI Care | <p>“STEMI care” means emergency cardiac care, for the purposes of these regulations.</p> <p>22 CCR § 100270.112. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| STEMI Medical Director | <p>“STEMI medical director” means a qualified board-certified physician by the American Board of Medical Specialties (ABMS) as defined by the local EMS agency and designated by the hospital that is responsible for the STEMI program, performance improvement, and patient safety programs related to a STEMI critical care system.</p> <p>22 CCR § 100270.113. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| STEMI Patient | <p>“STEMI patient” means a patient with symptoms of myocardial infarction in association with ST-Segment Elevation in an ECG.</p> <p>22 CCR § 100270.114. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.</p> |
| STEMI Program | <p>“STEMI program” means an organizational component of the hospital specializing in the care of STEMI patients.</p> <p>22 CCR § 100270.115. Note: Authority cited: Sections 1797.107 and</p> |

STEMI Receiving Center/Cardiac Arrest Receiving Center Agreement

| | |
|--|---|
| | <p>1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>STEMI Program Manager</p> | <p>“STEMI program manager” means a registered nurse or qualified individual as defined by the local EMS agency, and designated by the hospital responsible for monitoring, coordinating and evaluating the STEMI program.</p> <p>22 CCR § 100270.116. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>STEMI Receiving Center (SRC)</p> | <p>“STEMI receiving center” or “SRC” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.124 and is able to perform PCI.</p> <p>22 CCR § 100270.117. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.</p> |
| <p>STEMI Referring Hospital (SRH)</p> | <p>“STEMI referring hospital” or “SRH” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.125.</p> <p>22 CCR § 100270.118. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.</p> |
| <p>STEMI Critical Care System</p> | <p>“STEMI critical care system” means a critical care component of the EMS system developed by a local EMS agency that links prehospital and hospital care to deliver treatment to STEMI patients.</p> <p>22 CCR § 100270.119. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>STEMI Team</p> | <p>“STEMI team” means clinical personnel, support personnel, and administrative staff that function together as part of the hospital’s STEMI program.</p> |

STEMI Receiving Center/Cardiac Arrest Receiving Center Agreement

| | |
|------------|--|
| | 22 CCR § 100270.120. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code. |
| TTM | Targeted Temperature Management (FKA: Therapeutic Hypothermia) |
| V/F | Ventricular Fibrillation: life threatening cardiac rhythm |
| V/T | Ventricular Tachycardia: life threatening cardiac rhythm |

Section 1 - Introduction

- 1.1 Alameda County EMS is the Local Emergency Medical Service Agency (LEMSA) as defined in the California Health and Safety Code Division 2.5, Section 1797.94: responsible for establishing policies and procedures within Alameda County. The LEMSA also has primary responsibility for administration of emergency medical services in a county or region, which is designated under Health and Safety Code commencing with section 1797.200.
- 1.2 This Agreement, dated as of the first day of January 2023, and in accordance with California Code of Regulations Title 22. Social Security; Division 9. Prehospital Emergency Medical Services; Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System (22 CCR §100270.119.), is by and between the COUNTY OF ALAMEDA, hereinafter referred to as the "COUNTY," and [INSERT HOSPITAL NAME], hereinafter referred to as the "Contractor."
- 1.3 Whereas, CONTRACTOR, in consideration of the COUNTY'S designation of CONTRACTOR as a STEMI (S-T Elevation Myocardial Infarction) Receiving Center (22 CCR § 100270.117) and Cardiac Arrest Receiving Center (SRC/CARC) as described in this document shall perform the services identified in this agreement without interruption, 24 hours per day, 7 days per week, 52 weeks per year for the full term of this Contract, as set forth in Exhibit A. Exceptions would include the lack of technology (equipment) available to perform the procedure: catastrophic plant failure or pre-planned scheduled maintenance.
- 1.4 Whereas, Contractor is professionally qualified to provide such services and is willing to provide the same to COUNTY.
- 1.5 Now, therefore it is agreed that COUNTY does hereby designate Contractor to provide STEMI and Cardiac Arrest Resuscitation and Post-Resuscitation Services, and Contractor

Alameda County Emergency Medical Services

STEMI Receiving Center/Cardiac Arrest Receiving Center Agreement

accepts such designation as specified in this Agreement, and the following described exhibits, all of which are incorporated into this Agreement by this reference:

Exhibit A – Scope of Services

Exhibit B – Data Elements

Exhibit C – Application

Exhibit D – California Regulations: ST-Elevation Myocardial Infarction Critical Care System

- 1.6 The parties hereby execute the single agreement that will constitute formal designation of Contractor as a STEMI Receiving Center/Cardiac Arrest Receiving Center within the Alameda County EMS system under Health & Safety Code Sections 1797.67, 1798.170 et seq., 1797.107 and 1798.150,

Section 2 - Term

- 2.1 The term of this Agreement shall be from January 1, 2023, through December 31, 2025.
- 2.2 The current designation term expires December 31, 2022, at which time contractor shall submit a new SRC/CARC application and provide supporting documentation that reflects compliance with the requirements under 22 CCR § 100270.124. This Agreement is subject to the review and approval of the application by ALCO EMS. There will be NO interruption of service during the COUNTY EMS review/approval process for existing SRC/CARCs that are in good standing with an expired MOU.
- 2.3 SRC designation term will be for up to three-years with re-designation reviews by local EMS agency or other designated agency conducted at least every three years: (Exhibit D, 22 CCR § 100270.124(a)(14).
- 2.4 Before SRC re-designation by the local EMS agency at the next regular interval, the SRC shall be re-evaluated to meet the criteria established in these regulations: (Exhibit D, 22 CCR § 100270.124(b).)
- 2.5 The local EMS agency medical director may stipulate additional requirements: (Exhibit D, 22 CCR § 100270.124(c).)
- 2.6 LEMSA may suspend or revoke the SRC designation for lack of compliance with this Agreement or applicable laws and regulations.

STEMI Receiving Center/Cardiac Arrest Receiving Center Agreement

- 2.7 During the term of this agreement, it is strongly recommended that the CONTRACTOR obtain “Heart Attack” or “Cardiac” center certification by American Heart Association/ The Joint Commission (AHA/TJC). AHA/TJC certification will be required by the second year (2027) of the following three-year contract cycle. CONTRACTOR shall obtain the appropriate level of certification that accurately reflects the patient volume and level of service they currently provide. Such certification will be required to maintain STEMI/Cardiac Arrest Receiving Center (SRC/CARC) designation by EMS.

Section 3 - Services

- 3.1 Contractor shall provide hospital, equipment, resources and personnel services as described in Exhibits A and D; data collection and reporting requirements as described in Exhibits A, B and D; quality improvement requirements as described in Exhibits A and D. Contractor shall participate in an annual review and adhere to compliance standards as described in Exhibits A and D. For initial EMS approval, Contractor shall complete and submit a SRC/CARC Application as described in Exhibit C. Contractor shall comply with ALL criteria in accordance with 22 CCR § 100270.124. STEMI Receiving Center Requirements as described in Exhibit D.
(ALCO EMS Policies and protocols for the ALCO SRC/CARC programs will be reviewed and revised as needed).

Section 4 - Required Reports

- 4.1 Contractor shall provide data specified in Exhibits B and D for individual EMS transported patients (identified) with suspected STEMI. Contractor shall complete data (b-2) entry into GWTG-CAD registry regarding all EMS patients no later than 30 calendar days following the prior month’s end. This will allow for timely access by ALCO EMS via established GWTG-CAD “Super User” agreement and must include ALL: EMS transported patients with a diagnosis of STEMI.
- 4.2 Contractor shall provide identified performance and clinical outcome data specified in Exhibits B (B3-4) and D regarding individual patients transported by EMS with Cardiac Arrest and Post Cardiac Arrest. Patient specific EMSCardiac Arrest, post-cardiac arrest and

Alameda County Emergency Medical Services

STEMI Receiving Center/Cardiac Arrest Receiving Center Agreement

IFT follow-up data must be available to ALCO EMS and CARES as soon as possible or within 30 calendar days of receipt, request or prior month's end, and must include:

- EMS transported STEMI patients
- EMS transferred patients from SRH for STEMI and or Post-Cardiac Arrest care.
- EMS Cardiac Arrest and Post Cardiac Arrest patients

- 4.3 Contractor shall submit aggregate data reports regarding performance and clinical outcomes in the format and timeline established by the EMS Agency in Exhibit B (B1-2)
- 4.4 Contractor shall submit an annual aggregate performance and clinical outcome data report in the format and timeline established by the LEMSA in Exhibit B (B1-2). Said report shall be submitted on LEMSA request for prior year respectively and present said data at requested ALCO EMS SRC/CARC Meeting.
- 4.5 Any data elements specified in Exhibits B and D are subject to modification/change at any time as agreed upon by the LEMSA and Contractor or otherwise mandated by the State.

Section 5 - Signatory

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

COUNTY OF ALAMEDA

CONTRACTOR

Hospital Name

By: _____

Signature

Name: _____

(Printed)

Title: _____

Approved as to Form:

By: _____

K. Joon Oh, Deputy County Counsel

By: _____

Signature

Name: _____

(Printed)

Title: _____

Date: _____

By signing above, signatory warrants and represents that he/she executed this Agreement in his/her authorized capacity and that by his/her signature on this Agreement, he/she or the entity upon behalf of which he/she acted, executed this Agreement.

EXHIBIT A – SCOPE OF SERVICES

**1. SCOPE OF SERVICES: STEMI Receiving Center (SRC)
(Exhibit D22 CCR § 100270.117.)**

Contractor shall:

- 1.1 Provide services as a SRC. “STEMI receiving center” or “SRC” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to 22 CCR § 100270.124 and is able to perform PCI. SRC must be able to provide all services, equipment, and personnel including maintenance of adequate staffing levels, equipment, and facilities according to STEMI/Cardiac Arrest Receiving Center designation criteria which is described in Exhibits A and D.
- 1.2 Accept all Alameda County EMS patients triaged as having a suspected STEMI and or suffer from Cardiac Arrest and transported to Contractor’s facility. Provide appropriate medical management for said patients without regard to the race, color, national origin, religious affiliation, age, sex, or ability to pay.

2. HOSPITAL SERVICES: 22 CCR § 100270.124. STEMI Receiving Center Requirements, in addition, Cardiac Arrest Receiving Center Requirements:

(a) The following minimum criteria shall be used by the local EMS agency for the designation of a STEMI receiving center:

(1) The hospital shall have established protocols for triage, diagnosis, and Cath lab activation following field notification.

(2) The hospital shall have a single call activation system to activate the Cardiac Catheterization Team directly.

(3) Written protocols shall be in place for the identification of STEMI patients.

(A) At a minimum, these written protocols shall be applicable in the intensive care unit/coronary care unit, Cath lab and the emergency department.

(4) The hospital shall be available for treatment of STEMI patients twenty-four (24) hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year.

(5) The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients.

(6) The hospital shall maintain STEMI team and Cardiac Catheterization Team call rosters.

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(7) The Cardiac Catheterization Team, including appropriate staff determined by the local EMS agency, shall be immediately available.

(8) The hospital shall agree to accept all STEMI patients according to the local policy.

(9) STEMI receiving centers shall comply with the requirement for a minimum volume of procedures for designation required by the local EMS agency: 36 PPCI/Year (including EMS transports and walk-ins)

(10) The hospital shall have a STEMI program manager and a STEMI medical director.

(11) The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.

(12) The hospital shall participate in the local EMS agency quality improvement processes related to a STEMI critical care system.

(13) A STEMI receiving center without cardiac surgery capability on-site shall have a written transfer plan and agreements for transfer to a facility with cardiovascular surgery capability.

(14) A STEMI receiving center shall have reviews by local EMS agency or other designated agency conducted every three years.

(b) A STEMI center designated by the local EMS agency prior to implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, STEMI centers shall be re-evaluated to meet the criteria established in these regulations.

(c) Additional requirements may be stipulated by the local EMS agency medical director.

In addition to abiding by the requirements above, Contractor shall keep in effect the following:

- 2.1 Licensure under California Health and Safety Code Section 1250 et seq.
- 2.2 Permit for Basic or Comprehensive Emergency Medical Services pursuant to the provisions of Title 22, Division 5, of the California Code of Regulations,
- 2.3 Cardiac Catheterization Laboratory as a supplemental service pursuant to the provisions of Title 22, Division 5, of the California Code of Regulations,
- 2.4 Intra-aortic balloon pump capability with necessary staffing available,

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- 2.5 Electronic ability (computer and software) to receive diagnostic quality 12-lead ECG's transmitted by prehospital personnel prior to suspected STEMI patient arrival at that SRC/CARC (not to be used for consult, unless SRC/CARC is an approved EMS Base Station),
- 2.6 Designated priority telephone line to be used by prehospital personnel to contact the SRC/CARC regarding patients with suspected STEMI that are being transported to that facility for potential intervention,
- 2.7 Cardiovascular Surgery availability.
 - 2.7.1 California permit for cardiovascular surgery; or,
 - 2.7.2 A plan for emergency transport to a facility with cardiovascular surgery available that describes steps for timely transfer (within 1 hour).
- 2.8 Equipment and staffing to provide:
 - 2.8.1 Resuscitation for cardiopulmonary arrest including mechanical options.
 - 2.8.2 Targeted Temperature Management (TTM) in ED and ICU 24/7.
 - 2.8.3 Emergent PCI 24/7.
 - 2.8.4 Post-resuscitation care for cardiac arrest (uniform approach).
 - 2.8.5 Ventilator support/strategies.
 - 2.8.6 EEG monitoring.
 - 2.8.7 Cardiac arrest consultation service (to be determined).
 - 2.8.8 Neurology Consultation (automatic/uniform).
 - 2.8.9 Neurosurgical Consultation (automatic/uniform).
 - 2.8.10 Organ Procurement Consultation (uniform approach);
 - 2.8.12 Electrophysiology Consultation (automatic/uniform).
 - 2.8.13 Social Work Consultation (automatic/uniform).
 - 2.8.14 Inpatient physical and or occupational therapy (automatic/uniform).
 - 2.8.15 Outpatient physical and or occupational therapy (patient specific).
 - 2.8.16 Outpatient neurological rehabilitation.
 - 2.8.17 Outpatient psychological services
 - 2.8.18 CPR training: Professional, community and patient's family on discharge.

3. HOSPITAL PERSONNEL: 22 CCR § 100270.120. STEMI Team

Contractor shall provide program oversight staff and shall have available all staff necessary to perform optimal care for patients with STEMI's, including the following:

- 3.1 **SRC Program Medical Director (Exhibit D, 22 CCR § 100270.113.)**
 - 3.1.1 **Qualifications:**

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- Board Certified in Cardiology or Cardiothoracic Surgery,
- Board Certified in Interventional Cardiology (desired),
- Credentialed member of medical staff with privileges for primary percutaneous coronary intervention (PCI).

3.1.2. **Responsibilities:**

- Oversight of STEMI program patient care,
- Coordination of staff and services,
- Authority and accountability for quality and performance improvement,
- Participation in protocol development,
- Establish and monitor quality control, including Mortality and Morbidity, and,
- Participation in County STEMI system QI Committee meeting .

3.2 **SRC Program Manager (Exhibit D, 22 CCR § 100270.116.)**

3.2.1. **Qualifications:**

- STEMI patient / program experience (ED, ICU, CCU, Cath. Lab.).

3.2.2. **Responsibilities:**

- Supports SRC Medical Director Functions
- Acts as EMS-STEMI Program Liaison
- Assures EMS-Facility STEMI data sharing
- Manages EMS-Facility STEMI QI activities
- Authority and accountability for QI/PI

3.3 **CARC Program Medical Director**

3.3.1 **Qualifications:**

- Board Certified in Emergency Medicine; or,
- Board Certified in Cardiology; or,
- Board Certified in Intensive Care / Critical Care, or Pulmonology.

3.3.2 **Responsibilities:**

- Oversight of CARC program patient care,
- Coordination of staff and services,
- Authority and accountability for quality and performance improvement,
- Participation in protocol development,
- Establish and monitor quality control, including Mortality and Morbidity, and,
- Participate in County SRC/CARC QI meetings.

3.4 **CARC Program Manager**

3.4.1 **Qualifications:**

- Cardiac Arrest and Post Cardiac Arrest patient experience (ED, ICU, CCU).

3.4.2 **Responsibilities:**

- Supports CARC Medical Director Functions
- Acts as EMS-CARC Program Liaison

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- Assures EMS-Facility CARC data sharing
- Manages EMS-Facility CARC QI activities
- Authority and accountability for QI/PI

3.5 **Physician Consultants** - Hospital shall maintain a daily on-call roster of:

- 3.5.1 Cardiologist(s) with PCI privileges and evidence of training/experience in PCI including primary PCI.
- 3.5.2 Cardiovascular Surgeon(s) if cardiovascular surgery is a service provided by Hospital.
- 3.5.3 Intensivist(s) / Critical Care
- 3.5.4 Neurologist(s)
- 3.5.5 Neurosurgeon (s) if Neurosurgery is a service provided by Hospital.

3.6 **Additional personnel:**

- 3.6.1 Intra-aortic balloon pump technician(s) / staff,
- 3.6.2 Cardiac catheterization lab manager/coordinator
- 3.6.3 Appropriate cardiac catheterization nursing and support personnel.

4. **PERFORMANCE STANDARDS**

4.1 Contractor shall strive to meet the following goals and current evidence-based recommendations regarding in caring for patients who present to Hospital with identified STEMI:

- Fibrinolysis within 30 minutes of ED arrival if administered.
- PCI “Door-to-Intervention” time ≤ 90 minutes of ED arrival at primary SRC.
- Patients that cannot get to the Cath-lab within 30 minutes of arrival at the primary SRC or receive intervention ≤ 90 minutes require emergent interfacility transfer (IFT) to the next closest SRC. This should preferably be facilitated by 911 or Critical Care Transport (CCT) if immediately available and warranted for transport.
- STEMI patients that present at a non-SRC require emergent interfacility transfer (IFT) to the closest SRC. This should preferably be facilitated by 911 or Critical Care Transport (CCT) if immediately available and warranted for transport. Time from patient ED arrival at SRH to PCI at SRC should be ≤ 120 minutes.
- SRC establishing written agreements with geographically surrounding non-STEMI hospitals: STEMI Referring Hospital (SRH) in attempt to improve continuity of care and expedite emergent transfer of the STEMI patient.

4.2 Contractor shall strive to meet the current evidence-based recommendations in caring for patients who present to Hospital with Cardiac Arrest or Post-Cardiac Arrest:

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- a) Resuscitation for cardiopulmonary arrest.
- b) Post-resuscitation TTM.
- c) Emergent cardiac catheterization for persistent/recurrent cardiac arrest and post cardiac arrest.
- d) Hemodynamic/metabolic support and monitoring post cardiac arrest.
- e) Prognostication post cardiac arrest interventions. This should include EEG monitoring for comatose patients.
- f) Electrophysiology testing and AICD placement as appropriate.
- g) Organ procurement/donation.
- h) Rehabilitation: cardiac, physical, speech, occupational and others needed.
- i) CPR training: Professional, community and hospital discharge (patient's family).

5. HOSPITAL POLICIES AND PROCEDURES (Exhibit D, 22 CCR § 100270.124.)

Contractor shall develop and implement policies and procedures designed to assure that patients presenting to their facility with possible STEMI and or Cardiac Arrest / Post cardiac Arrest receive appropriate care in a timely manner. Such internal policies shall include but are not limited to:

- 5.1 Definition of patients with defined inclusion criteria that shall receive emergent angiography and patients who shall receive emergent fibrinolysis, based on physician decision for individual patients.
- 5.2 Processes by which fibrinolytic therapy or PCI (including prompt activation of personnel) can be delivered rapidly to meet Performance Standards identified in this Contract.
- 5.3 For hospitals without cardiovascular surgery services, written arrangements with a tertiary institution that provides for rapid transfer of patients for any required additional care, including elective or emergency cardiac surgery or PCI.
- 5.4 Standardized written agreements with referral hospitals by which the expeditious transfer and acceptance of STEMI and or Post-Cardiac Arrest patients can occur.
- 5.5 Standardized written guidelines / protocol regarding TTM with inclusion criteria for patient selection.
- 5.6 Standardized written guidelines / protocol regarding emergent PCI with inclusion criteria for post cardiac arrest patients.
- 5.7 Standardized written order set / protocol for ED and ICU care regarding post ROSC patients.
- 5.8 Standardized written guidelines / protocol regarding an appropriate process and timing for neurologic prognostication of post cardiac arrest patients.

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- 5.9 Standardized written guidelines / protocol regarding the appropriate use of electrophysiology testing and placement of AICD for post cardiac arrest patients.
 - 5.10 Sharing of EMS patient specific cardiac arrest outcome data with the Alameda County EMS Agency by participating in CARES.
 - 5.11 Required availability of at least ONE mechanical CPR device (preferably LUCAS device with radiolucent back plate for the use in Cath-lab if needed).
 - 5.12 Standardized written guidelines / protocol regarding a comprehensive cardiac arrest consultation service (for patient and family).
 - 5.13 During the term of this contract, the Contractor shall establish a written agreement with at least one Bay Area hospital that agrees to accept and provide ECMO services for warranted patients. These patients may include but are not limited to cardiogenic shock as well as refractory cardiac arrest. If the receiving ECMO facility does not have a formal ECMO-TO-GO program, the contractor may establish a written agreement with a third-party service that can provide timely response, treatment and transfer for patients that require this higher level of specialty critical care. This requirement shall terminate at such time that the Contractor independently provides said service.
6. **DATA MANAGEMENT AND REPORTING (Exhibit D, 22 CCR § 100270.126.)**
- (a) The local EMS agency shall implement a standardized data collection and reporting process for a STEMI critical care system.
 - (b) The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency.
 - (c) The prehospital STEMI patient care elements selected by the local EMS agency shall be compliant with the most current version of the California EMS Information Systems (CEMSIS) database, and the National EMS Information System (NEMSIS).
 - (d) All hospitals that receive STEMI patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.
 - (e) The prehospital care record and the hospital data elements shall be collected and submitted to the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis and shall include, but not be limited to, the following:
 - (1) The STEMI patient data elements:
 - (A) EMS ePCR Number.
 - (B) Facility.
 - (C) Name: Last, First.
 - (D) Date of Birth.
 - (E) Patient Age.
-

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- (F) Patient Gender.
- (G) Patient Race.
- (H) Hospital Arrival Date.
- (I) Hospital Arrival Time.
- (J) Dispatch Date.
- (K) Dispatch Time.
- (L) Field ECG Performed.
- (M) 1st ECG Date.
- (N) 1st ECG Time.
- (O) Did the patient suffer out-of-hospital cardiac arrest.
- (P) CATH LAB Activated.
- (Q) CATH LAB Activation Date.
- (R) CATH LAB Activation Time.
- (S) Did the patient go to the CATH LAB.
- (T) CATH LAB Arrival Date.
- (U) CATH LAB Arrival Time.
- (V) PCI Performed.
- (W) PCI Date.
- (X) PCI Time.
- (Y) Fibrinolytic Infusion.
- (Z) Fibrinolytic Infusion Date.
- (AA) Fibrinolytic Infusion Time.
- (BB) Transfer.
- (CC) SRH ED Arrival Date.
- (DD) SRH ED Arrival Time.
- (EE) SRH ED Departure Date.
- (FF) SRH ED Departure Time.
- (GG) Hospital Discharge Date.
- (HH) Patient Outcome.
- (II) Primary and Secondary Discharge Diagnosis.

(2) The STEMI System data elements:

- (A) Number of STEMIs treated.
- (B) Number of STEMI patients transferred.
- (C) Number and percent of emergency department STEMI patients arriving by private transport (non-EMS).
- (D) The false positive rate of EMS diagnosis of STEMI, defined as the percentage of STEMI alerts by EMS which did not show STEMI on ECG reading by the emergency physician.

- 6.1 As further specified in Exhibit B, Contractor shall collect on-going aggregate data (de-identified) for patients below, submit and present to Alameda County Emergency Medical Services for annual review:

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- a) Number of patients identified with possible STEMI transported from the field by EMS for intervention.
 - b) Number of above patients who received primary PCI.
 - c) Number of patients identified with possible STEMI, transferred (IFT) by EMS from another acute care hospital ED (RH) to SRC for intervention.
 - d) Number of above patients who received primary PCI (IFT)
 - e) Number of SRC walk-in patients identified in ED with possible STEMI.
 - f) Number of above patients (walk-in) who received primary PCI.
 - g) For ALL STEMI patients door-to-infusion time (median) for fibrinolysis; and, door-to-intervention time (median) for primary PCI. (EMS, IFT by EMS, SRC walk-in)
 - h) Contractor shall collect and provide data to the National Cardiovascular Data Registry (NCDR) using CathPCI and or American Heart Association (AHA) Get With The Guidelines Coronary Artery Disease (GWTG CAD) database. Use of GWTG-CAD and ALCO EMS “Super User” “Read-only” access to contractor’s GWTG-CAD data is mandatory for CA State EMSA data reporting.
 - i) Provide ALCO EMS non-specific, de-identified, aggregate NCDR rolling quarterly data via **Executive Summary** report on request.
 - j) PCI volumes (number)/year by Cardiologist (de-identified).
- 6.2 Support and facilitate the implementation of future data elements related to STEMI and Cardiac Arrest Resuscitation and Post-Resuscitation system performance and quality improvement strategies.
- 6.3 Provide data for individual EMS transported patients with suspected STEMI and or Cardiac Arrest. Patient specific Follow-Up data must be available to ALCO EMS as soon as possible after patient encounter or within 30 calendar days of previous months end, and must include ALL data elements required by § 100270.126:
- EMS transported STEMI patients (GWTG-CAD)
 - EMS transferred patients from RH for STEMI (GWTG-CAD) and or Post-Cardiac Arrest (CARES).
 - EMS Cardiac Arrest and Post Cardiac Arrest patients (CARES)
- 6.4 As further specified in Exhibit B and in accordance with Contractor’s CARES agreement, Contractor shall collect and provide CARES with the following cardiac

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arrest hospital outcome data that includes but not limited to current CARES hospital specific data elements:

- a) Emergency Department outcome
 - b) Was hypothermia care initiated/continued in the hospital?
 - c) Hospital outcome
 - d) Discharge from the hospital
 - e) Neurological outcome at discharge from hospital
 - f) Was final diagnosis acute myocardial infarction?
 - g) Coronary Angiography performed?
 - h) Was a cardiac stent placed?
 - i) CABG performed?
 - j) Was an ICD placed and/or scheduled?
- 6.5 Contractor shall allow the use of provided data for IRB approved clinical research without hospital identifiers.
- 6.6 The data further specified in Exhibits B1-4 shall be provided to the EMS Agency in the timeline and manner defined, until a Bidirectional Healthcare Data Exchange (BHDE) network is established between County EMS and the SRC/CARC Contractor.
- 6.7 The Contractor and County EMS are both fully committed to establishing a Bidirectional Healthcare Data Exchange (BHDE) during the Term of this Agreement.
- 6.7.1 The Contractor and County EMS will collaborate and agree in the design, and implementation of the BHDE on an agreed upon timeframe.
- 6.7.2 The development of the BHDE shall address the Contractor's information security standards.
- 6.7.3 The cost to establish the BHDE network between County EMS and the Contractor shall be fairly shared by apportionment as agreed upon by both parties.
- 6.7.4 When BHDE details are finalized, Agreement will be amended to add agreed terms as an appendix to this Agreement.
- 6.8 The BHDE network established between County EMS and the Contractor must be interoperable with other data systems, including the functionality to exchange electronic patient health information in real-time with other entities in an HL7 format.
- 6.9 The BHDE network is expected to address the following components (with details to be agreed by the parties):
- 6.9.1 Search a patient's health record for problems, medications, allergies, and end of life decisions to enhance clinical decision-making;

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- 6.9.2 Alert the receiving hospital regarding the patient's status directly onto a dashboard in the emergency department to provide decision support;
 - 6.9.3 File the EMS Patient Care Report data directly into the patient's electronic health record for timely and longitudinal patient care documentation;
 - 6.9.4 Reconcile the electronic health record information including diagnoses and disposition back into the EMS patient care report for use in ensuring timely provider feedback and enhanced quality improvement strategies for the County EMS system.
- 6.10 Any access to, or exchange of, individually identifiable health information or protected health information shall comply with the requirements of the Health Insurance Portability and Accountability Act (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HiTECH).

**7. QUALITY IMPROVEMENT AND EVALUATION PROCESS
(Exhibit D, 22 CCR § 100270.127.)**

(a) Each STEMI critical care system shall have a quality improvement process that shall include, at a minimum:

- (1) Evaluation of program structure, process, and outcome.
- (2) Review of STEMI-related deaths, major complications, and transfers.
- (3) A multidisciplinary STEMI Quality Improvement Committee, including both prehospital and hospital members.
- (4) Participation in the QI process by all designated STEMI centers and prehospital providers involved in the STEMI critical care system.
- (5) Evaluation of regional integration of STEMI patient movement.
- (6) Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases.

(b) The local EMS agency shall be responsible for on-going performance evaluation and quality improvement of the STEMI critical care system.

- 7.1 STEMI/Cardiac Arrest Receiving Center Program staff shall participate in Alameda County EMS quarterly SRC/CARC QI Committee meetings, with a minimum attendance requirement of two / year. Each SRC/CARC shall provide at minimum,

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multi-disciplinary representation including one decision-making representative from Emergency Medicine, Cardiology and Critical Care at every meeting attended.

- 7.2 Hospital shall maintain a written internal quality improvement plan for STEMI, Cardiac Arrest and Post Cardiac Arrest patients that includes, but is not limited to the determination and evaluation of:
 - a) Death rate
 - b) Complications
 - c) Sentinel events
 - d) System issues
 - e) Organizational issues and resolution processes
- 7.3 Hospital shall support EMS Agency QI activities including educational activities for prehospital personnel.
- 7.4 **CONTRACTOR shall provide a minimum of one hour of annual EMS education/training (virtual or in person). EMS education should focus on the recognition, treatment, and transport of Acute Coronary Syndromes (ACS): including but not limited to ST-Elevation Myocardial Infarction (STEMI), Non-ST-Elevation ACS (NSTEMI-ACS) and ACS mimics.**
- 7.5 STEMI/Cardiac Arrest Receiving Center Program staff shall actively participate in system wide consortium meetings of Alameda County Cardiac Arrest Receiving Centers. This consortium will have the mission and intention to standardize clinical strategies and protocols regarding the care of post-OHCA patients. Each SRC/CARC shall provide at minimum, one decision-making representative from the ED, Cardiology and the ICU at every meeting.

8. COMPLIANCE

- 8.1 Contractor shall provide continuous Oversight for ALL sections as described in Exhibit A and D
- 8.2 Contractor shall advise ALCO EMS immediately regarding any changes that would result in non-compliance with any section in Exhibit A.
- 8.3 Contractor shall participate in an annual review regarding modifications of any and compliance with ALL sections as described in Exhibit A and a three-year review for Exhibit D.
- 8.4 Material failure by Contractor to comply with any section(s) as described in Exhibit A, B and D may result in the loss of EMS STEMI and or Cardiac Arrest/Post-Cardiac Arrest patients transported to contractor's SRC/CARC for potential intervention until compliance issue(s) is resolved.

9. PREHOSPITAL STEMI CRITICAL CARE SYSTEM REQUIREMENTS (Exhibit D, Article 3. § 100270.123. EMS Personnel and Early Recognition)

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(a) The local EMS agency with an established STEMI critical care system shall have protocols for the identification and treatment of STEMI patients, including paramedic performance of a 12-lead ECG and determination of the patient destination.

(b) The findings of 12-lead ECG shall be assessed and interpreted through one or more of the following methods:

(1) Direct paramedic interpretation.

(2) Automated computer algorithm.

(3) Wireless transmission to facility followed by physician interpretation or confirmation.

(c) Notification of prehospital ECG findings of suspected STEMI patients, as defined by the local EMS agency, shall be communicated in advance of the arrival to the STEMI centers according to the local EMS agency's STEMI Critical Care System Plan.

County shall also keep in effect the following:

9.1 Make electronic prehospital patient care records available to Contractor via computer for all STEMI and/or Cardiac Arrest patients taken by 911 ambulance to Contractor's facilities.

9.2 Maintain the confidentiality of all patient information and data (includes de-identified data) provided by Contractor and use such information solely for the local EMS Agency's internal quality improvement, peer review and oversight functions as mandated/authorized by law or regulation. County also agrees to not identify Contractor by name in any aggregate report of the data or release any reports or data showing individual hospital performance unless agreed to by contractor or required by law. Notwithstanding anything in this Agreement to the contrary, the parties acknowledge and agree that Contractor shall not be required to disclose any patient information or other data to the COUNTY to the extent not otherwise permitted or required by applicable laws or regulations.

9.3 Provide to Contractor and/or the STEMI/CARC Quality Improvement Committee prehospital system data, including patient destination data, related to STEMI and Cardiac Arrest/Post- Cardiac Arrest care.

9.4 Meet and consult with Contractor prior to the adoption of any policy or procedure that concerns the administration of the STEMI and Cardiac Arrest/Post-Cardiac Arrest Care System, STEMI/Cardiac Arrest public education efforts or the triage, transport and treatment of STEMI/Cardiac Arrest/Post-Cardiac Arrest patients.

9.5 In order to improve quality of care, direct 911 ambulance transport providers to inform hospital of identification of patients determined to have STEMI and/or have experienced Cardiac Arrest prior to the patient's arrival at hospital.

9.6 Transport suspected STEMI, Cardiac Arrest and Post-Cardiac Arrest patients to Contractor in accordance with County EMS field assessment, treatment and transport protocols.

EXHIBIT B – DATA ELEMENTS

As set forth in Section 4 of the Agreement and in Section 6 of Exhibit A to the Agreement, Contractor shall provide the specified data elements in the formats established by the ALCO EMS Agency and included in this Exhibit B: (B-1, B-2, B-3, B-4, etc.)

B-1

Contractor shall collect continuous aggregate (de-identified) performance measures using data elements below, submit and present to ALCO EMS on an annual basis at ALCO SRC/CARC meeting: (6.1.1-6.1.7)

B1

Alameda County EMS SRC Annual Performance Data

1. # of patients identified by EMS STEMI ALERT and transported to SRC?
 - 1a. # of patients identified by EMS STEMI ALERT and transported to SRC who went for emergency angiography?
 - 1b. # of patients identified by EMS STEMI ALERT and transported to SRC who received primary PCI?
 - 1c. Median time to PCI for patients identified by EMS STEMI ALERT and transported to SRC who received primary PCI?

 2. # of patients identified by from another acute care hospital ED with possible STEMI and transferred (IFT) to SRC?
 - 2a. # of patients identified by from another acute care hospital ED with possible STEMI and transferred (IFT) to SRC who received primary PCI?
 - 2b. Median time to PCI for patients identified by from another acute care hospital ED with possible STEMI and transferred (IFT) to SRC who received primary PCI?

 3. # of walk-in SRC patients identified in ED with possible STEMI?
 - 3a. # of walk-in SRC patients identified in ED with possible STEMI who received primary PCI?
-

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3b. Median time to PCI for walk-in SRC patients identified in ED with possible STEMI who received primary PCI? B-2 Contractor shall collect continuous aggregate (de-identified) performance measures using NCDR data elements from either CathPCI and submit to ALCO EMS for review on request via NCDR CathPCI "EXECUTIVE SUMMARY": (6.1.8-6.1.9)

B-2

Contractor shall provide SRC performance and clinical outcome data for individual EMS patients transported with suspected STEMI. Patient specific Follow-Up data shall include but not limited to data elements listed below and required by 22 CCR § 100270.126.), and shall be entered into GWTG-CAD registry for timely ALCO EMS "read-only" access via "Super User" agreement. EMS patients shall be identified by a unique incident number provided by EMS and entered by SRC (6).

B2

STEMI Activation / IFT Follow-up

(1) The STEMI patient data elements:

- (A) EMS ePCR Number.
- (B) Facility.
- (C) Name: Last, First.
- (D) Date of Birth.
- (E) Patient Age.
- (F) Patient Gender.
- (G) Patient Race.
- (H) Hospital Arrival Date.
- (I) Hospital Arrival Time.
- (J) Dispatch Date.
- (K) Dispatch Time.
- (L) Field ECG Performed.
- (M) 1st ECG Date.
- (N) 1st ECG Time.
- (O) Did the patient suffer out-of-hospital cardiac arrest.
- (P) CATH LAB Activated.
- (Q) CATH LAB Activation Date.
- (R) CATH LAB Activation Time.
- (S) Did the patient go to the CATH LAB.
- (T) CATH LAB Arrival Date.
- (U) CATH LAB Arrival Time.
- (V) PCI Performed.
- (W) PCI Date.

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- (X) PCI Time.
- (Y) Fibrinolytic Infusion.
- (Z) Fibrinolytic Infusion Date.
- (AA) Fibrinolytic Infusion Time.
- (BB) Transfer.
- (CC) SRH ED Arrival Date.
- (DD) SRH ED Arrival Time.
- (EE) SRH ED Departure Date.
- (FF) SRH ED Departure Time.
- (GG) Hospital Discharge Date.
- (HH) Patient Outcome.
- (II) Primary and Secondary Discharge Diagnosis.

Exceptions for delay to PCI:

(V-Fib/D-Fib, Cardiac arrest/CPR, Intubation, CT r/o head bleed, TEE r/o aortic dissection)

EMS Patient Inclusion Criteria (STEMI Activation / ITF follow-up)

All patients who:

have a prehospital ECG interpreted by EMS as suspected STEMI/equivalent and transported to a PCI capable hospital (SRC) for potential intervention; **OR,**

are in the ED of an acute care hospital without PCI capability (RH), have an ECG interpreted as STEMI/equivalent and are transferred by EMS to a PCI-capable hospital (SRC) for potential intervention; **OR,**

have experienced witnessed out-of-hospital sudden cardiac arrest (SCA) of suspected cardiac etiology, or with an initial EMS ECG rhythm of V/F or V/T, or were shocked by AED prior to EMS arrival, or have return of spontaneous circulation with an ECG interpreted as STEMI/equivalent following SCA and transported to a PCI capable hospital (SRC) for potential intervention.

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Contractor shall provide clinical outcome data for individual EMS patients transported with suspected Cardiac Arrest and or Post Cardiac Arrest. Patient specific Follow-Up data shall include but not be limited to data elements listed below and shall be collected and sent to CARES via designated SECURE website as soon as possible following patient encounter or within 30 calendar days of receipt of patient follow-up list sent by CARES. (6.5)

CARES HOSPITAL DATASET FOR CARDIAC ARREST / POST CARDIAC ARREST

EMERGENCY Department OUTCOME

Description

- The final disposition of the patient from the emergency department.
- This variable will be used to quantify the outcome of the patient from emergency department specifically. It will be used to differentiate the outcome in the field (EMS resuscitation) and the outcome from the hospital (hospital survival) from the outcome in the emergency department.

Instructions for Coding

- This variable should not be left blank. All the information from the EMS trip sheet and patient medical record should be used to complete this data field.
- If “Transferred to another acute care facility from the emergency department” (Code 4) is selected, the destination hospital should be documented using the corresponding drop-down menu. If a transfer hospital is not selected, CARES will prompt the user to choose one from the drop-down menu or to type the name of the facility (if not listed) in the comments box.
- Codes for hospitals receiving transfers are established through the CARES registry for each particular EMS Agency. Contact the CARES Coordinator if the correct hospital is not located on the drop-down menu.

Field Values:

| Code | Definition |
|-------------|--|
| 1 | Resuscitation terminated in ED |
| 2 | Admitted to hospital |
| 3 | Transferred to another acute care facility from the emergency department |

Examples:

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| Example | Appropriate Code/Value |
|--|--|
| Patient was received in the ED after successful resuscitation in the field by EMS personnel. Patient blood pressure was labile upon receiving in the ED and continued to deteriorate.....Patient was pronounced dead in the ED 20 minutes after arrival. | 1 – Resuscitation terminated in ED |
| Patient was received in the ED after successful resuscitation in the field by EMS personnel. Patient blood pressure was adequate upon receiving in the ED and continued to improve after the addition of Dopamine...Patient was transported to the CCU. | 2 – Admitted to hospital |
| Patient was received in the ED with ongoing resuscitation by EMS personnel. Patient was stabilized in the ED after the addition of Dopamine.....Patient was transported to Pine Valley Tertiary Care Hospital for further intervention. | 3 – Transferred to another acute care facility from the emergency department |

WAS HYPOTHERMIA CARE INITIATED/CONTINUED IN THE HOSPITAL

Description

- Hypothermia care is provided in the hospital if measures were taken to reduce the patient’s body temperature by either non-invasive means (administration of cold intravenous saline, external cold pack application to armpits and groin, use of a cooling blanket, torso vest or leg wrap devices) or by invasive means (use of a cooling catheter inserted in the femoral vein).

Instructions for Coding

- Indicate “Yes” or “No”
- Indicate whether hypothermia procedures (e.g. external cooling-ice packs or cooling blankets/pads and internal cooling – cold IV fusion or invasive catheter lines for internal cooling) were performed in ED.
- If the patient is admitted or transferred, then this field is required.
- This field should not be left blank, even if a facility is not providing hypothermia. If hypothermia is not being provided, then “No” should be selected.
- In the case of a transfer, this field should be completed by the original destination hospital.

Field Values:

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| Code | Definition |
|------|------------|
| 1 | Yes |
| 2 | No |

HOSPITAL OUTCOME

Description

- The final disposition of the patient from the hospital.
- This variable will be used to quantify the outcome of the patient from the hospital.

Instructions for Coding

- This variable should not be left blank. All the information from patient medical record and discharge summary should be used to complete this data field.
- If “Transferred to another acute care facility” (Code 4) is selected, the destination hospital should be documented using the corresponding drop-down menu. If a transfer hospital is not selected, CARES will prompt the user to choose one from the drop-down menu or to type the name of the facility (if not listed) in the comments box.
- If “Patient has not been disposed” (Code 8) is selected, the patient will remain in the hospital’s inbox until the patient has been discharged and a final outcome has been selected.
- Codes for hospitals receiving transfers are established through the CARES registry for each particular EMS Agency. Contact the CARES Coordinator if the correct hospital is not located on the drop-down menu.

Field Values:

| Code | Definition |
|------|--|
| 1 | Died in the Hospital |
| 2 | Discharged Alive |
| 3 | Patient made DNR |
| | If yes, choose one of the following: |
| | ○ Died in the hospital |
| | ○ Discharged alive |
| | ○ Transferred to another acute care hospital |

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|---|--|
| | ○ Not yet determined |
| 4 | Transferred to another acute care hospital |
| 8 | Not yet determined |

Examples:

| Example | Appropriate Code/Value |
|--|-----------------------------------|
| Patient was admitted to CCU after successful resuscitation from sudden cardiac arrest. Patient became unstable after 2 days in the CCU. Blood pressure could not be maintained after pharmacological support. Patient arrested at 04:30 after being admitted to the CCU Resuscitation attempts were unsuccessful and patient was pronounced dead at 6:00. | 1 – Died in the Hospital |
| Patient was received in the ED after successful resuscitation in the field by EMS personnel. Patient blood pressure was adequate upon receiving in the ED and continued to improve after the addition of Dopamine.....Patient was transported to the CCU.....Patient remained stable and Dopamine was weaned off in 12 hours. Patient was transferred to the floor and discharged home after one week in the hospital. | 2 – Discharged Alive |
| Patient was admitted to CCU after successful resuscitation from sudden cardiac arrest. Patient is still in the CCU and has not yet been discharged from the hospital. | 8 – Patient has not been disposed |

DISCHARGE FROM THE HOSPITAL

Description

- This variable will be used to determine the type of destination and the frequency of each destination type for discharged patients.

Instructions for Coding

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- If the field “Hospital Outcome” has a value of “Discharged Alive,” this variable should not be left blank. All the information from patient medical record and discharge summary should be used to complete this data field.
- Rehabilitation facility is defined as an establishment for “treatment or treatments designed to facilitate the process of recovery from injury, illness, or disease to as normal a condition as possible.”
- Skilled nursing facility is defined as “an establishment that houses chronically ill, usually elderly patients, and provides long-term nursing care, rehabilitation, and other services. Also called *long-term care facility, nursing home*. Hospice facility is defined as a providing special care for people who are near the end of their life. Note: If a patient is discharged home with hospice care, this should be coded as “Home/residence.”

Field Values:

| Code | Definition |
|------|----------------------------------|
| 1 | Home/residence |
| 2 | Rehabilitation facility |
| 3 | Skilled nursing facility/Hospice |

Examples:

| Example | Appropriate Code/Value |
|---|--------------------------------------|
| After two weeks in the CCU following sudden cardiac arrest, and a week on the floor, the patient was discharged home with follow up orders. | 1 – Home/residence |
| After 3 weeks in the CCU and 5 weeks on the floor patient was transported to Sunshine Rehabilitation Hospital for further treatment. | 2 – Rehabilitation facility |
| After an extensive stay at Memorial Hospital, the patient was discharged home with severe cerebral disability in hospice care. | 3 – Skilled nursing facility/Hospice |

NEUROLOGICAL OUTCOME AT DISCHARGE FROM HOSPITAL

Description

- Survival without higher neurological outcome is suboptimal; therefore it is important to attempt to assess neurological outcome at discharge.

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- This variable will be used to determine the frequency of neurological outcome in resuscitation survivors at the time of discharge.

Instructions for Coding

- The level of cerebral performance of the patient at the time of discharge from the hospital. The following simple, validated neurological score is referred to as the Cerebral Performance Category, CPC.
- 1 = Good Cerebral Performance – Conscious, alert, able to work and lead a normal life.
- 2 = Moderate Cerebral Disability – Conscious and able to function independently (dress, travel, prepare food), but may have hemiplegia, seizures, or permanent memory or mental changes.
- 3 = Severe Cerebral Disability – Conscious, dependent on others for daily support, functions only in an institution or at home with exceptional family effort.
- 4 = Coma, vegetative state.
- If the field “Hospital Outcome” has a value of “Discharged Alive,” this variable should not be left blank. All the information from patient medical record and discharge summary should be used to complete this data field.
- If a record is coded as discharged to a 'Rehabilitation Facility' or 'Skilled Nursing Facility/Hospice' with 'Good Cerebral Performance' at time of discharge, CARES will prompt the use to clarify in the comments box.
- If a record is coded as discharged to 'Home/residence' with 'Severe Cerebral Performance' or 'Coma, vegetative state' at time of discharge, CARES will prompt the user to clarify in the comments box.

Field Values:

| Code | Definition |
|------|-------------------------------------|
| 1 | Good Cerebral Performance; CPC 1 |
| 2 | Moderate Cerebral Disability; CPC 2 |
| 3 | Severe Cerebral Disability; CPC 3 |
| 4 | Coma, vegetative state; CPC 4 |

Examples:

| Example | Appropriate Code/Value |
|--|-------------------------------|
| At discharge, patient was conscious, alert, and able to work and lead a normal life. | 1 – Good Cerebral Performance |
| At discharge, patient was conscious and able to function independently but | 2 – Moderate Cerebral |

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|--|--------------------------------|
| had some permanent memory changes. | Disability |
| At discharge, patient was unable to function independently with severe cognitive disability, | 3 - Severe Cerebral Disability |
| Patient was in a vegetative state at time of discharge. | 4 - Coma, vegetative state |

WAS FINAL DIAGNOSIS ACUTE MYOCARDIAL INFARCTION?

Description

- Determine the number of cardiac arrests that were eventually confirmed as a myocardial infarction.

Instructions for Coding

- Indicate “Yes” or “No”
- In the case of a transfer, this field should be completed by the destination hospital.

Field Values:

| Code | Definition |
|------|------------|
| 1 | Yes |
| 2 | No |

CORONARY ANGIOGRAPHY PERFORMED?

Definition:

- Coronary Angiography is a therapeutic procedure used to treat the stenotic (narrowed) coronary arteries of the heart.
- Indicate whether emergency coronary angiography was performed after patient has ROSC

Coding Instruction:

- If yes, please provide date and time of the coronary angiography

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| Code | Options |
|------|-------------------------------|
| 1 | Yes |
| 2 | No |
| 3 | Unknown |
| | If yes, provide date and time |

Examples:

| Example | Appropriate Code/Value |
|--|--------------------------------|
| Coronary Angiography was performed on the patient. | 1 – Yes; provide date and time |
| Coronary Angiography was not performed on the patient. | 2 – No |

WAS A CARDIAC STENT PLACED?

Definition:

- A cardiac stent is a small mesh tube that is introduced into the coronary artery and is used to prop it open during a PCI procedure

Coding Instruction:

| Code | Options |
|------|---------|
| 1 | Yes |
| 2 | No |
| 3 | Unknown |

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Examples:

| Example | Appropriate Code/Value |
|---------------------------------|-------------------------------|
| A cardiac stent was placed. | 1 – Yes |
| A cardiac stent was not placed. | 2 – No |

CABG PERFORMED?

Definition:

- CABG is defined as a coronary artery bypass graft

Coding Instruction:

- Indicate whether CABG was performed after patient has ROSC.

| Code | Options |
|-------------|----------------|
| 1 | Yes |
| 2 | No |
| 3 | Unknown |

Examples:

| Example | Appropriate Code/Value |
|--|-------------------------------|
| CABG was performed on the patient. | 1 – Yes |
| CABG was not performed on the patient. | 2 – No |

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WAS AN ICD PLACED AND/OR SCHEDULED?

Definition:

- ICD - An implantable cardioverter-defibrillator (ICD) is a small battery powered electrical impulse generator which is implanted in patients who are at risk of sudden cardiac death due to vfib and vtach.

Coding Instructions:

- Indicate “yes” if ICD was placed and/or scheduled.

| Code | Options |
|------|---------|
| 1 | Yes |
| 2 | No |
| 3 | Unknown |

Examples:

| Example | Appropriate Code/Value |
|---------------------|------------------------|
| ICD was placed. | 1 - Yes |
| ICD was not placed. | 2 - No |

EXHIBIT C – SRC/CARC APPLICATION

HOSPITALS _____ January 1, 2020

STEMI/CARDIAC ARREST RECEIVING CENTER (SRC/CARC) APPLICATION (# 5501)

Hospital Name: _____ **Date:** ____/____/____

Dedicated phone number for paramedic call-ins: (____) ____ - ____

Does your hospital have a special permit for cardiac catheterization? Yes No

Number of percutaneous coronary interventions (PCI)¹ per year:

Does your hospital have a special permit for cardiovascular surgery? Yes No

Name of proposed SRC program Medical Director:

Meets the requirements for SRC Medical Director in section 3.1? Yes No

Name of proposed SRC Program Manager:

Meets the requirements for SRC Program Manager in section 3.2? Yes No

Catheterization lab contact: Name: _____ **Phone:** (____) ____ - ____

Name of proposed CARC program Medical Director:

Meets the requirements for CARC Medical Director in section 3.3? Yes No

Name of proposed CARC Program Manager:

Meets the requirements for CARC Program Manager in section 3.4? Yes No

| CARDIOLOGISTS PROPOSED FOR ON-CALL LIST | |
|--|---|
| Name: | Number of PCIs per year²: |
| | |
| | |
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Does your hospital participate in the ACC/NCDR and or AHA GWTG-CAD? Yes No,
if yes, CathPCI GWTG-CAD

Does your hospital have a cardiovascular surgical on-call staff available 24/7? Yes No

Does your hospital have the capability to place an intra-aortic balloon pump? Yes No

Does your hospital have Intra-aortic balloon pump staff on-call 24/7? Yes No

Does your hospital have a policy on the treatment of ST-elevation myocardial infarction that emphasizes rapid treatment and meets the requirements of sections 4 and 5? Yes No

Does your hospital collect data and have quality improvement policies that meet the requirements of sections 6 and 7? Yes No

Does your hospital have a data system that identifies the time the cath lab team was notified and time of first device deployment? Yes No

Does your hospital have the electronic capability to receive diagnostic quality ECG's transmitted by prehospital personnel? Yes No

Does your hospital have a designated priority phone line for use by prehospital personnel to contact your facility regarding suspected STEMI patients prior to arrival? Yes No
(____)____-_____

CARDIAC ARREST AND POST CARDIAC ARREST CARE:

Does your hospital have the capability to provide resuscitation for cardiopulmonary arrest with an ALCO EMS approved radiolucent mechanical CPR device? Yes No

Does your hospital have the capability to provide ECMO?
 Yes NO

If no, does your hospital have a written agreement with another facility to provide

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ECMO services? Yes NO

Does your hospital have the capability and standardized protocol to provide Targeted Temperature Management in ED and ICU 24/7? Yes No

Does your hospital have the capability to provide emergent PCI 24/7? Yes No

Does your hospital have the capability to provide post-resuscitation care for cardiac arrest? Yes No

Does your hospital have the capability to provide ventilator support? Yes No

Does your hospital have the capability to provide EEG monitoring? Yes No

Does your hospital have the capability to provide cardiac arrest consult service? Yes No

Does your hospital have the capability to provide Neurology Consultation? Yes No

Does your hospital have the capability to provide Neurosurgical Consultation? Yes No

Does your hospital have the capability to provide Organ Bank consultation? Yes No

Does your hospital have the capability to provide Electrophysiology Consultation? Yes No

Does your hospital have the capability to provide Social Work Consultation? Yes No

Does your hospital have the capability to provide Inpatient physical and or occupational therapy? Yes No

Does your hospital have the capability to provide Outpatient physical and or occupational therapy? Yes No

Does your hospital have the capability to provide Outpatient neurological rehabilitation? Yes No

Does your hospital have the capability to provide Outpatient psychological services? Yes No

Does your hospital have the capability to provide CPR training: Professional, community and patient's family on discharge? Yes No

Is your hospital currently participating in the Cardiac Arrest Registry to Enhance Survival (CARES)? Yes No

Does your hospital have the capability to provide ECMO? Yes No

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If not, does your hospital have an agreement with one that does?

Yes No

¹ PCI is defined as a therapeutic coronary intervention such as angioplasty, stent placement etc.

² Total personally performed PCIs per year at all institutions, not just this center.

This would include any PCI as defined above and not restricted to acute myocardial infarction.

STEMI RECEIVING CENTER (SRC/CARC) APPLICATION (# 5501)

EXHIBIT D – CALIFORNIA REGULATIONS: STEMI SYSTEM OF CARE

**California Code of Regulations
Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System
ARTICLE 1. DEFINITIONS**

§ 100270.101. Cardiac Catheterization Laboratory

“Cardiac catheterization laboratory” or “Cath lab” means the setting within the hospital where diagnostic and therapeutic procedures are performed on patients with cardiovascular disease.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.102. Cardiac Catheterization Team

“Cardiac catheterization team” means the specially trained health care professionals that perform percutaneous coronary intervention. It may include, but is not limited to, an interventional cardiologist, mid-level practitioners, registered nurses, technicians, and other health care professionals.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.103. Clinical Staff

“Clinical staff” means individuals that have specific training and experience in the treatment and management of ST-Elevation Myocardial Infarction (STEMI) patients. This includes, but is not limited to, physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.104. Emergency Medical Services Authority

“Emergency Medical Services Authority” or “EMS Authority” or “EMSA” means the department in California responsible for the coordination and integration of all state activities concerning EMS.

Note: Authority cited: Sections 1797.1, 1797.107 and 1797.54, Health and Safety Code.

Reference: Sections 1797.100, and 1797.103, Health and Safety Code.

§ 100270.105. Immediately Available

“Immediately available” means:

- (a) Unencumbered by conflicting duties or responsibilities.
- (b) Responding without delay upon receiving notification.
- (c) Being physically available to the specified area of the hospital when the patient is delivered in accordance with local EMS agency policies and procedures.

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Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.106. Implementation

“Implementation,” “implemented,” or “has implemented” means the development and activation of a STEMI Critical Care System Plan by the local EMS agency, including the prehospital and hospital care components in accordance with the plan.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.107. Interfacility Transfer

“Interfacility transfer” means the transfer of a STEMI patient from one acute general care facility to another acute general care facility.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176 and 1798.170, Health and Safety Code.

§ 100270.108. Local Emergency Medical Services Agency

“Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility for administration of emergency medical services in a county or region and which is designated pursuant Health and Safety Code commencing with section 1797.200.

Note: Authority cited: Sections 1797.107, 1797.200 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.109. Percutaneous Coronary Intervention (PCI)

“Percutaneous coronary intervention” or “PCI” means a procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart, usually done on an emergency basis for a STEMI patient.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference:

Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.110. Quality Improvement

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

Note: Authority cited: Sections 1797.103, 1797.107, 1797.174, 1797.176 and 1798.150

Health and Safety Code. Reference: Sections 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.

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§ 100270.111. ST-Elevation Myocardial Infarction (STEMI)

“ST-Elevation Myocardial Infarction” or “STEMI” means a clinical syndrome defined by symptoms of myocardial infarction in association with ST-segment elevation on Electrocardiogram (ECG).

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.112. STEMI Care

“STEMI care” means emergency cardiac care, for the purposes of these regulations.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.113. STEMI Medical Director

“STEMI medical director” means a qualified board-certified physician by the American Board of Medical Specialties (ABMS) as defined by the local EMS agency and designated by the hospital that is responsible for the STEMI program, performance improvement, and patient safety programs related to a STEMI critical care system.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.114. STEMI Patient

“STEMI patient” means a patient with symptoms of myocardial infarction in association with ST-Segment Elevation in an ECG.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.

§ 100270.115. STEMI Program

“STEMI program” means an organizational component of the hospital specializing in the care of STEMI patients.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.116. STEMI Program Manager

“STEMI program manager” means a registered nurse or qualified individual as defined by the local EMS agency, and designated by the hospital responsible for monitoring, coordinating and evaluating the STEMI program.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.117. STEMI Receiving Center (SRC)

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“STEMI receiving center” or “SRC” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.124 and is able to perform PCI.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.

§ 100270.118. STEMI Referring Hospital (SRH)

“STEMI referring hospital” or “SRH” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.125.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.

§ 100270.119. STEMI Critical Care System

“STEMI critical care system” means a critical care component of the EMS system developed by a local EMS agency that links prehospital and hospital care to deliver treatment to STEMI patients.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.120. STEMI Team

“STEMI team” means clinical personnel, support personnel, and administrative staff that function together as part of the hospital’s STEMI program.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

ARTICLE 2. LOCAL EMS AGENCY STEMI CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.121. STEMI Critical Care System Plan

- (a) The local EMS agency may develop and implement a STEMI critical care system.
- (b) The local EMS agency implementing a STEMI critical care system shall have a STEMI Critical Care System Plan approved by the EMS Authority prior to implementation.
- (c) A STEMI Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all of the following components:
 - (1) The names and titles of the local EMS agency personnel who have a role in a STEMI critical care system.
 - (2) The list of STEMI designated facilities with the agreement expiration dates.

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- (3) A description or a copy of the local EMS agency's STEMI patient identification and destination policies.
- (4) A description or a copy of the method of field communication to the receiving hospital specific to STEMI patient, designed to expedite time-sensitive treatment on arrival.
- (5) A description or a copy of the policy that facilitates the inter-facility transfer of a STEMI patient.
- (6) A description of the method of data collection from the EMS providers and designated STEMI hospitals to the local EMS agency and the EMS Authority.
- (7) A policy or description of how the local EMS agency integrates a receiving center in a neighboring jurisdiction.
- (8) A description of the integration of STEMI into an existing quality improvement committee or a description of any STEMI specific quality improvement committee.
- (9) A description of programs to conduct or promote public education specific to cardiac care.
- (d) The EMS Authority shall, within 30-days of receiving a request for approval, notify the requesting local EMS agency in writing of approval or disapproval of its STEMI Critical Care System Plan. If the STEMI Critical Care System Plan is disapproved, the response shall include the reason(s) for the disapproval and any required corrective action items.
- (e) The local EMS agency shall provide a corrected plan to the EMS Authority within 60 days of receipt of the disapproval letter.
- (f) The local EMS agency currently operating a STEMI critical care system implemented before the effective date of these regulations, shall submit to the EMS Authority a STEMI Critical Care System Plan as an addendum to its next annual EMS plan update, or within 180-days of the effective date of these regulations, whichever comes first.
- (g) After approval of the STEMI Critical Care System Plan, the local EMS agency shall submit an update to the plan as part of its annual EMS update, consistent with the requirements in Section 100270.122.
- (h) No health care facility shall advertise in any manner or otherwise hold itself out to be affiliated with a STEMI critical care system or a STEMI center unless they have been so designated by the local EMS agency, in accordance with this chapter.

Note: Authority cited: Sections 1797.107, 1797.103, 1797.105, 1797.250, 1797.254 and

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1798.150, Health and Safety Code. Reference: Section 1797.176 and 1797.220, Health and Safety Code.

§100270.122. STEMI Critical Care System Plan Updates

(a) The local EMS agency shall submit an annual update of its STEMI Critical Care System Plan, as part of its annual EMS plan submittal, which shall include, at a minimum, all the following:

- (1) Any changes in a STEMI critical care system since submission of the prior annual plan update or a STEMI Critical Care System Plan addendum.
- (2) The status of a STEMI critical care system goals and objectives.
- (3) The STEMI critical care system quality improvement activities.
- (4) The progress on addressing action items and recommendations provided by the EMS Authority within the STEMI Critical Care System Plan or status report approval letter if applicable.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.176, 1797.250, 1797.254, 1798.150, and 1798.172, Health and Safety Code. Reference: Section 1797.176, 1797.220, 1797.222, 1798.170, Health and Safety Code.

ARTICLE 3. PREHOSPITAL STEMI CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.123. EMS Personnel and Early Recognition

(a) The local EMS agency with an established STEMI critical care system shall have protocols for the identification and treatment of STEMI patients, including paramedic performance of a 12-lead ECG and determination of the patient destination.

(b) The findings of 12-lead ECG shall be assessed and interpreted through one or more of the following methods:

- (1) Direct paramedic interpretation.
- (2) Automated computer algorithm.
- (3) Wireless transmission to facility followed by physician interpretation or confirmation.

(c) Notification of prehospital ECG findings of suspected STEMI patients, as defined by the local EMS agency, shall be communicated in advance of the arrival to the STEMI centers according to the local EMS agency's STEMI Critical Care System Plan.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.114, 1797.176, 1797.206, 1797.214 and 1798.150, Health and Safety Code. Reference: Section 1797.176,

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1797.220, 1798, 1798.150 and 1798.170, Health and Safety Code.

ARTICLE 4. STEMI CRITICAL CARE FACILITY REQUIREMENTS

§ 100270.124. STEMI Receiving Center Requirements

(a) The following minimum criteria shall be used by the local EMS agency for the designation of a STEMI receiving center:

- (1) The hospital shall have established protocols for triage, diagnosis, and Cath lab activation following field notification.
- (2) The hospital shall have a single call activation system to activate the Cardiac Catheterization Team directly.
- (3) Written protocols shall be in place for the identification of STEMI patients.
 - (A) At a minimum, these written protocols shall be applicable in the intensive care unit/coronary care unit, Cath lab and the emergency department.
- (4) The hospital shall be available for treatment of STEMI patients twenty-four (24) hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year.
- (5) The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients.
- (6) The hospital shall maintain STEMI team and Cardiac Catheterization Team call rosters.
- (7) The Cardiac Catheterization Team, including appropriate staff determined by the local EMS agency, shall be immediately available.
- (8) The hospital shall agree to accept all STEMI patients according to the local policy.
- (9) STEMI receiving centers shall comply with the requirement for a minimum volume of procedures for designation required by the local EMS agency.
- (10) The hospital shall have a STEMI program manager and a STEMI medical director.
- (11) The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.
- (12) The hospital shall participate in the local EMS agency quality improvement processes related to a STEMI critical care system.

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(13) A STEMI receiving center without cardiac surgery capability on-site shall have a written transfer plan and agreements for transfer to a facility with cardiovascular surgery capability.

(14) A STEMI receiving center shall have reviews by local EMS agency or other designated agency conducted every three years.

(b) A STEMI center designated by the local EMS agency prior to implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, STEMI centers shall be re-evaluated to meet the criteria established in these regulations.

(c) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.176, 1797.220, and 1798.150, 1798.167 and 1798.172, Health and Safety Code. Reference: Section 1797.176, 1797.220, 1798, 1798.150 and 1798.170 Health and Safety Code.

§ 100270.125. STEMI Referring Hospital Requirements

(a) The following minimum criteria shall be used by the local EMS agency for designation of a STEMI referring hospital:

(1) The hospital shall be committed to supporting the STEMI Program.

(2) The hospital shall be available to provide care for STEMI patients twenty-four (24) hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year.

(3) Written protocols shall be in place to identify STEMI patients and provide an optimal reperfusion strategy, using fibrinolytic therapy .

(4) The emergency department shall maintain a standardized procedure for the treatment of STEMI patients.

(5) The hospital shall have a transfer process through interfacility transfer agreements, and have pre-arranged agreements with EMS ambulance providers for rapid transport of STEMI patients to a SRC.

(6) The hospital shall have a program to track and improve treatment of STEMI patients.

(7) The hospital must have a plan to work with a STEMI receiving center and the local EMS agency on quality improvement processes.

(8) A STEMI referring hospital designated by the local EMS agency shall have a review

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conducted every three years.

(b) A STEMI center designated by the local EMS agency prior to implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, STEMI centers shall be re-evaluated to meet the criteria established in these regulations.

(c) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.176, 1797.220, and 1798.150, 1798.167 and 1798.172, Health and Safety Code. Reference: Section 1797.176, 1797.220, 1798.150 and 1798.170 Health and Safety Code.

ARTICLE 5. DATA MANAGEMENT, QUALITY IMPROVEMENT AND EVALUATIONS

§ 100270.126. Data Management.

(a) The local EMS agency shall implement a standardized data collection and reporting process for a STEMI critical care system.

(b) The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency.

(c) The prehospital STEMI patient care elements selected by the local EMS agency shall be compliant with the most current version of the California EMS Information Systems (CEMSIS) database, and the National EMS Information System (NEMSIS).

(d) All hospitals that receive STEMI patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.

(e) The prehospital care record and the hospital data elements shall be collected and submitted to the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis and shall include, but not be limited to, the following:

(1) The STEMI patient data elements:

(A) EMS ePCR Number.

(B) Facility.

(C) Name: Last, First.

(D) Date of Birth.

(E) Patient Age.

(F) Patient Gender.

(G) Patient Race.

(H) Hospital Arrival Date.

(I) Hospital Arrival Time.

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- (J) Dispatch Date.
 - (K) Dispatch Time.
 - (L) Field ECG Performed.
 - (M) 1st ECG Date.
 - (N) 1st ECG Time.
 - (O) Did the patient suffer out-of-hospital cardiac arrest.
 - (P) CATH LAB Activated.
 - (Q) CATH LAB Activation Date.
 - (R) CATH LAB Activation Time.
 - (S) Did the patient go to the CATH LAB.
 - (T) CATH LAB Arrival Date.
 - (U) CATH LAB Arrival Time.
 - (V) PCI Performed.
 - (W) PCI Date.
 - (X) PCI Time.
 - (Y) Fibrinolytic Infusion.
 - (Z) Fibrinolytic Infusion Date.
 - (AA) Fibrinolytic Infusion Time.
 - (BB) Transfer.
 - (CC) SRH ED Arrival Date.
 - (DD) SRH ED Arrival Time.
 - (EE) SRH ED Departure Date.
 - (FF) SRH ED Departure Time.
 - (GG) Hospital Discharge Date.
 - (HH) Patient Outcome.
 - (II) Primary and Secondary Discharge Diagnosis.
 - (2) The STEMI System data elements:
 - (A) Number of STEMIs treated.
 - (B) Number of STEMI patients transferred.
 - (C) Number and percent of emergency department STEMI patients arriving by private transport (non-EMS).
 - (D) The false positive rate of EMS diagnosis of STEMI, defined as the percentage of STEMI alerts by EMS which did not show STEMI on ECG reading by the emergency physician.
- Note: Authority cited: Sections 1791.102, 1797.103, 1797.107, 1797.176, 1797.204, 1797.220, 1798.150, and 1798.172, Health and Safety Code. Reference: Section 1797.220, 1797.222, 1797.204, Health and Safety Code.

§ 100270.127. Quality Improvement and Evaluation Process

- (a) Each STEMI critical care system shall have a quality improvement process that shall include, at a minimum:

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- (1) Evaluation of program structure, process, and outcome.
 - (2) Review of STEMI-related deaths, major complications, and transfers.
 - (3) A multidisciplinary STEMI Quality Improvement Committee, including both prehospital and hospital members.
 - (4) Participation in the QI process by all designated STEMI centers and prehospital providers involved in the STEMI critical care system.
 - (5) Evaluation of regional integration of STEMI patient movement.
 - (6) Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases.
- (b) The local EMS agency shall be responsible for on-going performance evaluation and quality improvement of the STEMI critical care system.

Note: Authority cited: Sections 1797.102, 1797.103, 1797.107, 1797.176, 1797.204, 1797.220, 1797.250, 1797.254, 1798.150, and 1798.172, Health and Safety Code.

Reference: Section 1797.104, 1797.176, 1797.204, 1797.220, 1797.222, 1798.170,

Health and Safety Code.

Exhibit B

**California Code of Regulations
Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.1 ST-Elevation Myocardial Infarction Critical Care System**

ARTICLE 1. DEFINITIONS

§ 100270.101. Cardiac Catheterization Laboratory

“Cardiac catheterization laboratory” or “Cath lab” means the setting within the hospital where diagnostic and therapeutic procedures are performed on patients with cardiovascular disease.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.102. Cardiac Catheterization Team

“Cardiac catheterization team” means the specially trained health care professionals that perform percutaneous coronary intervention. It may include, but is not limited to, an interventional cardiologist, mid-level practitioners, registered nurses, technicians, and other health care professionals.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.103. Clinical Staff

“Clinical staff” means individuals that have specific training and experience in the treatment and management of ST-Elevation Myocardial Infarction (STEMI) patients. This includes, but is not limited to, physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.104. Emergency Medical Services Authority

“Emergency Medical Services Authority” or “EMS Authority” or “EMSA” means the department in California responsible for the coordination and integration of all state activities concerning EMS.

Note: Authority cited: Sections 1797.1, 1797.107 and 1797.54, Health and Safety Code.
Reference: Sections 1797.100, and 1797.103, Health and Safety Code.

§ 100270.105. Immediately Available

“Immediately available” means:

- (a) Unencumbered by conflicting duties or responsibilities.
- (b) Responding without delay upon receiving notification.
- (c) Being physically available to the specified area of the hospital when the patient is delivered in accordance with local EMS agency policies and procedures.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.106. Implementation

“Implementation,” “implemented,” or “has implemented” means the development and activation of a STEMI Critical Care System Plan by the local EMS agency, including the prehospital and hospital care components in accordance with the plan.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.107. Interfacility Transfer

“Interfacility transfer” means the transfer of a STEMI patient from one acute general care facility to another acute general care facility.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103, 1797.176 and 1798.170, Health and Safety Code.

§ 100270.108. Local Emergency Medical Services Agency

“Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility for administration of emergency medical services in a county or region and which is designated pursuant Health and Safety Code commencing with section 1797.200.

Note: Authority cited: Sections 1797.107, 1797.200 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.109. Percutaneous Coronary Intervention (PCI)

“Percutaneous coronary intervention” or “PCI” means a procedure used to open or widen a narrowed or blocked coronary artery to restore blood flow supplying the heart, usually done on an emergency basis for a STEMI patient.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.110. Quality Improvement

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

Note: Authority cited: Sections 1797.103, 1797.107, 1797.174, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.

§ 100270.111. ST-Elevation Myocardial Infarction (STEMI)

“ST-Elevation Myocardial Infarction” or “STEMI” means a clinical syndrome defined by symptoms of myocardial infarction in association with ST-segment elevation on Electrocardiogram (ECG).

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.112. STEMI Care

“STEMI care” means emergency cardiac care, for the purposes of these regulations.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.113. STEMI Medical Director

“STEMI medical director” means a qualified board-certified physician by the American Board of Medical Specialties (ABMS) as defined by the local EMS agency and designated by the hospital that is responsible for the STEMI program, performance improvement, and patient safety programs related to a STEMI critical care system.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.114. STEMI Patient

“STEMI patient” means a patient with symptoms of myocardial infarction in association with ST-Segment Elevation in an ECG.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.

§ 100270.115. STEMI Program

“STEMI program” means an organizational component of the hospital specializing in the care of STEMI patients.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.116. STEMI Program Manager

“STEMI program manager” means a registered nurse or qualified individual as defined by the local EMS agency, and designated by the hospital responsible for monitoring, coordinating and evaluating the STEMI program.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.117. STEMI Receiving Center (SRC)

“STEMI receiving center” or “SRC” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.124 and is able to perform PCI.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.

§ 100270.118. STEMI Referring Hospital (SRH)

“STEMI referring hospital” or “SRH” means a licensed general acute care facility that meets the minimum hospital STEMI care requirements pursuant to Section 100270.125.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103, 1797.176 and 1797.220, Health and Safety Code.

§ 100270.119. STEMI Critical Care System

“STEMI critical care system” means a critical care component of the EMS system developed by a local EMS agency that links prehospital and hospital care to deliver treatment to STEMI patients.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.120. STEMI Team

“STEMI team” means clinical personnel, support personnel, and administrative staff that function together as part of the hospital’s STEMI program.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

ARTICLE 2. LOCAL EMS AGENCY STEMI CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.121. STEMI Critical Care System Plan

- (a) The local EMS agency may develop and implement a STEMI critical care system.
- (b) The local EMS agency implementing a STEMI critical care system shall have a STEMI Critical Care System Plan approved by the EMS Authority prior to implementation.
- (c) A STEMI Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all of the following components:
 - (1) The names and titles of the local EMS agency personnel who have a role in a STEMI critical care system.
 - (2) The list of STEMI designated facilities with the agreement expiration dates.

- (3) A description or a copy of the local EMS agency's STEMI patient identification and destination policies.
 - (4) A description or a copy of the method of field communication to the receiving hospital specific to STEMI patient, designed to expedite time-sensitive treatment on arrival.
 - (5) A description or a copy of the policy that facilitates the inter-facility transfer of a STEMI patient.
 - (6) A description of the method of data collection from the EMS providers and designated STEMI hospitals to the local EMS agency and the EMS Authority.
 - (7) A policy or description of how the local EMS agency integrates a receiving center in a neighboring jurisdiction.
 - (8) A description of the integration of STEMI into an existing quality improvement committee or a description of any STEMI specific quality improvement committee.
 - (9) A description of programs to conduct or promote public education specific to cardiac care.
- (d) The EMS Authority shall, within 30-days of receiving a request for approval, notify the requesting local EMS agency in writing of approval or disapproval of its STEMI Critical Care System Plan. If the STEMI Critical Care System Plan is disapproved, the response shall include the reason(s) for the disapproval and any required corrective action items.
 - (e) The local EMS agency shall provide a corrected plan to the EMS Authority within 60 days of receipt of the disapproval letter.
 - (f) The local EMS agency currently operating a STEMI critical care system implemented before the effective date of these regulations, shall submit to the EMS Authority a STEMI Critical Care System Plan as an addendum to its next annual EMS plan update, or within 180-days of the effective date of these regulations, whichever comes first.
 - (g) After approval of the STEMI Critical Care System Plan, the local EMS agency shall submit an update to the plan as part of its annual EMS update, consistent with the requirements in Section 100270.122.
 - (h) No health care facility shall advertise in any manner or otherwise hold itself out to be affiliated with a STEMI critical care system or a STEMI center unless they have been so designated by the local EMS agency, in accordance with this chapter.

Note: Authority cited: Sections 1797.107, 1797.103, 1797.105, 1797.250, 1797.254 and

1798.150, Health and Safety Code. Reference: Section 1797.176 and 1797.220, Health and Safety Code.

§100270.122. STEMI Critical Care System Plan Updates

(a) The local EMS agency shall submit an annual update of its STEMI Critical Care System Plan, as part of its annual EMS plan submittal, which shall include, at a minimum, all the following:

(1) Any changes in a STEMI critical care system since submission of the prior annual plan update or a STEMI Critical Care System Plan addendum.

(2) The status of a STEMI critical care system goals and objectives.

(3) The STEMI critical care system quality improvement activities.

(4) The progress on addressing action items and recommendations provided by the EMS Authority within the STEMI Critical Care System Plan or status report approval letter if applicable.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.176, 1797.250, 1797.254, 1798.150, and 1798.172, Health and Safety Code. Reference: Section 1797.176, 1797.220, 1797.222, 1798.170, Health and Safety Code.

ARTICLE 3. PREHOSPITAL STEMI CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.123. EMS Personnel and Early Recognition

(a) The local EMS agency with an established STEMI critical care system shall have protocols for the identification and treatment of STEMI patients, including paramedic performance of a 12-lead ECG and determination of the patient destination.

(b) The findings of 12-lead ECG shall be assessed and interpreted through one or more of the following methods:

(1) Direct paramedic interpretation.

(2) Automated computer algorithm.

(3) Wireless transmission to facility followed by physician interpretation or confirmation.

(c) Notification of prehospital ECG findings of suspected STEMI patients, as defined by the local EMS agency, shall be communicated in advance of the arrival to the STEMI centers according to the local EMS agency's STEMI Critical Care System Plan.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.114, 1797.176, 1797.206, 1797.214 and 1798.150, Health and Safety Code. Reference: Section 1797.176,

1797.220, 1798, 1798.150 and 1798.170, Health and Safety Code.

ARTICLE 4. STEMI CRITICAL CARE FACILITY REQUIREMENTS

§ 100270.124. STEMI Receiving Center Requirements

(a) The following minimum criteria shall be used by the local EMS agency for the designation of a STEMI receiving center:

(1) The hospital shall have established protocols for triage, diagnosis, and Cath lab activation following field notification.

(2) The hospital shall have a single call activation system to activate the Cardiac Catheterization Team directly.

(3) Written protocols shall be in place for the identification of STEMI patients.

(A) At a minimum, these written protocols shall be applicable in the intensive care unit/coronary care unit, Cath lab and the emergency department.

(4) The hospital shall be available for treatment of STEMI patients twenty-four (24) hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year.

(5) The hospital shall have a process in place for the treatment and triage of simultaneously arriving STEMI patients.

(6) The hospital shall maintain STEMI team and Cardiac Catheterization Team call rosters.

(7) The Cardiac Catheterization Team, including appropriate staff determined by the local EMS agency, shall be immediately available.

(8) The hospital shall agree to accept all STEMI patients according to the local policy.

(9) STEMI receiving centers shall comply with the requirement for a minimum volume of procedures for designation required by the local EMS agency.

(10) The hospital shall have a STEMI program manager and a STEMI medical director.

(11) The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.

(12) The hospital shall participate in the local EMS agency quality improvement processes related to a STEMI critical care system.

(13) A STEMI receiving center without cardiac surgery capability on-site shall have a written transfer plan and agreements for transfer to a facility with cardiovascular surgery capability.

(14) A STEMI receiving center shall have reviews by local EMS agency or other designated agency conducted every three years.

(b) A STEMI center designated by the local EMS agency prior to implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, STEMI centers shall be re-evaluated to meet the criteria established in these regulations.

(c) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.176, 1797.220, and 1798.150 1798.167 and 1798.172, Health and Safety Code. Reference: Section 1797.176, 1797.220, 1798, 1798.150 and 1798.170 Health and Safety Code.

§ 100270.125. STEMI Referring Hospital Requirements

(a) The following minimum criteria shall be used by the local EMS agency for designation of a STEMI referring hospital:

(1) The hospital shall be committed to supporting the STEMI Program.

(2) The hospital shall be available to provide care for STEMI patients twenty-four (24) hours per day, seven (7) days per week, three hundred and sixty-five (365) days per year.

(3) Written protocols shall be in place to identify STEMI patients and provide an optimal reperfusion strategy, using fibrinolytic therapy .

(4) The emergency department shall maintain a standardized procedure for the treatment of STEMI patients.

(5) The hospital shall have a transfer process through interfacility transfer agreements, and have pre-arranged agreements with EMS ambulance providers for rapid transport of STEMI patients to a SRC.

(6) The hospital shall have a program to track and improve treatment of STEMI patients.

(7) The hospital must have a plan to work with a STEMI receiving center and the local EMS agency on quality improvement processes.

(8) A STEMI referring hospital designated by the local EMS agency shall have a review

conducted every three years.

(b) A STEMI center designated by the local EMS agency prior to implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, STEMI centers shall be re-evaluated to meet the criteria established in these regulations.

(c) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.103, 1797.107, 1797.176, 1797.220, and 1798.150 1798.167 and 1798.172, Health and Safety Code. Reference: Section 1797.176, 1797.220, 1798.150 and 1798.170 Health and Safety Code.

ARTICLE 5. DATA MANAGEMENT, QUALITY IMPROVEMENT AND EVALUATIONS

§ 100270.126. Data Management.

(a) The local EMS agency shall implement a standardized data collection and reporting process for a STEMI critical care system.

(b) The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency.

(c) The prehospital STEMI patient care elements selected by the local EMS agency shall be compliant with the most current version of the California EMS Information Systems (CEMSIS) database, and the National EMS Information System (NEMSIS).

(d) All hospitals that receive STEMI patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.

(e) The prehospital care record and the hospital data elements shall be collected and submitted to the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis and shall include, but not be limited to, the following:

(1) The STEMI patient data elements:

- (A) EMS ePCR Number.
- (B) Facility.
- (C) Name: Last, First.
- (D) Date of Birth.
- (E) Patient Age.
- (F) Patient Gender.
- (G) Patient Race.
- (H) Hospital Arrival Date.
- (I) Hospital Arrival Time.

- (J) Dispatch Date.
- (K) Dispatch Time.
- (L) Field ECG Performed.
- (M) 1st ECG Date.
- (N) 1st ECG Time.
- (O) Did the patient suffer out-of-hospital cardiac arrest.
- (P) CATH LAB Activated.
- (Q) CATH LAB Activation Date.
- (R) CATH LAB Activation Time.
- (S) Did the patient go to the CATH LAB.
- (T) CATH LAB Arrival Date.
- (U) CATH LAB Arrival Time.
- (V) PCI Performed.
- (W) PCI Date.
- (X) PCI Time.
- (Y) Fibrinolytic Infusion.
- (Z) Fibrinolytic Infusion Date.
- (AA) Fibrinolytic Infusion Time.
- (BB) Transfer.
- (CC) SRH ED Arrival Date.
- (DD) SRH ED Arrival Time.
- (EE) SRH ED Departure Date.
- (FF) SRH ED Departure Time.
- (GG) Hospital Discharge Date.
- (HH) Patient Outcome.
- (II) Primary and Secondary Discharge Diagnosis.

(2) The STEMI System data elements:

- (A) Number of STEMIs treated.
- (B) Number of STEMI patients transferred.
- (C) Number and percent of emergency department STEMI patients arriving by private transport (non-EMS).
- (D) The false positive rate of EMS diagnosis of STEMI, defined as the percentage of STEMI alerts by EMS which did not show STEMI on ECG reading by the emergency physician.

Note: Authority cited: Sections 1791.102, 1797.103, 1797.107, 1797.176, 1797.204, 1797.220, 1798.150, and 1798.172, Health and Safety Code. Reference: Section 1797.220, 1797.222, 1797.204, Health and Safety Code.

§ 100270.127. Quality Improvement and Evaluation Process

(a) Each STEMI critical care system shall have a quality improvement process that shall include, at a minimum:

- (1) Evaluation of program structure, process, and outcome.
 - (2) Review of STEMI-related deaths, major complications, and transfers.
 - (3) A multidisciplinary STEMI Quality Improvement Committee, including both prehospital and hospital members.
 - (4) Participation in the QI process by all designated STEMI centers and prehospital providers involved in the STEMI critical care system.
 - (5) Evaluation of regional integration of STEMI patient movement.
 - (6) Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected STEMI cases.
- (b) The local EMS agency shall be responsible for on-going performance evaluation and quality improvement of the STEMI critical care system.

Note: Authority cited: Sections 1797.102, 1797.103, 1797.107, 1797.176, 1797.204, 1797.220, 1797.250, 1797.254, 1798.150, and 1798.172, Health and Safety Code.
Reference: Section 1797.104, 1797.176, 1797.204, 1797.220, 1797.222, 1798.170, Health and Safety Code.

Print All 21 Tabs

Mission: Lifeline Hospital Level Report

Alameda County EMS Initiative - GWTG - CAD: January 2022 - 2022 (Annual)



| Main Category | Sub Category | Health System |
|---|--|---------------|
| | | 2022 |
| Total Number of Records | Total Number of STEMI Receiving Records | 568 |
| | Total Number of NSTEMI Records | 101 |
| Patient Demographics | Median Age | 64 |
| Race | % American Indian or Alaska Native | 1 |
| | % Black or African American | 13 |
| | % Native Hawaiian or Pacific Islander | 2 |
| | % White | 41 |
| | % UTD | 14 |
| | % Asian | 29 |
| | % Hispanic Ethnicity | 16 |
| 12 Lead ECG | % EMS Arrivals with pre-hospital 12 Lead ECG | 81 |
| | % STEMI noted on 1st ECG (all arrival mode) | 88 |
| | Median time to 1st ECG (all arrival mode) | 7 |
| Arrival Mode | % Walk In | 35 |
| | % Ambulance | 65 |
| | % Air | - |
| Transfer Status | % Transfer In | 20 |
| | % Transfer Out | 8 |
| Median Time from Symptom Onset | Time of S/S Onset to Time of 911 Call (Median Time) | 54 |
| | To Arrival (Walk In) | 172 |
| | To Arrival (EMS) | 80 |
| | Overall Median Time | 91 |
| | Median Time from Symptom Onset to PCI (Overall) | 167 |
| Arrival to Reperfusion | Median Time from Arrival to Primary PCI | 67 |
| | Median Time from Arrival to Primary PCI <= 60 minutes (females only) | 68 |
| | Median Time from Arrival to Primary PCI <= 60 Minutes (males only) | 66 |
| | % Arrival to Primary PCI <= 60 Minutes (overall) | 48 |
| | Median Time from Arrival to Thrombolytics | 31 |
| Length of Stay (LOS) in ED (Median Time Minutes) | For Patients Transferred Out-Door In Door Out | 732 |
| | For Patients Admitted(by EMS) | 46 |
| | For Patients Admitted(By Walk In) | 57 |
| | For Patients Admitted(overall) | 50 |
| Prehospital Cath Lab Activation prior to EMS arrival | EMS FMC to 1st 12 Lead ECG (Median Time) | 7 |
| | 1st STEMI Positive Pre-Hospital 12 Lead ECG to Hospital Notification (Median Ti... | 5 |
| | % Cath Lab activation prior to patient's arrival | 45 |
| | Pre-Hospital Notification to Cath Lab Activation (Median Time) | 12 |
| EMS FMC to Reperfusion | Time of 911 Call to PCI (Median Time) | 100 |
| | EMS FMC to Primary PCI (Median Time) | 83 |
| | Arrival at First Facility to Primary PCI (Transfers, Median Time) | 95 |
| Transfer In (To STEMI Receiving Center for Primary PCI) | EMS FMC to Arrival at First Facility to transfer for PCI (EMS) (Transfers, Median T... | - |
| | Walk In Arrival at First Facility to transfer for PCI (Walk in) (Transfers, Median Ti... | 79 |
| | % FMC at or Before Arrival to First Facility to Primary PCI (Overall) | 84 |
| | Median LOS in ED (Door In Door Out) | 43 |
| | % Arrived to First Facility by EMS | 16 |
| | % Arrived to First Facility by Walk In | 84 |
| | % Arrival to Primary PCI <= 30 Minutes | 40 |
| % with Door In Door Out <= 30 Minutes | 21 | |
| Reperfusion ALL Patients (at my facility including transfer in) | % Fibrinolytics | 0 |
| | % Primary PCI | 82 |
| | % Rescue PCI for STEMI (After failed full dose lytics) | 0 |
| | % Rescue PCI for STEMI (stable after successful full dose lytics) | 1 |
| Non-System Reason For Delay | % No Reperfusion | 12 |
| | % 1st ECG NSRFD (Direct and transfer in) | 8 |
| | % EMS FMC | 4 |

My Facility M:L Report

3/4/2024

Print All 21 Tabs

Mission: Lifeline Hospital Level Report

Mission: Lifeline Regional Report

Alameda County EMS Initiative - GWTG - CAD: January 2023 - 2023 (Annual)



| Main Category | Sub Category | Health System |
|---|--|---------------|
| Total Number of Records | Total Number of STEMI Receiving Records | 567 |
| | Total Number of NSTEMI Records | 88 |
| Patient Demographics | Median Age | 62 |
| Race | % American Indian or Alaska Native | 0 |
| | % Black or African American | 11 |
| | % Native Hawaiian or Pacific Islander | 3 |
| | % White | 44 |
| | % UTD | 14 |
| | % Asian | 28 |
| | % Hispanic Ethnicity | 16 |
| 12 Lead ECG | % EMS Arrivals with pre-hospital 12 Lead ECG | 73 |
| | % STEMI noted on 1st ECG (all arrival mode) | 87 |
| | Median time to 1st ECG (all arrival mode) | 6 |
| Arrival Mode | % Walk In | 31 |
| | % Ambulance | 51 |
| | % Air | - |
| | % Transfer from another acute care facility | 17 |
| Transfer Status | % Transfer In | 16 |
| | % Transfer Out | 8 |
| Median Time from Symptom Onset | Time of SIS Onset to Time of 911 Call (Median Time) | 179 |
| | To Arrival (Walk In) | 189 |
| | To Arrival (EMS) | 73 |
| | Overall Median Time | 115 |
| | Median Time from Symptom Onset to PCI (Overall) | 185 |
| Arrival to Reperfusion | Median Time from Arrival to Primary PCI | 71 |
| | Median Time from Arrival to Primary PCI <= 60 minutes (females only) | 70 |
| | Median Time from Arrival to Primary PCI <= 60 Minutes (males only) | 65 |
| | % Arrival to Primary PCI <= 60 Minutes (overall) | 41 |
| | Median Time from Arrival to Thrombolytics | 351 |
| Length of Stay (LOS) in ED (Median Time Minutes) | For Patients Transferred Out-Door In Door Out | 553 |
| | For Patients Admitted (by EMS) | 27 |
| | For Patients Admitted (By Walk In) | 56 |
| | For Patients Admitted (overall) | 53 |
| Prehospital Cath Lab Activation prior to EMS arrival | EMS FMC to 1st 12 Lead ECG (Median Time) | 8 |
| | 1st STEMI Positive Pre-Hospital 12 Lead ECG to Hospital Notification (Median Time) | 6 |
| | Pre-Hospital Notification to Cath Lab Activation (Median Time) | 8 |
| EMS FMC to Reperfusion | Time of 911 Call to PCI (Median Time) | 85 |
| | EMS FMC to Primary PCI (Median Time) | 87 |
| | Arrival at First Facility to Primary PCI (Transfers, Median Time) | 100 |
| | EMS FMC to Thrombolytics | 561 |
| Transfer In (To STEMI Receiving Center for Primary PCI) | EMS FMC to Arrival at First Facility to transfer for PCI (EMS) (Transfers, Median Time) | - |
| | Walk in Arrival at First Facility to transfer for PCI (Walk in) (Transfers, Median Time) | - |
| | % FMC at or Before Arrival to First Facility to Primary PCI (Overall) | 100 |
| | Median LOS in ED (Door In Door Out) | 44 |
| | % Arrived to First Facility by EMS | 14 |
| | % Arrived to First Facility by Walk In | 85 |
| | % Arrival to Primary PCI <= 30 Minutes | 26 |
| | % with Door In Door Out <= 30 Minutes | 18 |
| Reperfusion ALL Patients (at my facility including transfer in) | % Fibrinolytics | 0 |
| | % Primary PCI | 92 |

Exhibit E

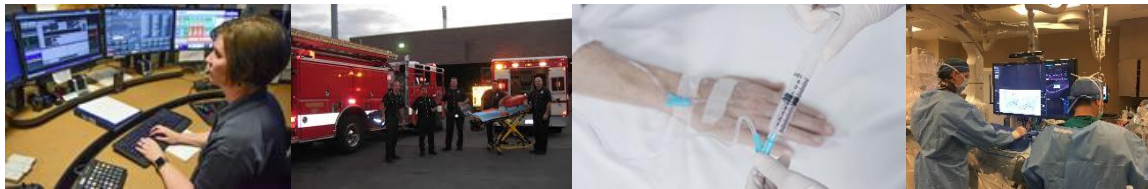
| Base Physician Contact Template Highland Hospital Base Physician – 510-535-6000 | |
|--|---|
| Situation | <ul style="list-style-type: none"> ▪ Identify yourself/unit number ▪ State purpose of call: (e.g. AMA consult, destination decision, etc.) ▪ Provide basic patient demographics (e.g. age/gender) ▪ Reason for patient contact/EMS activation |
| Background | <ul style="list-style-type: none"> ▪ Provide history of present illness/injury ▪ Medical history |
| Assessment | <ul style="list-style-type: none"> ▪ Vital signs ▪ Physical findings ▪ Treatment provided |
| Recommendation/Request | <ul style="list-style-type: none"> ▪ State your recommendation/request ▪ Confirm Base Physician’s recommendation/orders |

| Hospital Notification Template | |
|---|--|
| Basic Notifications | |
| <ol style="list-style-type: none"> 1. Unit Number 2. Transport code 3. Age & Gender 4. Chief Complaint 5. V/S stable or detailed V/S if abnormal | <ol style="list-style-type: none"> 6. Pertinent negatives/positives 7. Treatment(s) 8. Repeat ETA 9. Check for questions |
| Specialty care patient notifications | |
| For each category below, include info from the basic notification template plus the appropriate category below | |
| Trauma | |
| <ol style="list-style-type: none"> 1. Mechanism of Injury 2. Injuries | <ol style="list-style-type: none"> 3. GCS – each category of E/V/M + total 4. Detailed Vital Signs |
| Cardiac Arrest / ROSC | |
| <ol style="list-style-type: none"> 1. Airway – non-patent, patent, airway placed/not-placed 2. Breathing – absent/spontaneous 3. Circulation – pulses present/absent | <ol style="list-style-type: none"> 4. Total estimated down time 5. Summary of treatment(s) given |
| Stroke Alert | |
| <ol style="list-style-type: none"> 1. Last seen normal time 2. Stroke Assessment/Scale findings | <ol style="list-style-type: none"> 3. Blood glucose |
| Sepsis | |
| <ol style="list-style-type: none"> 1. Temperature 2. Suspected source of infection (if known) | <ol style="list-style-type: none"> 3. Detailed Vital Signs |
| STEMI | |
| <ol style="list-style-type: none"> 1. Estimated onset of S/S 2. Was 12-lead ECG Transmitted | <ol style="list-style-type: none"> 3. Detailed Vital Signs |
| Pediatric Patients | |
| <ol style="list-style-type: none"> 1. Patient’s weight-based color code | <ol style="list-style-type: none"> 2. Status of parent/guardian |
| Note: Detailed Vital Signs should include: RR, HR, B/P, SpO2, GCS (number of each category E/V/M) | |

**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
EMERGENCY MEDICAL SERVICES**



**2022-2023
STOKE CRITICAL CARE SYSTEM
PLAN (Update)**



February 2024

(All 2022-2023 Updates in Arial Black Bold Italic Font)

DEFINITIONS AND ACRONYMS

| | |
|---|--|
| <p>§ 100270.200. Acute Stroke Ready Hospital</p> | <p>“Acute stroke-ready hospitals” or “Satellite stroke centers” means a hospital able to provide the minimum level of critical care services for stroke patients in the emergency department, and are paired with one or more hospitals with a higher level of stroke services.</p> <p>Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>AHS</p> | <p>Acute Hemorrhagic Stroke</p> |
| <p>AIS</p> | <p>Acute Ischemic Stroke</p> |
| <p>ALCO</p> | <p>Alameda County</p> |
| <p>BHDE</p> | <p>Bidirectional Healthcare Data Exchange</p> |
| <p>§ 100270.201. Board-certified</p> | <p>“Board-certified” means a physician who has fulfilled all the Accreditation Council for Graduate Medical Education (ACGME) requirements in a specialty field of practice, and has been awarded a certification by an American Board of Medical Specialties (ABMS) approved program.</p> <p>Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.202. Board-eligible</p> | <p>“Board-eligible” means a physician who has applied to a specialty board examination and has completed the requirements and is approved to take the examination by ABMS. Board certification must be obtained within the allowed time by ABMS from the first appointment.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

| | |
|--|--|
| CPSS | Cincinnati Prehospital Stroke Scale |
| § 100270.204. Clinical Stroke Team | <p>“Clinical stroke team” means a team of healthcare professionals who provide care for the stroke patient and may include, but is not limited to, neurologists, neuro interventionalists, neurosurgeons, anesthesiologists, emergency medicine physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| § 100270.203. Comprehensive Stroke Center | <p>“Comprehensive stroke center” means a hospital with specific abilities to receive, diagnose and treat all stroke cases and provide the highest level of care for stroke patients.</p> <p>Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.</p> |
| CT | Computed Tomography |
| Dx | Diagnosis |
| ED | Emergency Department |
| EMS | Emergency Medical Services |
| § 100270.205. Emergency Medical Services Authority (EMSA) | <p>“Emergency Medical Services Authority” or “EMS Authority” means the department in California that is responsible for the coordination and the integration of all state activities concerning emergency medical services (EMS).</p> <p>Note: Authority cited: Section 1797.107 Health and Safety Code. Reference: Sections 1797.54, 1797.100, and 1797.103, Health and Safety Code.</p> |
| § 100270.206. Local Emergency Medical | <p>“Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility for administration of emergency medical services in a county and</p> |

ALCO EMS STOKE CRITICAL CARE SYSTEM OF CARE PLAN

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|---|--|
| <p>Services Agency (LEMSA)</p> | <p>which is designated pursuant Health and Safety Code section 1797.200. Note: Authority cited: Sections 1797.107, 1797.176, Health and Safety Code. Reference: Sections 1797.94 and 1797.200, Health and Safety Code.</p> |
| <p>HIPAA</p> | <p>Health Insurance Portability and Accountability Act</p> |
| <p>HITECH</p> | <p>Health Information Technology for Economic and Clinical Health Act</p> |
| <p>IA</p> | <p>Intra-arterial</p> |
| <p>IR</p> | <p>Interventional Radiology</p> |
| <p>JC</p> | <p>The Joint Commission</p> |
| <p>MRI</p> | <p>Magnetic Resonance Imaging</p> |
| <p>§ 100270.207. Primary Stroke Center</p> | <p>“Primary stroke center” means a hospital that treats acute stroke patients, and identifies patients who may benefit from transfer to a higher level of care when clinically warranted. Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.208. Protocol</p> | <p>“Protocol” means a predetermined, written medical care guideline, which may include standing orders. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| <p>PSRC</p> | <p>Primary Stroke Receiving Center designation by Alameda County for patients transported via the 9-1-1 system with suspected possible Stroke who may benefit by rapid assessment and timely treatment with fibrinolytic if warranted.</p> |

ALCO EMS STOKE CRITICAL CARE SYSTEM OF CARE PLAN

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| <p>§ 100270.209. Quality Improvement (QI)</p> | <p>“Quality improvement” or “QI” means methods of evaluation that are composed of a structure, process, and outcome evaluations which focus on improvement efforts to identify causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process and recognize excellence in performance and delivery of care.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.103, 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.</p> |
| <p>§ 100270.210. Stroke</p> | <p>“Stroke” means a condition of impaired blood flow to a patient’s brain resulting in brain dysfunction, most commonly through vascular occlusion or hemorrhage.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| <p>§ 100270.211. Stroke Call Roster</p> | <p>“Stroke call roster” means a schedule of licensed health professionals available twenty- four (24) hours a day, seven (7) days a week for the care of stroke patients.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.212. Stroke Care</p> | <p>“Stroke care” means emergency transport, triage, diagnostic evaluation, acute intervention and other acute care services for stroke patients that potentially require immediate medical or surgical intervention treatment, and may include education, primary prevention, acute intervention, acute and subacute management, prevention of complications, secondary stroke prevention, and rehabilitative services.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| <p>100270.213. Stroke Critical Care System</p> | <p>“Stroke critical care system” means a subspecialty care component of the EMS system developed by a local EMS agency. This critical care</p> |

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

| | |
|---|--|
| | <p>system links prehospital and hospital care to deliver optimal treatment to the population of stroke patients.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.214. Stroke Medical Director</p> | <p>“Stroke medical director” means a board-certified physician in neurology or neurosurgery or another board with sufficient experience and expertise dealing with cerebrovascular disease as determined by the hospital credentialing committee that is responsible for the stroke service, performance improvement, and patient safety programs related to a stroke critical care system.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.215. Stroke Program Manager</p> | <p>“Stroke program manager” means a registered nurse or qualified individual designated by the hospital with the responsibility for monitoring and evaluating the care of stroke patients and the coordination of performance improvement and patient safety programs for the stroke center in conjunction with the stroke medical director.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.216. Stroke Program</p> | <p>“Stroke program” means an organizational component of the hospital specializing in the care of stroke patients.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| <p>§ 100270.217. Stroke Team</p> | <p>“Stroke team” means the personnel, support personnel, and administrative staff that function together as part of the hospital’s stroke program.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

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|---|---|
| <p>§ 100270.218. Telehealth</p> | <p>“Telehealth” means the mode of delivering health care services and public health via information and communication technologies to facilitate the diagnosis, consultation, treatment, education, care management, and self-management of a patient's health care while the patient is at the originating site and the health care provider is at a distant site.</p> <p>Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code. California Business and Professions Code Sec. 2290.5</p> |
| <p>§ 100270.219. Thrombectomy-Capable Stroke Center</p> | <p>“Thrombectomy-capable stroke center” means a primary stroke center with the ability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.</p> <p>Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103, and 1797.176, Health and Safety Code.</p> |
| <p>TIA</p> | <p>Transient Ischemic Accident</p> |
| <p>tpA</p> | <p>Tissue Plasminogen Activator</p> |

This document is the Stroke Critical Care System plan intended for submission to the EMS Authority for approval and in accordance with California Code of Regulations Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7.2 Stroke Critical Care System: ARTICLE 2. LOCAL EMS AGENCY STEMI CRITICAL CARE SYSTEM REQUIREMENTS, § 100270.220. Stoke Critical Care System Plan.

NOTE: § 100270.220. Stoke Critical Care System Plan. (a) The local EMS agency may develop and implement a stroke critical care system. (b) The local EMS agency implementing a stroke critical care system shall have a Stroke Critical Care System Plan approved by the EMS Authority prior to implementation. (c) The Stroke Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all of the following components:

- (1) The names and titles of the local EMS agency personnel who have a role in a stroke critical care system.
- (2) The list of stroke designated facilities with the agreement expiration dates.
- (3) A description or a copy of the local EMS agency's stroke patient identification and destination policies.
- (4) A description or a copy of the method of field communication to the receiving hospital-specific to stroke patients, designed to expedite time-sensitive treatment on arrival.

ALCO EMS STOKE CRITICAL CARE SYSTEM OF CARE PLAN

- (5) A description or a copy of the policy that facilitates the inter-facility transfer of stroke patients.
- (6) A description of the method of data collection from the EMS providers and designated stroke hospitals to the local EMS agency and the EMS Authority.
- (7) A policy or description of how the Local EMS agency integrates a receiving center in a neighboring jurisdiction.
- (8) A description of the integration of stroke into an existing quality improvement committee or a description of any stroke-specific quality improvement committee.
- (9) A description of programs to conduct or promote public education specific to stroke.
- (d) The EMS Authority shall, within 30 days of receiving a request for approval, notify the requesting local EMS agency in writing of approval or disapproval of its Stroke Critical Care System Plan. If the Stroke Critical Care System Plan is disapproved, the response shall include the reason(s) for the disapproval and any required corrective action items.
- (e) The local EMS agency shall provide an amended plan to the EMS Authority within 60 days of receipt of the disapproval letter.
- (f) The local EMS agency currently operating a stroke critical care system implemented before the effective date of these regulations, shall submit to the EMS Authority a Stroke Critical Care System Plan as an addendum to its next annual EMS plan update, or within 180 days of the effective date of these regulations, whichever comes first.
- (g) Any stroke center designated by the local EMS agency before implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, stroke centers shall be re-evaluated to meet the criteria established in these regulations.
- (h) No health care facility shall advertise in any manner or otherwise hold itself out to be affiliated with a stroke critical care system or a stroke center unless they have been designated by the local EMS agency, in accordance with this chapter.

Note: Authority cited: Sections 1797.105, 1797.107, 1797.176, and 1798.150, Health and Safety Code.
Reference: Sections 1797.103, 1797.105, 1797.173, 1797.176, 1797.220, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

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Exhibit A ALCO EMS Current Primary Stroke Receiving Center MOU
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**Exhibit E 2024 Base Hospital/Physician and Specialty Care (Stroke)
Receiving Center Notification Template**

STROKE SYSTEM OF CARE SUMMARY

Section 1. Introduction / Background / MOU

Alameda County (ALCO) EMS began establishing a countywide Stroke System of Care in 2008 by designating hospitals three as EMS Primary Stroke receiving Centers (PSRC) that were already certified or were in process with The Joint Commission to obtain Primary Stroke Center status. ALCO Paramedics recognizing a possible Stroke patient using the Cincinnati Prehospital Stroke Scale (CPSS) transport to the most geographically desirable / closest facility and or the hospital of patient prior care or medical record if EMS designated. In 2011, three more receiving hospitals achieved JC certification within the county and became PSRC's and by 2013, two more centers had designation. Over the past five, one hospital let their JC certification expire without renewal. Recently, one new designated center currently reflects eight of twelve adult receiving hospitals in Alameda County as being recognized EMS Primary Stroke Receiving Centers.

The first written agreements: Memorandums of Understanding (MOU) executed between ALCO EMS and the eight designated PSRCs' occurred in 2013. Active MOUs are in place with all JC approved Primary Stroke Centers as a designation requirement for a facility to receive EMS suspected Stroke patients.

The initial purpose of developing a Stroke system was to assure preparation, timely response and definitive care for people that present with suspected Stroke in Alameda County. A decade later, the goal and objectives remain unchanged. The rapidly evolving science surrounding Stroke treatment strategies and time of symptom onset has had significant impact regarding inclusion for treatment, as these advancements have extended the window of opportunity for many. The many changes influencing the health care delivery systems in the United States over the years have not had a negative impact on the Stroke system within the County. The fact is that the desire of hospitals and geographic needs of the community have supported the increase for more Stroke Receiving Centers over the past ten years. The fundamental components of the Stroke system design remain intact with consistent continuity and continue to improve performance and meet the needs of the residents and visitors to Alameda County.

Section 2. ALCO EMS Design / Administration

Alameda County is approximately 739 square miles of land and 82 of water, located in the center of the San Francisco Bay Area, with a diverse demographic and socioeconomic population of 1.6 million. The EMS system design and configuration consists of a countywide Advanced Life Support (ALS) model for first responders and transport: five First Responder ALS (FRALS) Fire Departments, four ALS Transport Fire Departments with FRALS, one private ALS transport provider agency and one Basic Life Support (BLS) First responder Fire Department.

Within the county, currently thirteen hospitals exist as emergency receiving centers for ambulance transport: 12 adult and 1 pediatric. Of the twelve adult hospitals, eight are LEMSA designated Primary Stroke Receiving Centers with three being thrombectomy capable.

The EMS Agency is responsible for oversight of the countywide Stroke System of Care including operations, performance, quality improvement, administration, and compliance monitoring of designated PSRC MOUs. ALCO EMS leadership consists of the Director-Lauri McFadden, Deputy Director- William McClurg, Medical Director - Karl Sporer MD and EMS Coordinator (Specialty Systems of Care) – Michael Jacobs, Paramedic.

Section 3. ALCO EMS Designated Primary Stroke Receiving Centers / MOU

ALCO EMS currently has eight designated Primary Stroke Receiving Centers (PSRC), all have JC Certification as Primary Stroke Centers under the existing MOU (Exhibit A). ***ALL designated PSRCs are on the same three-year agreement cycle: current term 1/1/2023-12/31/2025, next agreement cycle 1/1/2026-12/31/2028.***

- Alameda Health System Alameda Hospital-(Alameda)
- Alta Bates Summit Medical Center-(Oakland)
- Sutter Eden Medical Center-(Castro Valley)
- Kaiser Permanente-(Fremont)
- Kaiser Permanente-(Oakland)
- Kaiser Permanente-(San Leandro)
- Stanford Health Care Valley Care Medical Center-(Pleasanton)
- Washington Hospital Health System-(Fremont)

Section 4. EMS Stroke Identification and Destination Policy/Protocol

The identification of a suspected Stroke starts in Dispatch: below are both Medical Priority Dispatch CARD 28 for CVA / TIA and ALCO EMS Field Assessment / Treatment Protocol for suspected Stroke.

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

1. Is s/he **completely alert** (responding appropriately)?

2. Is s/he **breathing normally**?

3. **(No STROKE symptoms mentioned yet)**
Tell me **why** you think it's a **STROKE**.
Sudden **speech** problems
Sudden **weakness** or **numbness** (one side)
Sudden **paralysis** or **facial droop** (one side)
Sudden **loss of balance** or **coordination**
Sudden **vision** problems
Sudden onset of **severe headache**

*** Start the Stroke Diagnostic now (use the pullout card).** →

4. Exactly **what time** did these symptoms (problem) **start**?
a. **(Unknown)** When was the **last time** s/he was **seen to be normal**?

5. Has s/he ever had a **STROKE** before?

a. I'm sending the **paramedics** (ambulance) to help you now. **Stay on the line** and I'll tell you **exactly** what to do next.

*** Provide hospital staff with the Stroke Diagnostic Tool results, the symptom onset time, and the name and phone number of any person(s) who witnessed the onset of STROKE symptoms.**

DLS * Link to X-1 unless:

Unconscious — NABC-1
INEFFECTIVE BREATHING and Not alert — NABC-1
Not alert and snoring — NABC-1

| LEVELS | # | DETERMINANT DESCRIPTORS | SEE ADDITIONAL INFO | CODES | RESPONSES | MODES |
|----------|----|---|---------------------|---------|-----------|-------|
| C | 1 | Not alert | | 28-C-1 | | |
| | 2 | Abnormal breathing | | 28-C-2 | | |
| | 3 | Sudden speech problems | | 28-C-3 | | |
| | 4 | Sudden weakness or numbness (one side) | | 28-C-4 | | |
| | 5 | Sudden paralysis or facial droop (one side) | | 28-C-5 | | |
| | 6 | Sudden loss of balance or coordination | | 28-C-6 | | |
| | 7 | Sudden vision problems | | 28-C-7 | | |
| | 8 | Sudden onset of severe headache | | 28-C-8 | | |
| | 9 | STROKE history | | 28-C-9 | | |
| | 10 | TIA (mini-stroke) history | | 28-C-10 | | |
| | 11 | Breathing normally ≥ 35 | | 28-C-11 | | |
| | 12 | Unknown status/Other codes not applicable | | 28-C-12 | | |
| A | 1 | Breathing normally < 35 | | 28-A-1 | | |

When the **Stroke Diagnostic Tool** is **completed**, its recommendation is paired with the time frame of symptom onset, generating 12 combination suffixes.

COMPLETED Stroke Diagnostic Tool

- C** = PARTIAL evidence (Less than "T" hrs)
- D** = PARTIAL evidence (Greater than "T" hrs)
- E** = PARTIAL evidence (Unknown time frame)
- F** = STRONG evidence (Less than "T" hrs)
- H** = STRONG evidence (Greater than "T" hrs)
- I** = STRONG evidence (Unknown time frame)
- J** = CLEAR evidence (Less than "T" hrs)
- K** = CLEAR evidence (Greater than "T" hrs)
- M** = CLEAR evidence (Unknown time frame)
- X** = No test evidence (Less than "T" hrs)
- Y** = No test evidence (Greater than "T" hrs)
- Z** = No test evidence (Unknown time frame)

NOT COMPLETED or NOT USED Tool

- L** = Less than "T" hours (since the symptoms started)
- G** = Greater than "T" hours (since the symptoms started)
- U** = Unknown (when the symptoms started)

STROKE

Disruption of blood flow to the brain or part of the brain due to a **blood clot** or **hemorrhage**. Hemorrhage causes increased pressure within the skull and is more likely to cause a decreased level of consciousness (alertness), unconsciousness, or death.

A temporary interruption of blood supply to an area of the brain, sometimes called a "mini-stroke." It is usually caused by a small blood clot and results in a **sudden, brief decrease in brain function and STROKE-like symptoms**. These symptoms usually last 1 or 2 hours, but no more than 24 hours.

STROKE Treatment Time Window

The **time of symptom onset** is determined in **Key Questions**. Hospital and/or responder notification of this finding plays an important part in preparing the patient's therapy. The suffix codes for **STROKE** include a **locally defined** treatment time window: **Less than "T" hrs, Greater than "T" hrs, and Unknown**.

"T" = Time window set by local Medical Control:

Approval signature of local Medical Control _____ Date approved _____

Rules

1. **STROKE must receive an immediate response that is not subject to delay.** Lights-and-siren are **not recommended**; however, there should be a sense of urgency.
2. Because there is **no way in the prehospital environment** to tell whether symptoms are from a **TIA or an acute STROKE**, EMDs should assume that **all STROKE-like symptoms signal an emergency** and need prompt evaluation.

1. **Stroke-related terms** (e.g., and "brain attack") are commonly used terms for **STROKE**.
2. Alert **STROKE** patients should be treated as if they can hear and are aware of their surroundings. If the patient is conscious but not talking, **verbal reassurance may be helpful**.
3. Once a **patient has had a STROKE**, their chance of **having another STROKE increases**.
4. Some **younger people have STROKES** (often fatal) from a ballooned blood vessel called a berry aneurysm that expands and then breaks. This condition is present from birth (congenital). Early symptoms include a sudden, severe headache.
5. The Stroke Diagnostic Tool enables EMDs to **notify stroke centers early** in an effort to **decrease the time from symptom onset to definitive treatment**. The dispatcher's report of Stroke Diagnostic Tool results, symptom onset time, and witnessing persons' contact information **helps hospitals prepare and improves patient outcomes**.

STROKE Symptoms

Select Protocol 28 for the conscious and breathing patient when the caller **initially reports "stroke"** or the **sudden onset** of one or more of the following **symptoms**:

- Sudden **speech** problems
- Sudden **weakness, numbness, or paralysis** of the face, arm, or leg **on one side** of the body
- Sudden **loss of balance or coordination**
- Sudden **trouble seeing** in one or both eyes
- Sudden, **severe headache** with no known cause

While **symptoms** such as trouble speaking, trouble understanding, or confusion may be caused by a **STROKE**, they may also be due to a decreased level of consciousness (priority symptom) caused by many other problems. The **Chief Complaint** should be very **carefully evaluated** at the "Tell me exactly what happened" point in Case Entry to determine

Patient Care Policy (Adult) Modified On: July 24, 2018 31 ACUTE STROKE ACUTE

PURPOSE: To identify acute stroke patients who may be candidates for thrombolysis and specialized care at a certified stroke center. Information in this policy is based on the Cincinnati Prehospital Stroke Scale (CPSS). The CPSS evaluates using FASTT criteria (Facial droop, Arm drift, Speech abnormalities, Time of onset/Transport)

JC Certified Stroke Centers: The following hospitals have been EMS designated as JC certified stroke centers. If possible, patient should be transported to the patient’s regular source of hospitalization and/or healthcare.

- Alameda Hospital, Alameda
- Eden Medical Center, Castro Valley
- Kaiser Hospital, Fremont
- Kaiser Hospital, Oakland
- Kaiser Hospital, San Leandro
- Stanford Valley Care, Pleasanton
- Summit Medical Center, Oakland
- Washington Hospital, Fremont

Consider transport to one of the following out-of-county centers, if appropriate. Contact the stroke center prior to transport.

- . San Ramon Medical Center, San Ramon
- . Stanford University Medical Center, Palo Alto
- . John Muir Medical Center, Walnut Creek
- . Kaiser Hospital, Walnut Creek
- . Regional Medical Center, San Jose

Assessment and transport of suspected Acute Stroke patient: Provide routine medical care including pulse oximetry
 Obtain blood glucose
 Assess the patient using the Cincinnati Prehospital Stroke Scale

Note: Early transport is essential if CPSS is positive

Cincinnati Prehospital Stroke Scale

| Sign/Symptom | How Tested | Normal | Abnormal |
|---------------------|---|---|---|
| Facial Droop | Have the patient show their teeth or smile | Both sides of the face move equally | One side of the face does not move as well as the other |
| Arm Drift | The patient closes their eyes and extends both arms straight out for 10 seconds | Both arms move the same, or both do not move at all. | One arm either does not move, or one arm drifts downward compared to the other. |
| Speech | The patient repeats “The sky is blue in Cincinnati”. | The patient says correct words with no slurring of words. | The patient slurs words, says the wrong words, or is unable to speak |
| Time of Onset | must be within 4 hours, observed by a reliable witness or reported by a reliable patient (for thrombolysis) | | |

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Transport The patient is considered a possible Acute Stroke patient if any of the tested signs/symptoms are abnormal and must be transported to the closest, most appropriate certified stroke center. If possible, patient should be transported to the patient's regular source of hospitalization and/or healthcare.

The patient may be a candidate for thrombolysis if all the following are true: One or more of the CPSS signs/symptoms are present. CPSS signs/symptoms were initially observed within **4 hours** of contact by a reliable witness or reported by a reliable patient.

Please note: Ask when the patient was last seen at normal baseline **and** when the onset of new stroke signs and symptoms appeared. Normal blood glucose level is obtained.

Make sure to either:
transport the witness to the stroke center in the ambulance (PREFERRED); OR,
if driving, tell him/her to leave immediately and meet you at the stroke center; AND,
obtain a contact number where the witness can be reached by the attending physician

Treatment and support guidelines (to be done en route)

Transport patient in supine position. If this position is not tolerated or there is evidence of increasing intracranial pressure/intracranial hemorrhage transport in semi fowlers with no more than 30° head elevation

O2 – titrate to 94-99% SpO2

Establish IV access en route using an 18 gauge (no smaller than 20 gauge) proximal to wrist (AC preferred). No more than 1 AC attempt and no more than 2 IV attempts total. Maintain with a saline lock or IV infusion set TKO

Obtain a 12-Lead EKG en route when a dysrhythmia or ACS symptoms are present (specifically watch for STEMI and/or atrial fibrillation)

Immediately call the designated stroke center via phone and/or radio and notify them that you are transporting a “possible Acute Stroke patient by the Cincinnati Prehospital Stroke Scale (CPSS), ETA _____ minutes”. (Reminder: See “Diversion Criteria” or the information on page v of the field manual regarding CT Diversion)

Implementation of revised ALCO EMS notification template for Base Hospital/Physician contact, and specific receiving center ringdowns regarding specialty care patients, including Stroke, January 2024 (Exhibit E)

Document the results of the assessment on the PCR and specifically describe any of the CPSS signs and/or symptoms that were abnormal

July 2020, a memo was disseminated countywide to ALL EMS field providers by the LEMSA, regrading Patients with Suspected COVID-19: ALCO EMS Suspected COVID-19 Interim Guidance.

ALCO EMS STOKE CRITICAL CARE SYSTEM OF CARE PLAN

Each Primary Stroke Receiving Center has its own policy/procedure in place to manage suspected/confirmed COVID-19 patients.

Section 5. EMS Communication to PSRC

- a) Radio ring down from transporting ambulance as soon as possible for early PSRC notification.
- b) Designated priority telephone line to be used by prehospital personnel to contact the PSRC regarding patients with suspected Stroke that are being transported to that facility for potential intervention.

Section 6. Stroke Inter-Facility Transfer (IFT) Policy/Protocol

ALCO EMS designated PSRC shall have a plan for emergency transport to a facility with neurovascular intervention and or Neurosurgery availability that describes steps for timely transfer. A Paramedic staffed ALS ambulance using the 911 system for emergent transfers is strongly recommended, even for patients that require interventions that are out of scope of practice for Paramedics. In these cases, a nurse from the transferring center shall accompany the patient, oversee as well as manage the intervention/therapy that is out of Paramedic scope of practice: tpA infusion and or infusion for blood pressure control. A non-911 Critical Care Transport (CCT) ambulance can also be used if appropriate and timely. If 911 EMS ALS ambulance is used, the ALCO EMS Policy shall apply:

Operations: INTERFACILITY TRANSFERS, Modified On: July 24, 2018

Note: This policy pertains to emergency transfers to a higher level of care that come through the 9-1-1 system. See "Scheduled Interfacility Transfers Using Paramedic Personnel" (policy #4605 Administration Policy Manual) for more information.

1. All patient care rendered by prehospital care personnel must be within the defined scope of practice according to Title 22 and Alameda County EMS protocols
2. A paramedic may only take orders from a base hospital physician. (See 5.2 below) There are no provisions for an EMT to take orders from a physician
3. EMT-Bs may only transfer a patient without an emergency medical condition; or, with an emergency medical condition that has been stabilized and has no potential (within reasonable probability) to deteriorate en route
4. Paramedics (in addition to 3) may only transport a patient who has not been stabilized to a facility that provides a higher level of care. The transferring physician must determine if the care that may be required during transport is within the scope of practice of a paramedic. If not, appropriate hospital staff and/or equipment should be sent with the patient
5. Base Contact by Paramedics
 - 5.1 Base Contact is required prior to transport if the transferring physician orders any ALS treatment and/or the patient has not been stabilized
 - 5.2 Paramedics may follow transferring physician's written orders ONLY when 1) the transferring physician speaks to the Base Physician, and they mutually agree on the course of treatment; 2) the proposed treatment plan is within the paramedic's scope of practice
 - 5.3 Base Physician contact shall be made:

►► When there is a request to transfer a patient to a higher level of care facility that is not the "closest, most appropriate" higher level of care facility.

5.4 Base Contact is not required if the patient is stable, and no ALS treatment has been ordered by the transferring physician. If the patient's condition changes during transport, see the appropriate patient care policy and treat accordingly

6. Base Contact may be made anytime a paramedic has a question regarding patient condition, destination and/or the appropriateness of the transfer

7. An Alameda County Unusual Occurrence (U.O.) form should be completed for any problem-oriented interfacility transfers. The U.O. form should be sent to the EMS office for review. [See Administration Manual UNUSUAL OCCURRENCES (#2300)]

8. Refer to "Interfacility Transfer Guidelines" [see Administration Manual INTERFACILITY TRANSFER GUIDELINES (# 5600)] for transfer approval process

9. Alameda County Critical Medical Patient Hospital Transfers for Specialty and/or Higher Level of Care: to provide a process to facilitate the emergent transfer of medical patients within a hospital, either in the ER or admitted within the facility, for specialty or higher level of care services requiring time sensitive intervention at another facility within Alameda County.

Section 7. EMS/PSRC Data Collection, Analysis and Reporting

(a) ALCO EMS agency implemented a standardized data collection and reporting process for a Stoke critical care system over a decade ago.

(b) The Stroke critical care system includes the collection of both prehospital and hospital patient care data, as determined by ALCO EMS agency and complies with § 100270.228.

(c) The prehospital Stroke patient care elements selected by ALCO EMS are compliant with the most current version of the California EMS Information Systems (CEMSIS) database, and the National EMS Information System (NEMSIS) via ESO Electronic Patient Care Report (ePCR).

(d) The hospital stroke patient care elements shall be consistent with the U.S. Centers for Disease Control and Prevention, Paul Coverdell National Acute Stroke Program Resource Guide, dated October 24, 2016, which is hereby incorporated by reference. All ALCO EMS designated PSRCs' participate in patient centric clinical performance and outcome data entry using the American Heart Association (AHA) Get With The Guidelines (GWTG) Stroke registry, which ALCO EMS has "Super User" access via Data Use Agreement (DUA).

(e) All hospitals that receive stroke patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.

(f) The prehospital care record and the hospital data elements shall be collected and submitted by the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis.

Note: Authority cited: Sections. 1797.107, 1797.176, and 1798.150, Health and Safety Code.
Reference: Section 1797.102, 1797.103, 1797.204, 1797.220, 1797.222, 1797.227, and 1798.172, Health and Safety Code.

7.1 PSRC shall collect on-going aggregate data (de-identified) for patients below and forward to Alameda County Emergency Medical Services review: annual or on EMS request:

- a) Number of EMS "Stroke Alerts".
- b) Number patients with diagnosis of Non-Stroke.

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- c) Number of patients with diagnosis of AHS.
 - d) Number of patients with diagnosis of TIA.
 - e) Number of patients with diagnosis of AIS.
 - f) Number of AIS patients treated with systemic (IV) TPA or TNK.
 - g) Percentage of AIS patients treated with TPA or TNK ≤60 minutes of arrival.
 - h) Median “Door-to-Drug” time for AIS patients treated with TPA or TNK.
 - i) Number of AIS patients that received an acute IR Approach.
 - j) Number of AIS patients treated with systemic (IV) TPA or TNK and transferred to an IR (thrombectomy) capable facility for further diagnostics and treatment.
 - k) Number of Non-EMS patients diagnosed in ED with AIS diagnosis (Dx).
 - l) Number of Non-EMS patients treated with systemic (IV) TPA or TNK.
 - m) Percentage of Non-EMS patients treated with TPA or TNK ≤60 minutes of Dx.
 - n) Median “Door-to-Drug” time for Non-EMS AIS patients treated with TPA or TNK.
 - o) Number of Non-EMS AIS patients that received an acute IR Approach.
 - p) Number of Non-EMS AIS patients treated with systemic (IV) TPA or TNK and transferred to an IR (thrombectomy) capable facility for further diagnostics and treatment.
- 7.2 Provide data for ALL EMS transported patients (identified) with suspected Stroke. Patient specific Follow-Up data must be accessible to ALCO EMS as soon as possible or within 30 calendar days of previous months end.
- 7.3 PSRC shall facilitate implementation of future data elements related to Stroke system performance improvement activities.
- 7.4 PSRC shall allow the use of provided data for IRB approved clinical research without hospital identifiers.

2022-2023 ALCO EMS Suspected Stroke Assessed/Transported to ALCO PSRCs

| Stroke Performance Metrics | 2022 | | 2023 | |
|---|-----------------|-----|-----------------|-----|
| | Reporting Value | N | Reporting Value | N |
| Blood Glucose Level - Stroke Alerts | 96.3% | 881 | 96.2% | 628 |
| Last Known Well Time - Stroke Alerts | 81.4% | 881 | 76.4% | 628 |
| Stroke Screening Documented - Stroke Alerts | 86.5% | 881 | 93.0% | 628 |
| Stroke Alerts Transported to a Stroke Receiving Center | 97.3% | 881 | 97.1% | 628 |
| Dispatched to On Scene Time (90th Percentile) - Stroke Alerts | 20min | 881 | 18min | 628 |
| Scene Time (90th Percentile) - Stroke Alerts | 24min | 881 | 25min | 628 |
| Transport Time (90th Percentile) - Stroke Alerts | 19min | 881 | 19min | 628 |
| Door-to-CT Time (90th Percentile) | 24min | 187 | 26min | 165 |
| CT-to-Needle Time (90th Percentile) | 40min | 187 | 38min | 165 |
| Door-to-Needle Time - EMS Arrival (90th Percentile) | 53min | 187 | 56min | 165 |
| Dispatched Time-to-Needle Time (90th Percentile) | 127min | 187 | 126min | 165 |
| Arrival by EMS - Stroke Activations Receiving Thrombolytics | 84.0% | 280 | 75.0% | 280 |

2022 ALCO EMS Stroke Critical Care System AHA/GWTG-Target Stroke Report

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

| Measure Group | Measure Name | Alameda Cou... 01/01/2022-12... | |
|---|--|------------------------------------|-------|
| Advanced Notification by EMS/MSU | % | 27,85% | |
| | Total | 789 | |
| Arrival Mode | % EMS from home/scene | 51,33% | |
| | % Mobile Stroke Unit | 0,04% | |
| | % Transfer from other hospital | 11,34% | |
| | % Walk-in | 33,58% | |
| Arrival to Device (EVT) | % EMS or patients directly presenting within 90 min | 1,69% | |
| | % Transfers from outside hospital/MSU within 60 ... | 6,78% | |
| Arrival to Thrombolytics | % Within 30 minutes | 49,12% | |
| | % Within 30 minutes (EMS Arrival) | 56,25% | |
| | % Within 45 minutes | 84,34% | |
| | % Within 45 minutes (EMS Arrival) | 88,48% | |
| | % Within 60 minutes | 95,35% | |
| | % Within 60 minutes (EMS Arrival) | 95,58% | |
| Door-in-door out within 90 minutes | For MSU | 0,00% | |
| | For Patients Arriving by EMS | 6,67% | |
| | For Walk-in patients | 0,00% | |
| EMS FMC to EVT | Median | 188,50 | |
| EMS FMC to Thrombolytics | Median | 60,50 | |
| Gender | % Female | 49,45% | |
| | % Male | 50,51% | |
| | % Unknown | 0,04% | |
| Ischemic Stroke Treatment | % Alteplase | 1,10% | |
| | % EVT | 3,12% | |
| | % No Treatment | 30,11% | |
| | % Tenecteplase | 8,64% | |
| IV Thrombolytic at an outside hospital or EMS / Mobile Stroke Unit? | % | 1,10% | |
| | Alteplase | 0 | |
| | Tenecteplase | 0 | |
| | Total | 31 | |
| M:L Prehospital Rate-Based Measures | AHA/STRS: IV Thrombolytic Arrive by 3,5 Hour, Tre... | 0,00% | |
| Median Time from LKW | To Arrival (EMS) | 224,00 | |
| | To Arrival (Mobile Stroke Unit) | 0,00 | |
| | To Arrival (Transfer from other hospital) | 1092,00 | |
| | To Arrival (Walk in) | 584,50 | |
| | Total | 1900,50 | |
| Number of Records | Elective Carotid Intervention only | 4 | |
| | ICH | 316 | |
| | Ischemic | 1902 | |
| | No stroke related diagnosis | 62 | |
| | Stroke not otherwise specified | 75 | |
| | Subarachnoid Hemorrhage | 96 | |
| | TIA | 348 | |
| | Total Number of Stroke Records | 2823 | |
| | Patient Demographics | Median Age | 71,00 |
| | Race | % American Indian or Alaska Native | 0,50% |
| % Asian | | 24,97% | |
| % Black or African American | | 20,94% | |
| % Hispanic Ethnicity | | 12,75% | |
| % Native Hawaiian or Pacific Islander | | 0,71% | |
| % UTD | | 10,17% | |
| % White | | 42,83% | |

2023 ALCO EMS Stroke Critical Care System AHA/GWTG-Target Stroke Report

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

| Measure Group | Measure Name | Alameda Cou... 01/01/2023-12... |
|---|---|------------------------------------|
| Arrival to Device (EVT) | % Walk-ins | 33,96% |
| | % EMS or patients directly presenting within 90 min | 9,76% |
| Arrival to Thrombolytics | % Transfers from outside hospital/MSU within 60 ... | 21,95% |
| | % Within 30 minutes | 64,91% |
| | % Within 30 minutes (EMS Arrival) | 68,38% |
| | % Within 45 minutes | 86,87% |
| | % Within 45 minutes (EMS Arrival) | 86,54% |
| | % Within 60 minutes | 94,52% |
| | % Within 60 minutes (EMS Arrival) | 95,91% |
| Door-in-door out within 90 minutes | For MSU | 0,00% |
| | For Patients Arriving by EMS | 25,00% |
| | For Walk-in patients | 20,00% |
| EMS FMC to EVT | Median | 151,00 |
| EMS FMC to Thrombolytics | Median | 52,00 |
| Gender | % Female | 47,83% |
| | % Male | 52,17% |
| | % Unknown | 0,00% |
| Ischemic Stroke Treatment | % Alteplase | 0,00% |
| | % EVT | 4,38% |
| | % No Treatment | 29,77% |
| | % Tenecteplase | 10,54% |
| IV thrombolytic at an outside hospital or EMS / Mobile Stroke Unit? | % | 1,55% |
| | Alteplase | 0 |
| | Tenecteplase | 0 |
| | Total | 41 |
| M:L Prehospital Rate-Based Measures | AHASTR5: IV Thrombolytic Arrive by 3,5 Hour, Tre... | 0,00% |
| Median Time from LKW | To Arrival (EMS) | 189,00 |
| | To Arrival (Mobile Stroke Unit) | 719,00 |
| | To Arrival (Transfer from other hospital) | 866,50 |
| | To Arrival (Walk In) | 832,50 |
| Number of Records | Elective Carotid Intervention only | 3 |
| | ICH | 333 |
| | Ischemic | 1921 |
| | No stroke related diagnosis | 21 |
| | Stroke not otherwise specified | 9 |
| | Subarachnoid Hemorrhage | 101 |
| | TIA | 259 |
| | Total Number of Stroke Records | 2647 |
| | | |
| Patient Demographics | Median Age | 71,00 |
| Race | % American Indian or Alaska Native | 0,49% |
| | % Asian | 25,58% |
| | % Black or African American | 20,51% |
| | % Hispanic Ethnicity | 11,86% |
| | % Native Hawaiian or Pacific Islander | 0,60% |
| | % UTD | 11,45% |
| | % White | 41,44% |

All eight ALCO EMS PSRCs currently participate in AHA/GWTG-Stroke Registry for patient and hospital specific performance and outcome data reporting, as well as contribute de-identified performance data for aggregated system level reporting (2023 Data not yet complete).

Section 8. Regional PSRC Integration

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

ALCO EMS has been involved with a Bay Area Stroke Coordinators group for the past five years. We meet approximately once per year with attendees from both EMS and Stroke Receiving Centers as well as industry (Pharmaceutical and Technology). ALCO EMS includes surrounding county representatives from both EMS and SRCs to Alameda County's Stroke System QI Meetings and as well attends out-of-county Stroke System meetings.

ALCO EMS supports the transport of suspected stroke patients to out-of-county SRCs' if appropriate:

"Consider transport to one of the following out-of-county centers, if appropriate. Contact the stroke center prior to transport."

San Ramon Medical Center, San Ramon
Stanford University Medical Center, Palo Alto
John Muir Medical Center, Walnut Creek
Kaiser Hospital, Walnut Creek
Regional Medical Center, San Jose

Section 9. Continued Quality Oversight / Improvement Strategies / Compliance

The Stroke quality improvement process was established by Alameda County EMS and includes contractual participation of ALL eight currently designated PSRCs'.

(a) ALCO EMS Stroke critical care system shall have a quality improvement process that complies with § 100270.229. Quality Improvement and Evaluation Process. This QI process includes, at a minimum but not limited to:

- (1) Evaluation of program structure, process, and outcome.
- (2) Review of stroke-related deaths, major complications, and transfers.
- (3) A multidisciplinary Stroke Quality Improvement Committee, including both prehospital and hospital members.
- (4) Participation in the QI process by all designated stroke centers and prehospital providers involved in the stroke critical care system.
- (5) Evaluation of regional integration of stroke patient movement.
- (6) Participation in the stroke data management system.
- (7) Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected stroke cases.

(b) ALCO EMS agency is responsible for on-going performance evaluation and quality improvement of the Stroke critical care system by continuing the following strategies that satisfy (1-7) in this section. Criteria for reviews, evaluations and benchmarking are referenced and compared to current evidence-based guidelines and recommendations for recognized standards in Stroke care: the American Heart Association (AHA) / American Stroke Association (ASA) and the Joint Commission (JC).

- 7.1 PSRC Program staff shall participate in Alameda County EMS PSRC QI Committee meetings, with a minimum requirement of two / year.

ALCO EMS STROKE CRITICAL CARE SYSTEM OF CARE PLAN

- 7.2 PSRC shall maintain a written internal quality improvement plan for Stroke patients that includes, but is not limited to the determination and evaluation of:
- a) Death rate
 - b) Complications
 - c) Sentinel events
 - d) System issues
 - e) Organizational issues and resolution processes
- 7.3 PSRC shall support EMS Agency QI activities including educational activities for prehospital personnel.
- 7.4 PSRC shall provide continuous Oversight for ALL sections as described in MOU.
- 7.5 PSRC shall advise/up-date EMS immediately regarding any changes to any section as described in MOU.
- 7.6 PSRC shall participate in an annual review (on request by EMS) regarding modifications of any and compliance with ALL sections as described in MOU.
- 7.7 PSRC shall comply with ALL sections required by California Code of Regulations Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7.2 Stroke Critical Care System: ARTICLE 4. HOSPITAL STROKE CARE REQUIREMENTS AND EVALUATIONS.
- 7.8 PSRC shall comply with ALL sections described and agreed upon in ALCO EMS MOU:
- Scope of services
 - Hospital services
 - Hospital personnel
 - Performance standards
 - Hospital policies and procedures
 - Data collection and required reports
 - Quality improvement
 - Compliance
- 7.9 Failure by PSRC to comply with any section(s) as defined or described in California Code of Regulations Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7.2 Stroke Critical Care System: ARTICLE 4. HOSPITAL STROKE CARE REQUIREMENTS AND EVALUATIONS or ALCO EMS MOU may result in the loss of EMS Stroke patients transported to PSRC for potential intervention until compliance issue(s) is resolved.

8.0 ALCO EMS is in process of establishing electronic bi-directional Healthcare Data Exchange (HDE) with all Alameda County receiving hospitals; currently, 6/13 acute care facilities, 2/8 PSRCs connected.

The purpose of this HDE is to enhance continuity of care between Alameda County Emergency Medical Services (EMS) and system receiving hospitals, provide patient

ALCO EMS STOKE CRITICAL CARE SYSTEM OF CARE PLAN

outcomes to EMS providers, and optimize billing practices to reduce insurance claim issues that could financially impact the patient through connecting EMS data with receiving facility data. The platform design is on an encounter specific basis to allow timely bi-directional digital sharing of information pertinent to patient demographics, billing, and clinical care.

HDE allows EMS patient care reports (PCR) to be digitally transferred in the hospital data systems and subsequently into the patient's Electronic Medical Record (EMR) in either a PDF format or by populating established fields within the system as soon as they are completed by the EMS provider. In addition, patient demographics and insurance information would be shared bi-directionally to help assure that both the EMS provider and the receiving facility both have accurate information.

Clinically, beyond the transferring of information into the hospital data collection system, patient outcome information such as diagnosis, admission/discharge status and interventions can be automatically shared with the EMS care providers involved with that specific patient encounter so that they can compare against their evaluations, assessments, interventions and treatments in order to enhance their skills as a clinical provider.

Furthermore, the bi-directional sharing of information will allow for more timely and efficient collection and reporting of program specific registry data for both EMS and specialty receiving centers. Additionally, this initiative will enhance system oversight as well as future quality and process improvement strategies.

Section 10. Cardiovascular (CV) Public Education - Awareness / EMS Education

ALCO EMS offers a monthly new provider orientation as a venue for PSRC stroke team staff to provide Stroke education to EMS field personnel. EMS is also working closely with ALCO PSRCs to develop educational opportunities regarding stroke: virtual/recoded lectures as well as case studies that are available via web-based platform for CE.

**Emergency Medical Services
Primary Stroke Receiving Center
Agreement**

County of Alameda

and

“[Insert Hospital Name]”

Effective Date: January 1, 2023

Alameda County Primary Stroke Receiving Center Agreement

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DEFINITIONS AND ACRONYMS

| | |
|------------------------------------|---|
| Acute Stroke Ready Hospital | <p>“Acute stroke-ready hospitals” or “Satellite stroke centers” means a hospital able to provide the minimum level of critical care services for stroke patients in the emergency department, and are paired with one or more hospitals with a higher level of stroke services.</p> <p>22 CCR § 100270.200. Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.</p> |
| AHS | Acute Hemorrhagic Stroke |
| AIS | Acute Ischemic Stroke |
| ALCO | Alameda County |
| BHDE | Bidirectional Healthcare Data Exchange |
| Board-certified | <p>“Board-certified” means a physician who has fulfilled all the Accreditation Council for Graduate Medical Education (ACGME) requirements in a specialty field of practice, and has been awarded a certification by an American Board of Medical Specialties (ABMS) approved program.</p> <p>22 CCR § 100270.201. Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| Board-eligible | <p>“Board-eligible” means a physician who has applied to a specialty board examination and has completed the requirements and is approved to take the examination by ABMS. Board certification must be obtained within the allowed time by ABMS from the first appointment.</p> <p>22 CCR § 100270.202. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| Clinical Stroke Team | <p>“Clinical stroke team” means a team of healthcare professionals who provide care for the stroke patient and may include, but is not limited to, neurologists, neuro interventionalists, neurosurgeons, anesthesiologists, emergency medicine physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.</p> <p>22 CCR § 100270.204. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |

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| Comprehensive Stroke Center | <p>“Comprehensive stroke center” means a hospital with specific abilities to receive, diagnose and treat all stroke cases and provide the highest level of care for stroke patients.</p> <p>22 CCR § 100270.203. Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.</p> |
| CT | Computed Tomography |
| Dx | Diagnosis |
| ED | Emergency Department |
| EMS | Emergency Medical Services |
| Emergency Medical Services Authority (EMSA) | <p>“Emergency Medical Services Authority” or “EMS Authority” means the department in California that is responsible for the coordination and the integration of all state activities concerning emergency medical services (EMS).</p> <p>22 CCR § 100270.205. Note: Authority cited: Section 1797.107 Health and Safety Code. Reference: Sections 1797.54, 1797.100, and 1797.103, Health and Safety Code.</p> |
| Local Emergency Medical Services Agency (LEMSA) | <p>“Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility for administration of emergency medical services in a county and which is designated pursuant Health and Safety Code section 1797.200.</p> <p>22 CCR § 100270.206. Note: Authority cited: Sections 1797.107, 1797.176, Health and Safety Code. Reference: Sections 1797.94 and 1797.200, Health and Safety Code.</p> |
| GWTG-Stroke | Get With The Guidelines Stroke is a registry offered by the American Heart Association to capture data regarding Stroke patients |
| HIPAA | Health Insurance Portability and Accountability Act |
| HITECH | Health Information Technology for Economic and Clinical Health Act |
| IA | Intra-arterial |
| IFT | “Interfacility transfer” means the transfer of a Stroke patient from one acute general care facility to another acute general care facility. |

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| IR | Interventional Radiology |
| JC | The Joint Commission |
| MRI | Magnetic Resonance Imaging |
| Primary Stroke Center | <p>“Primary stroke center” means a hospital that treats acute stroke patients, and identifies patients who may benefit from transfer to a higher level of care when clinically warranted.</p> <p>22 CCR § 100270.207. Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.</p> |
| Protocol | <p>“Protocol” means a predetermined, written medical care guideline, which may include standing orders.</p> <p>22 CCR § 100270.208. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| PSRC or Primary Stroke Receiving Center | Designation by Alameda County of a hospital as a primary stroke center, thrombectomy-capable stroke center, and/or comprehensive stroke center where patients with suspected possible Stroke who may benefit by rapid assessment and timely treatment with fibrinolytic if warranted are to be transported to via the 9-1-1 system. |
| Quality Improvement (QI) | <p>“Quality improvement” or “QI” means methods of evaluation that are composed of a structure, process, and outcome evaluations which focus on improvement efforts to identify causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process and recognize excellence in performance and delivery of care.</p> <p>22 CCR § 100270.209. Note: Authority cited: Sections 1797.107, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.103, 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.</p> |
| Stroke | <p>“Stroke” means a condition of impaired blood flow to a patient’s brain resulting in brain dysfunction, most commonly through vascular occlusion or hemorrhage.</p> <p>22 CCR § 100270.210. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.</p> |
| Stroke Call Roster | <p>“Stroke call roster” means a schedule of licensed health professionals available twenty- four (24) hours a day, seven (7) days a week for the care of stroke patients.</p> <p>22 CCR § 100270.211. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections</p> |

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| | 1797.103 and 1797.220, Health and Safety Code. |
| Stroke Care | <p>“Stroke care” means emergency transport, triage, diagnostic evaluation, acute intervention and other acute care services for stroke patients that potentially require immediate medical or surgical intervention treatment, and may include education, primary prevention, acute intervention, acute and subacute management, prevention of complications, secondary stroke prevention, and rehabilitative services.</p> <p>22 CCR § 100270.212. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| Stroke Critical Care System | <p>“Stroke critical care system” means a subspecialty care component of the EMS system developed by a local EMS agency. This critical care system links prehospital and hospital care to deliver optimal treatment to the population of stroke patients.</p> <p>22 CCR § 100270.213. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| Stroke Medical Director | <p>“Stroke medical director” means a board-certified physician in neurology or neurosurgery or another board with sufficient experience and expertise dealing with cerebrovascular disease as determined by the hospital credentialing committee that is responsible for the stroke service, performance improvement, and patient safety programs related to a stroke critical care system.</p> <p>22 CCR § 100270.214. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| Stroke Program Manager | <p>“Stroke program manager” means a registered nurse or qualified individual designated by the hospital with the responsibility for monitoring and evaluating the care of stroke patients and the coordination of performance improvement and patient safety programs for the stroke center in conjunction with the stroke medical director.</p> <p>22 CCR § 100270.215. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| Stroke Program | <p>“Stroke program” means an organizational component of the hospital specializing in the care of stroke patients.</p> <p>22 CCR § 100270.216. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |

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| Stroke Team | <p>“Stroke team” means the personnel, support personnel, and administrative staff that function together as part of the hospital’s stroke program.</p> <p>22 CCR § 100270.217. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.</p> |
| Telehealth | <p>“Telehealth” means the mode of delivering health care services and public health via information and communication technologies to facilitate the diagnosis, consultation, treatment, education, care management, and self-management of a patient’s health care while the patient is at the originating site and the health care provider is at a distant site.</p> <p>22 CCR § 100270.218. Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code. California Business and Professions Code Sec. 2290.5</p> |
| Thrombectomy-Capable Stroke Center | <p>“Thrombectomy-capable stroke center” means a primary stroke center with the ability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.</p> <p>22 CCR § 100270.219. Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103, and 1797.176, Health and Safety Code.</p> |
| TIA | Transient Ischemic Accident |
| tpA | Tissue Plasminogen Activator |

Section 1 – Introduction

- 1.1 Alameda County is designated as the Local Emergency Medical Service Agency (LEMSA) as defined in the California Health and Safety Code Division 2.5, Sections 1797.94, 1797.67, 1798, and 1798.170. Responsible for establishing policies and procedures within its jurisdiction. The LEMSA also has primary responsibility for administration of emergency medical services in a county or region, which is designated pursuant Health and Safety Code commencing with section 1797.200.
- 1.2 This Agreement, dated as of the first day of January 2023, and in accordance with California Code of Regulations Title 22. Social Security; Division 9. Prehospital Emergency Medical Services; Chapter 7.2 Stroke Critical Care System (§ 100270.213.), is by and between the COUNTY OF ALAMEDA, hereinafter referred to as the “COUNTY”, and [Insert Hospital Name] hereinafter referred to as the “Contractor”.
- 1.3 Whereas, COUNTY, in consideration of the County’s PSRC designation of Contractor as a primary stroke center (22 CCR § 100270.207.) as described in ALCO EMS field assessment, treatment and transport protocol. Contractor shall perform the services identified in this agreement without interruption, 24 hours per day, 7 days per week, 52 weeks per year for the full term of this Contract, as set forth in Exhibit A. Exceptions would include, the lack of technology (equipment) available to perform appropriate diagnostics: catastrophic plant or equipment failure (CT and or MRI) or pre-planned scheduled maintenance.
- 1.4 Whereas, Contractor is professionally qualified to provide such services and is willing to provide the same to COUNTY.
- 1.5 Now, therefore it is agreed that COUNTY does hereby designate Contractor to provide Primary Stroke Services, and Contractor accepts such designation as specified in this Agreement, and the following described exhibits, all of which are incorporated into this Agreement by this reference:
- Exhibit A – Scope of Services
- Exhibit B – Data Elements
- Exhibit C – Application
- Exhibit D – California Regulations: Stroke Critical Care System

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Exhibit E – Paul Coverdell National Acute Stroke Program Resource Guide, dated October 24, 2016: <https://ems.ca.gov/wp-content/uploads/sites/71/2019/02/USCDCP-Paul-Coverdell-Nation-Acute-Stroke-Prog-Resource-Guide-10-24-16.pdf>

- 1.6 The parties hereby execute this single agreement that will constitute formal designation of Contractor as a Primary Stroke Receiving Center within the Alameda County EMS system under Health & Safety Code Sections 1797.67 and 1798.170 et seq.

Section 2 – Term

- 2.1 The term of this Agreement shall be from January 1, 2023, through December 31, 2025.
- 2.2 The current designation term expires December 31, 2022, at which time contractor shall submit a new PSRC application and provide supporting documentation demonstrating compliance with the requirements under 22 CCR§ 100270.225. This Agreement is subject to the review and approval of the application by ALCO EMS. There will be NO interruption of service during the COUNTY EMS review/approval process for existing PSRCs that are in good standing with an expired MOU.
- 2.3 The term for the PSRC designation will be for up to three-years, with re-designation reviews by LEMSA conducted at least every three years.
- 2.4 At minimum, Contractor shall maintain JC Certification as a Primary Stroke Center to continue designation as a PSRC, even if thrombectomy capable.
- 2.5 Current PSRCs that offer IR services for thrombectomy shall obtain Thrombectomy-Capable Stroke Center status by JC during the term of this Agreement.
- 2.6 Before PRSC re-designation by the LEMSA at the next regular interval, the Contractor shall be re-evaluated to meet the criteria established in these regulations: Exhibit D, Article 4. (22 CCR § 100270.225.)
- 2.7 The LEMSA medical director may stipulate additional requirements: Exhibit D, Article 4. (§ 100270.225.–18b)
- 2.8 LEMSA may suspend or revoke the PSRC designation for lack of compliance with this Agreement or applicable laws and regulations.

Section 3 – Services

- 3.1 Contractor shall provide hospital, equipment, resources and personnel services as described in Exhibits A and D; data collection and reporting requirements as described in Exhibits A, B, D and E; quality improvement requirements as described in Exhibits A and D. Contractor shall participate in an annual review and adhere to compliance standards as described in Exhibits A and D. For initial EMS approval, Contractor shall complete and submit a PSRC Application as described in Exhibit C. Contractor shall comply with ALL criteria in accordance with ARTICLE 4. § 100270.225. Primary Stroke Center Requirements as described in Exhibit D. Currently designated ALCO EMS PSRCs' that offer IR services for thrombectomy, shall at minimum, comply with ALL criteria in accordance with ARTICLE 4. § 100270.224. Thrombectomy-Capable Stroke Centers. (ALCO EMS Policies and protocols for the ALCO PSRC program will be reviewed and revised as needed).

Section 4 – Required Reports

- 4.1 Contractor shall provide data specified in Exhibits B, D, and E for individual EMS transported patients (identified) with suspected Stroke. Contractor shall complete data (b-2) entry into GWTG-Stroke registry regarding all EMS patients no later than 30 calendar days following the prior month's end. This will allow for timely access by ALCO EMS via established GWTG-Stroke "Super User" agreement and must include ALL: EMS transported patients with a diagnosis of stroke (AHS, AIS, TIA).
- 4.2 Contractor shall submit an annual aggregate performance data report in the format established by the LEMSA in Exhibit B (B-1). Said report shall be submitted on LEMSA request for prior year respectively and present said data at requested ALCO EMS PSRC Meeting.
- 4.3 Any and all data elements specified in Exhibits B, D and E are subject to modification/change at any time as agreed upon by the LEMSA and Contractor or otherwise mandated by the State.

Alameda County Primary Stroke Receiving Center Agreement

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Section 5 – Signatory

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

COUNTY OF ALAMEDA

CONTRACTOR

Hospital Name

By: _____
Signature

By: _____
Signature

Name: _____
(Printed)

Name: _____
(Printed)

Title: _____

Title: _____

Approved as to Form:

Date: _____

By: _____
K. Joon Oh, Deputy County Counsel

By signing above, signatory warrants and represents that he/she executed this Agreement in his/her authorized capacity and that by his/her signature on this Agreement, he/she or the entity upon behalf of which he/she acted, executed this Agreement.

EXHIBIT A – SCOPE OF SERVICES

1. SCOPE OF SERVICES: Primary Stroke Center

(Exhibit D, Article 1. § 100270.207.)

Contractor shall:

- 1.1 Meet and maintain minimum requirements as a Primary Stroke Center defined in § 100270.225 and maintain current JC certification as a Primary Stroke Center to be designated by ALCO EMS as a Primary Stroke Receiving Center (PSRC) for EMS transported patients with suspected stroke. This means a licensed general acute care facility that meets the minimum hospital Stroke Care requirements pursuant to and defined in 22 CCR § 100270.212. Patients with suspected “Stroke” means a condition of impaired blood flow to a patient’s brain resulting in brain dysfunction, most commonly through vascular occlusion or hemorrhage § 100270.210. In addition, Contractor is able to provide all services, equipment, and personnel including maintenance of adequate staffing levels, equipment, and facilities according to PSRC designation criteria described in Exhibits A and D.

At minimum, be currently certified as a Primary Stroke Center and without interruption provide all services according to Joint Commission (JC) requirements for Disease-Specific Care (DSC) Advanced Certification Program for Primary Stroke Center (PSC), and if applicable, Thrombectomy-Capable Stroke Center (TSC) or Comprehensive Stroke Center (CSC).

- 1.2 Accept all Alameda County EMS patients triaged as having suspected Stroke, transported to Contractor’s facility, and provide appropriate medical management for said patients without regard to race, color, national origin, religious affiliation, age, sex, or ability to pay.

2. HOSPITAL SERVICES: 22 CCR § 100270.225. Primary Stroke Centers

(Exhibit D, Article 4. HOSPITAL STROKE CARE REQUIREMENTS AND EVALUATIONS)

(a) Hospitals designated by the local EMS agency as a primary stroke center shall meet all the following minimum criteria:

- (1) Adequate staff, equipment, and training to perform rapid evaluation, triage, and treatment for the stroke patient in the emergency department.
- (2) Standardized stroke care protocol/order set.
- (3) Stroke diagnosis and treatment capacity twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.

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(4) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

(5) Continuing education in stroke care provided for staff physicians, staff nurses, staff allied health personnel, and EMS personnel.

(6) Public education on stroke and illness prevention.

(7) A clinical stroke team, available to see in person or via telehealth, a patient identified as a potential acute stroke patient within 15 minutes following the patient's arrival at the hospital's emergency department or within 15 minutes following a diagnosis of a patient's potential acute stroke.

(A) At a minimum, a clinical stroke team shall consist of:

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

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

(8) Written policies and procedures for stroke services that shall include written protocols and standardized orders for the emergency care of stroke patients. These policies and procedures shall be reviewed at least every three (3) years, revised as needed, and implemented.

(9) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

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

(11) CT scanning or equivalent neuro-imaging shall be initiated within twenty-five (25) minutes following emergency department arrival.

(12) Other imaging shall be available within a clinically appropriate timeframe and shall, at a minimum, include:

(A) MRI.

(B) CTA and / or Magnetic resonance angiography (MRA).

(C) TEE or TTE.

(13) Interpretation of the imaging.

(A) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.

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

(i) For the purpose of this subsection, a qualified radiologist shall be board certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(ii) For the purpose of this subsection, a qualified neurologist shall be board certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry.

(iii) For the purpose of this subsection, a qualified neurosurgeon shall be board certified by the American Board of Neurological Surgery.

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

(15) Neurosurgical services shall be available, including operating room availability, either directly or under an agreement with a thrombectomy-capable, comprehensive or other stroke center with neurosurgical services, within two (2) hours following the arrival of acute stroke patients to the primary stroke center.

(16) Acute care rehabilitation services.

(17) Transfer arrangements with one or more higher level of care centers when clinically warranted or for neurosurgical emergencies.

(18) There shall be a stroke medical director of a primary stroke center, who may also serve as a physician member of a stroke team, who is board-certified in neurology or neurosurgery or another board-certified physician with sufficient experience and expertise dealing with cerebral vascular disease as determined by the hospital credentials committee.

(b) Hospitals designated by the local EMS agency as a primary stroke center shall meet additional requirements that may be stipulated by the LEMSA medical director, including the following:

Contractor shall keep in effect the following:

- a) Licensure under California Health and Safety Code Section 1250 et seq.
- b) Permit for Basic or Comprehensive Emergency Medical Services pursuant to the provisions of Title 22, Division 5, of the California Code of Regulations,
- c) Designated priority telephone line to be used by prehospital personnel to contact the PSRC regarding patients with suspected Stroke that are being transported to that facility for potential intervention,
- d) Neurovascular intervention and Neurosurgical availability.

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- i. Neurovascular intervention and or neurosurgery; or,
- ii. A plan for emergency transport to a facility with neurovascular intervention and or Neurosurgery availability that describes steps for timely transfer.

3. 22 CCR § 100270.224. Thrombectomy-Capable Stroke Centers

(Exhibit D, Article 4. HOSPITAL STROKE CARE REQUIREMENTS AND EVALUATIONS)

(a) Hospitals designated as a thrombectomy-capable stroke center by the local EMS agency shall meet the following minimum criteria:

- (1) Satisfy all the requirements of a primary stroke center as provided in § 100270.225.
- (2) The ability to perform mechanical thrombectomy for the treatment of ischemic stroke twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.
- (3) Dedicated neuro-intensive care unit beds to care for acute ischemic stroke patients twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.
- (4) Satisfy all the following staff qualifications:
 - (A) A qualified physician, board certified by the American Board of Radiology, American osteopathic Board of Radiology, American Board of Psychiatry and Neurology, or the American osteopathic Board of Neurology and Psychiatry, with neuro-interventional angiographic training and skills on staff as deemed by the hospital's credentialing committee.
 - (B) A qualified neuro-radiologist, board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.
 - (C) A qualified vascular neurologist, board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry, or with appropriate education and experience as defined by the hospital credentials committee.
 - (D) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.
- (5) The ability to perform advanced imaging twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, which shall include, but not be limited to, the following:
 - (A) Computed tomography angiography (CTA).
 - (B) Diffusion-weighted MRI or CT Perfusion.
 - (C) Catheter angiography.
 - (D) Magnetic resonance angiography (MRA).
 - (E) And the following modalities available when clinically necessary:

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- (i) Carotid duplex ultrasound.
- (ii) Transesophageal echocardiography (TEE).
- (iii) Transthoracic Echocardiography (TTE).

(6) A process to collect and review data regarding adverse patient outcomes following mechanical thrombectomy.

(7) Written transfer agreement with at least one comprehensive stroke center.

(b) Hospitals designated as a thrombectomy-capable stroke center by the local EMS agency shall meet additional requirements may be stipulated by the local EMS agency medical director.

4. HOSPITAL PERSONNEL

Contractor shall provide program oversight staff and shall have available all staff necessary to perform optimal care for patients with Stroke, including the following:

4.1 PSRC Program Medical Director: (Exhibit D, 22 CCR § 100270.214.)

4.1.1 Qualifications:

- Board Certified in either Internal Medicine, Cardiology, or Neurology and have preferred knowledge and expertise in the diagnosis and treatment of cardiovascular disease and stroke.

4.1.2 Responsibilities:

- Oversight of PSRC program patient care,
- Coordination of staff and services,
- Authority and accountability for quality and performance improvement,
- Participation in protocol development,
- Establishes and monitors quality control, including Mortality and Morbidity, and,
- Participation in County PSRC QI Committee.

4.2 PSRC Program Manager: (Exhibit D, 22 CCR § 100270.215.)

4.2.1 Qualifications:

- Experience with monitoring and evaluating the care of stroke patients and/or the coordination of performance improvement and patient safety programs (ED, ICU, CCU).

4.2.2 Responsibilities:

- Supports PSRC Medical Director Functions
- Acts as EMS-PSRC Program Liaison
- Assures EMS-PSRC data sharing
- Manages EMS-PSRC QI activities
- Authority and accountability for quality oversight and performance improvement.

4.3 Physician-Consultants - Hospital shall maintain a daily on-call schedule for: Neurologist(s) (on-site or remote); Radiologist(s) (on-site or remote); and

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Interventional Neurologist(s), Neurosurgeon(s) if these services are provided by Hospital.

4.4 Stroke Team / Additional personnel: (Exhibit D, 22 CCR § 100270.217.)

- a) Emergency department (ED)
- b) Interventional radiology (IR)
- c) Neurosurgery
- d) Nursing
- e) Computed tomography (CT)
- f) Laboratory
- g) Pharmacy
- h) Rehabilitation
- i) Inpatient units

5. PERFORMANCE STANDARDS

Contractor shall follow current science/evidence based recommendations regarding the assessment and treatment of acute ischemic stroke as well as acute hemorrhagic (American Heart Association /American Stroke Association); and strive to meet the following recommended timelines in caring for patients who present to hospital with identified acute ischemic stroke and meet inclusion criteria for treatment:

- 5.1 Systemic Fibrinolytic within 4.5 hours of symptom onset if administered.
- 5.2 Systemic Fibrinolytic within 60 minutes of ED arrival if administered.
- 5.3 Timely IFT to a thrombectomy-capable center if necessary.

6. HOSPITAL POLICIES AND PROCEDURES

Contractor shall:

6.1 Develop and implement policies and procedures designed to ensure that patients presenting to hospital with possible Stroke receive appropriate care in a timely manner. Such internal policies shall include Program Management (DSPR), Delivering or Facilitating Clinical Care (DSDF), Supporting Self-Management (DSSE), Clinical Information Management (DSCT), and Performance Measurement (DSPM) as defined and specified by The Joint Commission requirements for Disease-Specific Care (DSC) Advanced Certification Program for Primary Stroke Center Certification Manual (Current standards for PSRC JC Certification cycle).

7. DATA MANAGEMENT AND REPORTING: (Exhibit D, 22 CCR § 100270.228.)

Data Requirements

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- (a) The local EMS agency shall implement a standardized data collection and reporting process for stroke critical care systems.
- (b) The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency.
- (c) The prehospital stroke patient care elements shall be compliant with the most current version of the California EMS Information Systems (CEMSIS) database and the National EMS Information System (NEMSIS) database.
- (d) The hospital stroke patient care elements shall be consistent with the U.S. Centers for Disease Control and Prevention, Paul Coverdell National Acute Stroke Program Resource Guide, dated October 24, 2016, which is hereby incorporated by reference (Exhibit-E).
- (e) All hospitals that receive stroke patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.
- (f) The prehospital care record and the hospital data elements shall be collected and submitted by the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis.

Contractor in addition shall provide:

- 7.1 As further specified in Exhibit B, Contractor shall collect on-going aggregate data (de-identified) for patients below and forward to ALCO EMS review: annual or on ALCO EMS request:
 - a) Number of EMS "Stroke Alerts".
 - b) Number of above patients (a) with diagnosis of Non-Stroke.
 - c) Number of above patients (a) with diagnosis of AHS.
 - d) Number of above patients (a) with diagnosis of TIA.
 - e) Number of above patients (a) with diagnosis of AIS.
 - f) Number of above AIS patients (e) treated with systemic (IV) TPA.
 - g) % of above AIS patients (f) treated with TPA \leq 60 minutes of arrival.
 - h) Median "Door-to-Drug" time of above AIS patients (f) treated with TPA.
 - i) Number of AIS patients (e) that received an acute IR Approach.
 - j) Number of AIS patients (f) treated with systemic (IV) TPA and transferred to an IR capable facility for further diagnostics and treatment.
 - k) Number of Non-EMS patients diagnosed in ED with AIS diagnosis (Dx).
 - l) Number of above Non-EMS patients (k) treated with systemic (IV) TPA.
 - m) % of above Non-EMS patients (l) treated with TPA \leq 60 minutes of Dx.
 - n) Median "Door-to-Drug" time of above AIS patients (l) treated with TPA.
 - o) Number of AIS patients (k) that received an acute IR Approach.
 - p) Number of AIS patients (l) treated with systemic (IV) TPA and transferred to an IR capable facility for further diagnostics and treatment.

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- 7.2 Provide data for ALL EMS transported patients (identified) with suspected possible Stroke. Patient specific Follow-Up data must be accessible to ALCO EMS via GWTG Super-User account as soon as possible or within 30 calendar days of previous months end or date of request received.
- 7.3 At minimum, participate by providing data to a National Stroke Registry using American Heart Association Get with the Guidelines Stroke (GWTG) database and be willing to participate in other data sharing strategies that may include but are not limited to the California Stroke Registry and or the Coverdell National Acute Stroke Registry on request by County (ALCO EMS). Facilitate implementation of future data elements related to Stroke system performance and quality improvement.
- 7.4 Contractor shall allow the use of provided data for IRB approved clinical research without hospital identifiers.
- 7.5 The data further specified in Exhibits B and D shall be provided to the EMS Agency in the timeline and manner defined, until a real time Bidirectional Healthcare Data Exchange (BHDE) network is established between County EMS and the PSRC Contractor.
- 7.6 At some point in time (to be determined at the discretion of EMS) during the term of this MOU, the contractor will establish a Bidirectional Healthcare Data Exchange (BHDE) network with County EMS.
- 7.7 The cost to establish the BHDE network between County EMS and the Contractor shall be fairly shared by apportionment as agreed upon by both parties.
- 7.8 The BHDE network established between County EMS and the Contractor must be interoperable with other data systems, including the functionality to exchange electronic patient health information in real-time with other entities in an HL7 format.
- 7.9 The minimum requirements and capability of the BHDE network established between County EMS and the Contractor shall include but are not limited to:
 - 7.10 Search a patient's health record for problems, medications, allergies, and end of life decisions to enhance clinical decision-making;
 - 7.10.1 Alert the receiving hospital regarding the patient's status directly onto a dashboard in the emergency department to provide decision support;
 - 7.10.2 File the EMS Patient Care Report data directly into the patient's electronic health record for timely and longitudinal patient care documentation;
 - 7.10.3 Reconcile the electronic health record information including diagnoses and disposition back into the EMS patient care report for use in ensuring timely provider feedback and enhanced quality improvement strategies for the County EMS system.
 - 7.10.4 Any access to, or exchange of, individually identifiable health information or protected health information shall comply with the requirements of HIPAA and HITECH.

8. QUALITY IMPROVEMENT AND EVALUATION PROCESS: (Exhibit D, 22 C 100270.229.)

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(a) Each stroke critical care system shall have a quality improvement process that shall include a minimum:

- (1) Evaluation of program structure, process, and outcome.
- (2) Review of stroke-related deaths, major complications, and transfers.
- (3) A multidisciplinary Stroke Quality Improvement Committee, including both prehospital and hospital members.
- (4) Participation in the QI process by all designated stroke centers and prehospital providers involved in the stroke critical care system.
- (5) Evaluation of regional integration of stroke patient movement.
- (6) Participation in the stroke data management system.
- (7) Compliance with the California Evidence Code, Section 1157.7 to ensure confidentiality, and a disclosure-protected review of selected stroke cases.

(b) The local EMS agency shall be responsible for on-going performance evaluation and quality improvement of the stroke critical care system.

Contractor shall provide the following:

- 8.1 PSRC Program staff shall participate in Alameda County EMS PSRC QI Committee meetings, with a minimum requirement of two / year. Each PSRC shall provide at minimum, multi-disciplinary representation including one decision-making representative from Emergency Medicine and Neurology at every meeting attended.
- 8.2 PSRC shall maintain a written internal quality improvement plan for Stroke patients that includes, but is not limited to the determination and evaluation of:
 - a) Death rate
 - b) Complications
 - c) Sentinel events
 - d) System issues
 - e) Organizational issues and resolution processes
- 8.3 PSRC shall support EMS Agency QI activities including educational activities for prehospital personnel.

9. COMPLIANCE

- 9.1 Contractor shall provide continuous Oversight for compliance with ALL sections in Exhibit A.
- 9.2 Contractor shall advise ACLO EMS immediately regarding any changes that would result in non-compliance with any section in Exhibit A.

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- 9.3 Contractor shall participate in an annual review (on request by ALCO EMS) regarding modifications of any and compliance with ALL sections as described in Exhibit A and D.
- 9.4 Failure by Contractor to comply with any section(s) as described in this Agreement, including in Exhibits A or B, may result in the loss of EMS Stroke patients transported to Contractor's hospital for potential intervention until compliance issue(s) is resolved.

10. PREHOSPITAL STROKE CRITICAL CARE SYSTEM REQUIREMENTS

(Exhibit D, Article 3. § 100270.222. EMS Personnel and Early Recognition)

- (a) The local EMS agency shall establish prehospital care protocols related to the early recognition, assessment, treatment, and transport of stroke patients for prehospital emergency medical care personnel as determined by the local EMS agency.
- (b) The local EMS agency shall require the use of a validated prehospital stroke- screening algorithm for early recognition and assessment.
- (c) The local EMS agency's protocols for the use of online medical direction shall be used to determine the most appropriate stroke center to transport a patient in cases of confusing or complex findings.
- (d) The prehospital treatment policies for stroke-specific basic life support (BLS), advanced life support (ALS), and limited advanced life support (LALS) shall be developed according to the scope of practice and local accreditation.
- (e) Notification of prehospital findings of suspected stroke patients shall be communicated in advance of the arrival to the stroke centers according to the local EMS agency's Stroke Critical Care System Plan.

County shall also keep in effect the following:

- 10.1 Make electronic prehospital patient care records available to Contractor via computer for all Stroke patients taken by 911 ambulance to Contractor's facilities.
- 10.2 Maintain the confidentiality of all patient information and data (includes de-identified data) provided by Contractor and use such information solely for the local EMS Agency's internal quality improvement, peer review and oversight functions as mandated/authorized by law or regulation. County also agrees to not identify Contractor by name in any aggregate report of the data or release any reports or data showing individual hospital performance unless agreed to by Contractor or required by law or regulation. Notwithstanding anything in this Agreement to the contrary, the parties acknowledge and agree that Contractor shall not be required to disclose any patient information or other data to the COUNTY to the extent not otherwise permitted or required by applicable laws or regulations.
- 10.3 Provide to Contractor and/or the PSRC Quality Improvement Committee prehospital system data, including patient destination data, related to Stroke care.

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- 10.4 Meet and consult with Contractor prior to the adoption of any policy or procedure that concerns the administration of the Stroke Critical Care System, Stroke public education efforts or the triage, transport and treatment of Stroke patients.
- 10.5 In order to improve quality of care, direct 911 ambulance transport providers to inform hospital of identification of patients determined to have suspected Stroke prior to the patient's arrival at hospital.
- 10.6 Transport suspected Stroke patients to Contractor in accordance with County EMS field assessment, treatment and transport protocols. .

EXHIBIT B – DATA ELEMENTS

As defined in Section 6 of Exhibit A and as further specified in this Exhibit B, Contractor shall provide the specified data elements required by the State of California and in the reporting formats established by the Alameda County EMS Agency.

B-1

Contractor shall collect continuous aggregate (de-identified) performance measures using data elements below, submitted on ALCO EMS request and presented to Alameda County Emergency Medical Services on an annual basis at ALCO PSRC meeting. (Ex. A, Sec. 7.1)

Alameda County EMS PSRC Annual Performance Data

- 1. Number of EMS “Stroke Alerts”.**
 - 1a. Number of above patients (1) with diagnosis of Non-Stroke.**
 - 1b. Number of above patients (1) with diagnosis of AHS.**
 - 1c. Number of above patients (1) with diagnosis of TIA.**
 - 1d. Number of above patients (1) with diagnosis of AIS.**

- 2. Number of above AIS patients (1d) treated with systemic (IV) TPA.**
 - 2a. % of above AIS patients (2) treated with TPA ≤60 minutes of arrival.**
 - 2b. Median “Door-to-Drug” time of above AIS patients (2) treated with TPA.**
 - 2c. Number of AIS patients (1d) that received an acute IR Approach.**
 - 2d. Number of AIS patients (2) treated with systemic (IV) TPA and transferred to an IR capable facility for further diagnostics and treatment.**

- 3. Number of Non-EMS patients diagnosed in ED with AIS diagnosis (Dx).**
 - 3a. Number of above Non-EMS patients (3) treated with systemic (IV) TPA.**
 - 3b. % of above Non-EMS patients (3a) treated with TPA ≤60 minutes of Dx.**
 - 3c. Median “Door-to-Drug” time of above AIS patients (3a) treated with TPA.**
 - 3d. Number of AIS patients (3) that received an acute IR Approach.**
 - 3e. Number of AIS patients (3a) treated with systemic (IV) TPA and transferred to an IR capable facility for further diagnostics and treatment**

B-2

Contractor shall provide PSRC performance and clinical outcome data for individual EMS patients transported with suspected Stroke via GWTG-Stroke Registry and allow “Super User” access by ALCO EMS through a signed Data Use Agreement. Patient specific follow-up data shall include but not be limited to data elements below and shall be accessible to ALCO EMS as soon as possible or within

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30 calendar days following the prior month's end or on receipt of request by ALCO EMS.

EMS Patient Inclusion Criteria (Stroke Alert follow-up)

All patients who:

Have **one or more** positive finding(s): signs/symptoms are present when assessed with the Cincinnati Prehospital Stroke Scale (CPSS), has a normal blood glucose level when obtained and CPSS signs/symptoms were initially observed within **4 hours** of contact by a valid historian.

Please note: ask when the patient was last seen at normal baseline **and** when the onset of new stroke signs and symptoms appeared, and interpreted by EMS as suspected Stroke and transported to a PSRC for potential intervention. **(Data collection tool B2: GWTG-Stroke)**

Data collection tool B2 captured in GWTG-Stroke:

EMS STROKE ALERT /IFT FOLLOW-UP

- Was the patient a "Stroke Alert" by EMS?
- Stroke confirmed at hospital: if yes, (ischemic, hemorrhagic or TIA)
- Was patient transported by EMS to your PSRC, NOT "Stroke Alerted" and diagnosed with Stroke?
- Did EMS record "TIME patient last known normal or at base-line"?
- Was a Systemic (IV) fibrinolytic (tpA) administered at PSRC?
- If yes, was the systemic (IV) fibrinolytic (tpA) administered within 4.5 hours of symptom onset?
- Was the (IV) systemic fibrinolytic (tpA) administered within 60 minutes of EMS ED arrival?
- If a systemic fibrinolytic (tpA) was NOT administered (reason)?
- Did the patient receive an Acute IR approach (if PSRC capable)?
- Was the patient transferred from your PSRC to another hospital for further IR diagnostics and or treatment?
- Diagnoses ?

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EXHIBIT C – PSRC APPLICATION

Alameda County EMS Primary Stroke Receiving Center (PSRC) Designation

(To complete this form electronically tab through the fields and then save it.)

Objective: To assess the interest and capabilities of Alameda County hospitals for designation as an Alameda County EMS Primary Stroke Receiving Center (“PSRC”).

Definition: A PSRC is a hospital that receives suspected stroke patients pre-screened by Alameda County EMS and is certified as a Primary Stroke Center, Thrombectomy-Capable Stroke Center, or Comprehensive Stroke Center by the Joint Commission.

In the future, ALCO EMS may further designate PSRCs to include “enhanced” capabilities for the treatment of stroke patients. These interventions include but are not restricted to Invasive Radiologic Approaches: intra-arterial fibrinolytics, mechanical thrombectomy or other invasive surgical procedures.

Facility Name: _____ Phone ext _____

Address:

_____ street

_____ city

_____ zip

Name of the person completing the form: _____

Title: _____

email: _____

Phone: ext: _____

Is your facility currently certified as a primary stroke center (PSC), Thrombectomy-Capable Stroke Center (TSC), or Comprehensive Stroke Center (CSC) by Joint Commission (JC)? Yes No

If **yes**, what level of JC certification? PSC TSC CSC

If **yes**, what is the date of certification expiration? ____/____/____

If **no**, are you in the process of applying? Yes No

(Note: Joint Commission certification visit on “ENTER DATE”, Evidence of Standards Compliance submission pending).

If **yes**, when do you anticipate certification? ____/____/____

If **no**, please keep EMS informed if you change your mind in the future. You do not need to complete the remainder of this form – thank you.

If your facility is currently JC Certified as a PSC or in process, please fill out below:

Name of stroke center Medical Director? _____

email: _____

Phone: ext: _____

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Name of stroke center Nurse Coordinator?

email:

Phone: ext:

Name of stroke center Administrative Liaison?

email:

Phone: ext:

Name of Liaison for data collection, analysis, and reporting?

Phone: ext:

email:

Phone: ext:

What is the dedicated phone number for EMS stroke patient notification?

Phone: ext:

Does your facility participate in the American Heart Association (AHA) Get With The Guidelines (GWTG) Stroke registry? Yes No

If your facility participates in any additional stroke registries, please list:

If your facility is certified by Joint Commission as a Primary Stroke Center and you wish to be designated as a PSRC by ACLO EMS, or your facility is renewing its status with ALCO EMS, please complete this form and, save it and email as an attachment, or print and mail or fax to:

Karl Sporer, MD or, Michael Jacobs, Paramedic

1000 San Leandro Blvd. San Leandro, CA 94577

Karl.sporer@acgov.org or, michael.jacobs@acgov.org

(510) 618.2050 fax: (510) 618-2099

We will contact you to schedule a site visit. Thank you for your interest and support!

EXHIBIT D – CALIFORNIA STATE STROKE REGULATIONS

California Code of Regulations

Title 22. Social Security

Division 9. Prehospital Emergency Medical Services

Chapter 7.2 Stroke Critical Care System

ARTICLE 1. DEFINITIONS

§ 100270.200. Acute Stroke Ready Hospital

“Acute stroke-ready hospitals” or “Satellite stroke centers” means a hospital able to provide the minimum level of critical care services for stroke patients in the emergency department, and are paired with one or more hospitals with a higher level of stroke services.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.

§ 100270.201. Board-certified

“Board-certified” means a physician who has fulfilled all the Accreditation Council for Graduate Medical Education (ACGME) requirements in a specialty field of practice, and has been awarded a certification by an American Board of Medical Specialties (ABMS) approved program.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.202. Board-eligible

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.203. Comprehensive Stroke Center

“Comprehensive stroke center” means a hospital with specific abilities to receive, diagnose and treat all stroke cases and provide the highest level of care for stroke patients.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.

§ 100270.204. Clinical Stroke Team

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

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§ 100270.205. Emergency Medical Services Authority

“Emergency Medical Services Authority” or “EMS Authority” means the department in California that is responsible for the coordination and the integration of all state activities concerning emergency medical services (EMS).

Note: Authority cited: Section 1797.107 Health and Safety Code. Reference: Sections 1797.54, 1797.100, and 1797.103, Health and Safety Code.

§ 100270.206. Local Emergency Medical Services Agency

“Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility for administration of emergency medical services in a county and which is designated pursuant Health and Safety Code section 1797.200.

Note: Authority cited: Sections 1797.107, 1797.176, Health and Safety Code. Reference: Sections 1797.94 and 1797.200, Health and Safety Code.

§ 100270.207. Primary Stroke Center

“Primary stroke center” means a hospital that treats acute stroke patients, and identifies patients who may benefit from transfer to a higher level of care when clinically warranted.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.

§ 100270.208. Protocol

“Protocol” means a predetermined, written medical care guideline, which may include standing orders.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.209. Quality Improvement

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

Note: Authority cited: Sections 1797.107, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.103, 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.

§ 100270.210. Stroke

“Stroke” means a condition of impaired blood flow to a patient’s brain resulting in brain dysfunction, most commonly through vascular occlusion or hemorrhage.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

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§ 100270.211. Stroke Call Roster

“Stroke call roster” means a schedule of licensed health professionals available twenty- four (24) hours a day, seven (7) days a week for the care of stroke patients.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103 and 1797.220, Health and Safety Code.

§ 100270.212. Stroke Care

“Stroke care” means emergency transport, triage, diagnostic evaluation, acute intervention and other acute care services for stroke patients that potentially require immediate medical or surgical intervention treatment, and may include education, primary prevention, acute intervention, acute and subacute management, prevention of complications, secondary stroke prevention, and rehabilitative services.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.213. Stroke Critical Care System

“Stroke critical care system” means a subspecialty care component of the EMS system developed by a local EMS agency. This critical care system links prehospital and hospital care to deliver optimal treatment to the population of stroke patients.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.214. Stroke Medical Director

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.215. Stroke Program Manager

“Stroke program manager” means a registered nurse or qualified individual designated by the hospital with the responsibility for monitoring and evaluating the care of stroke patients and the coordination of performance improvement and patient safety programs for the stroke center in conjunction with the stroke medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

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§ 100270.216. Stroke Program

“Stroke program” means an organizational component of the hospital specializing in the care of stroke patients.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.217. Stroke Team

“Stroke team” means the personnel, support personnel, and administrative staff that function together as part of the hospital’s stroke program.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.218. Telehealth

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code. California Business and Professions Code Sec. 2290.5

§ 100270.219. Thrombectomy-Capable Stroke Center

“Thrombectomy-capable stroke center” means a primary stroke center with the ability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103, and 1797.176, Health and Safety Code.

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ARTICLE 2. LOCAL EMS AGENCY STROKE CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.220. Stroke Critical Care System Plan

- (a) The local EMS agency may develop and implement a stroke critical care system.
- (b) The local EMS agency implementing a stroke critical care system shall have a Stroke Critical Care System Plan approved by the EMS Authority prior to implementation.
- (c) The Stroke Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all of the following components:
 - (1) The names and titles of the local EMS agency personnel who have a role in a stroke critical care system.
 - (2) The list of stroke designated facilities with the agreement expiration dates.
 - (3) A description or a copy of the local EMS agency's stroke patient identification and destination policies.
 - (4) A description or a copy of the method of field communication to the receiving hospital-specific to stroke patients, designed to expedite time-sensitive treatment on arrival.
 - (5) A description or a copy of the policy that facilitates the inter-facility transfer of stroke patients.
 - (6) A description of the method of data collection from the EMS providers and designated stroke hospitals to the local EMS agency and the EMS Authority.
 - (7) A policy or description of how the Local EMS agency integrates a receiving center in a neighboring jurisdiction.
 - (8) A description of the integration of stroke into an existing quality improvement committee or a description of any stroke-specific quality improvement committee.
 - (9) A description of programs to conduct or promote public education specific to stroke.
- (d) The EMS Authority shall, within 30 days of receiving a request for approval, notify the requesting local EMS agency in writing of approval or disapproval of its

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Stroke Critical Care System Plan. If the Stroke Critical Care System Plan is disapproved, the response shall include the reason(s) for the disapproval and any required corrective action items.

(e) The local EMS agency shall provide an amended plan to the EMS Authority within 60 days of receipt of the disapproval letter.

(f) The local EMS agency currently operating a stroke critical care system implemented before the effective date of these regulations, shall submit to the EMS Authority a Stroke Critical Care System Plan as an addendum to its next annual EMS plan update, or within 180 days of the effective date of these regulations, whichever comes first.

(g) Any stroke center designated by the local EMS agency before implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, stroke centers shall be re-evaluated to meet the criteria established in these regulations.

(h) No health care facility shall advertise in any manner or otherwise hold itself out to be affiliated with a stroke critical care system or a stroke center unless they have been designated by the local EMS agency, in accordance with this chapter.

Note: Authority cited: Sections 1797.105, 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.105, 1797.173, 1797.176, 1797.220, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

§ 100270.221. Stroke Critical Care System Plan Updates

(a) The local EMS agency shall submit an annual update of its Stroke Critical Care System Plan, as part of its annual EMS plan submittal, which shall include, at a minimum, all the following:

(1) Any changes in a stroke critical care system since submission of the prior annual plan update or the Stroke Critical Care System Plan addendum.

(2) The status of the Stroke Critical Care System Plan goals and objectives.

(3) Stroke critical care system performance improvement activities.

(4) The progress on addressing action items and recommendations provided by the EMS Authority within the Stroke Critical Care System Plan or status report approval letter, if applicable.

Note: Authority cited: Sections 1797.107, 1797.176, 1797.254, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, 1797.220, 1797.222, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

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ARTICLE 3. PREHOSPITAL STROKE CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.222. EMS Personnel and Early Recognition

(a) The local EMS agency shall establish prehospital care protocols related to the early recognition, assessment, treatment, and transport of stroke patients for prehospital emergency medical care personnel as determined by the local EMS agency.

(b) The local EMS agency shall require the use of a validated prehospital stroke- screening algorithm for early recognition and assessment.

(c) The local EMS agency's protocols for the use of online medical direction shall be used to determine the most appropriate stroke center to transport a patient in cases of confusing or complex findings.

(d) The prehospital treatment policies for stroke-specific basic life support (BLS), advanced life support (ALS), and limited advanced life support (LALS) shall be developed according to the scope of practice and local accreditation.

(e) Notification of prehospital findings of suspected stroke patients shall be communicated in advance of the arrival to the stroke centers according to the local EMS agency's Stroke Critical Care System Plan.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.
Reference: Sections 1797.92, 1797.103, 1797.176, 1797.189, 1797.206, 1797.214, 1797.220, 1798.150, and 1798.170, Health and Safety Code.

ARTICLE 4. HOSPITAL STROKE CARE REQUIREMENTS AND EVALUATIONS

§ 100270.223. Comprehensive Stroke Care Centers

(a) Hospitals designated as a comprehensive stroke center by the local EMS agency shall meet the following minimum criteria:

(1) Satisfy all the requirements of a thrombectomy-capable and primary stroke center as provided in this chapter.

(2) Neuro-endovascular diagnostic and therapeutic procedures available twenty-four (24) hours a day, seven (7) days a week.

(3) Advanced imaging, available twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, which shall include but not be limited to:

(A) All imaging requirements for thrombectomy-capable centers.

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(B) Diffusion-weighted magnetic resonance imaging (MRI) and computed tomography (CT) perfusion imaging.

(4) Transcranial Doppler (TCD) shall be available in a timeframe that is clinically appropriate.

(5) Intensive care unit (ICU) beds with licensed independent practitioners with the expertise and experience to provide neuro-critical care twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five days (365) days per year.

(6) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

(7) A stroke patient research program.

(8) Satisfy all the following staff qualifications:

(A) A neurosurgical team capable of assessing and treating complex stroke and stroke-like syndromes.

(B) A qualified neuro-radiologist, board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(C) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.

(D) Written call schedule for attending neurointerventionalist, neurologist, neurosurgeon providing availability twenty-four (24) hours a day seven (7) days a week.

(9) Provide comprehensive rehabilitation services either on-site or by written transfer agreement with another health care facility licensed to provide such services.

(10) Written transfer agreements with primary stroke centers in the region to accept the transfer of patients with complex strokes when clinically warranted.

(11) A comprehensive stroke center shall at a minimum, provide guidance and continuing stroke-specific medical education to hospitals designated as a primary stroke center with which they have transfer agreements.

(b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety

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Code. Reference: Sections 1797.103, 1797.204, 1797.220, 1797.222, and 1798.172, Health and Safety Code.

§ 100270.224. Thrombectomy-Capable Stroke Centers

(a) Hospitals designated as a thrombectomy-capable stroke center by the local EMS agency shall meet the following minimum criteria:

- (1) Satisfy all the requirements of a primary stroke center as provided in this chapter.
- (2) The ability to perform mechanical thrombectomy for the treatment of ischemic stroke twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.
- (3) Dedicated neuro-intensive care unit beds to care for acute ischemic stroke patients twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.
- (4) Satisfy all the following staff qualifications:
 - (A) A qualified physician, board certified by the American Board of Radiology, American osteopathic Board of Radiology, American Board of Psychiatry and Neurology, or the American osteopathic Board of Neurology and Psychiatry, with neuro-interventional angiographic training and skills on staff as deemed by the hospital's credentialing committee.
 - (B) A qualified neuro-radiologist, board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.
 - (C) A qualified vascular neurologist, board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry, or with appropriate education and experience as defined by the hospital credentials committee.
 - (D) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.
- (5) The ability to perform advanced imaging twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, which shall include, but not be limited to, the following:
 - (A) Computed tomography angiography (CTA).
 - (B) Diffusion-weighted MRI or CT Perfusion.

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- (C) Catheter angiography.
- (D) Magnetic resonance angiography (MRA).
- (E) And the following modalities available when clinically necessary:
 - (i) Carotid duplex ultrasound.
 - (ii) Transesophageal echocardiography (TEE).
 - (iii) Transthoracic Echocardiography (TTE).
- (6) A process to collect and review data regarding adverse patient outcomes following mechanical thrombectomy.
- (7) Written transfer agreement with at least one comprehensive stroke center.
- (b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.
Reference: Sections 1797.103, 1797.204, 1797.220, 1797.222, and 1798.172, Health and Safety Code.

§ 100270.225. Primary Stroke Centers

- (a) Hospitals designated by the local EMS agency as a primary stroke center shall meet all the following minimum criteria:
 - (1) Adequate staff, equipment, and training to perform rapid evaluation, triage, and treatment for the stroke patient in the emergency department.
 - (2) Standardized stroke care protocol/order set.
 - (3) Stroke diagnosis and treatment capacity twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.
 - (4) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.
 - (5) Continuing education in stroke care provided for staff physicians, staff nurses, staff allied health personnel, and EMS personnel.
 - (6) Public education on stroke and illness prevention.

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(7) A clinical stroke team, available to see in person or via telehealth, a patient identified as a potential acute stroke patient within 15 minutes following the patient's arrival at the hospital's emergency department or within 15 minutes following a diagnosis of a patient's potential acute stroke.

(A) At a minimum, a clinical stroke team shall consist of:

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

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

(8) Written policies and procedures for stroke services which shall include written protocols and standardized orders for the emergency care of stroke patients. These policies and procedures shall be reviewed at least every three (3) years, revised as needed, and implemented.

(9) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

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

(11) CT scanning or equivalent neuro-imaging shall be initiated within twenty-five (25) minutes following emergency department arrival.

(12) Other imaging shall be available within a clinically appropriate timeframe and shall, at a minimum, include:

(A) MRI.

(B) CTA and / or Magnetic resonance angiography (MRA).

(C) TEE or TTE.

(13) Interpretation of the imaging.

(A) If teleradiology is used in image interpretation, all staffing and staff qualification

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requirements contained in this section shall remain in effect and shall be documented by the hospital.

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

(i) For the purpose of this subsection, a qualified radiologist shall be board certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(ii) For the purpose of this subsection, a qualified neurologist shall be board certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry.

(iii) For the purpose of this subsection, a qualified neurosurgeon shall be board certified by the American Board of Neurological Surgery.

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

(15) Neurosurgical services shall be available, including operating room availability, either directly or under an agreement with a thrombectomy-capable, comprehensive or other stroke center with neurosurgical services, within two (2) hours following the arrival of acute stroke patients to the primary stroke center.

(16) Acute care rehabilitation services.

(17) Transfer arrangements with one or more higher level of care centers when clinically warranted or for neurosurgical emergencies.

(18) There shall be a stroke medical director of a primary stroke center, who may also serve as a physician member of a stroke team, who is board-certified in neurology or neurosurgery or another board-certified physician with sufficient experience and expertise dealing with cerebral vascular disease as determined by the hospital credentials committee.

(b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, 1797.254, and 1798.150, Health and Safety Code. Reference: Sections 1797.102, 1797.103, 1797.104, 1797.176, and 1797.204, 1797.220, 1797.222, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

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§ 100270.226. Acute Stroke Ready Hospitals

(a) Hospitals designated by the local EMS agency as an acute stroke ready hospital shall meet all the following minimum criteria:

(1) A clinical stroke team available to see, in person or via telehealth, a patient identified as a potential acute stroke patient within twenty (20) minutes following the patient's arrival at the hospital's emergency department.

(2) Written policies and procedures for emergency department stroke services that are reviewed, revised as needed, and implemented at least every three (3) years.

(3) Emergency department policies and procedures shall include written protocols and standardized orders for the emergency care of stroke patients.

(4) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

(5) Neuro-imaging services capability that is available twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, such that imaging shall be performed and reviewed by a physician within forty-five (45) minutes following emergency department arrival.

(6) Neuro-imaging services shall, at a minimum, include CT or MRI, or both.

(7) Interpretation of the imaging.

(A) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.

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

(i) For the purpose of this subsection, a qualified radiologist shall be board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(ii) For the purpose of this subsection, a qualified neurologist shall be board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry.

(iii) For the purpose of this subsection, a qualified neurosurgeon shall be board-

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certified by the American Board of Neurological Surgery.

(8) Laboratory services shall, at a minimum, include blood testing, electrocardiography and x-ray services, and be available twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, and able to be completed and reviewed by physician within sixty (60) minutes following emergency department arrival.

(9) Neurosurgical services shall be available, including operating room availability, either directly or under an agreement with a thrombectomy-capable, primary or comprehensive stroke center, within three (3) hours following the arrival of acute stroke patients to an acute stroke-ready hospital.

(10) Provide IV thrombolytic treatment and have transfer arrangements with one or more thrombectomy-capable, primary or comprehensive stroke center(s) that facilitate the transfer of patients with strokes to the stroke center(s) for care when clinically warranted.

(11) There shall be a medical director of an acute stroke-ready hospital, who may also serve as a member of a stroke team, who is a physician or advanced practice nurse who maintains at least four (4) hours per year of educational time in cerebrovascular disease;

(12) Clinical stroke team for an acute stroke-ready hospital at a minimum shall consist of a nurse and a physician with training and expertise in acute stroke care.

(b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.103, 1797.204, 1797.220, 1797.222, and 1798.172, Health and Safety Code.

§ 100270.227. EMS Receiving Hospitals (Non-designated for Stroke Critical Care Services)

(a) An EMS receiving hospital that is not designated for stroke critical care services shall do the following, at a minimum and in cooperation with stroke receiving centers and the local EMS agency in their jurisdictions:

(1) Participate in the local EMS agency's quality improvement system, including data submission as determined by the local EMS agency medical director.

(2) Participate in the inter-facility transfer agreements to ensure access to a stroke critical care system for a potential stroke patient.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code.

Reference: Sections 1797.88, 1797.103, 1797.176, 1797.220, 1798.100, 1798.150, 1798.170, and 1798.172, Health and Safety Code.

ARTICLE 5. DATA MANAGEMENT, QUALITY IMPROVEMENT AND EVALUATION

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§ 100270.228. Data Management Requirements

- (a) The local EMS agency shall implement a standardized data collection and reporting process for stroke critical care systems.
- (b) The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency.
- (c) The prehospital stroke patient care elements shall be compliant with the most current version of the California EMS Information Systems (CEMSIS) database and the National EMS Information System (NEMSIS) database.
- (d) The hospital stroke patient care elements shall be consistent with the U.S. Centers for Disease Control and Prevention, Paul Coverdell National Acute Stroke Program Resource Guide, dated October 24, 2016, which is hereby incorporated by reference.
- (e) All hospitals that receive stroke patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.
- (f) The prehospital care record and the hospital data elements shall be collected and submitted by the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis.

Note: Authority cited: Sections. 1797.107, 1797.176, and 1798.150, Health and Safety Code.
Reference: Section 1797.102, 1797.103, 1797.204, 1797.220, 1797.222, 1797.227, and 1798.172, Health and Safety Code.

§ 100270.229. Quality Improvement and Evaluation Process

- (a) Each stroke critical care system shall have a quality improvement process that shall include, at a minimum:
 - (1) Evaluation of program structure, process, and outcome.
 - (2) Review of stroke-related deaths, major complications, and transfers.
 - (3) A multidisciplinary Stroke Quality Improvement Committee, including both prehospital and hospital members.

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(4) Participation in the QI process by all designated stroke centers and prehospital providers involved in the stroke critical care system.

(5) Evaluation of regional integration of stroke patient movement.

(6) Participation in the stroke data management system.

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

(b) The local EMS agency shall be responsible for on-going performance evaluation and quality improvement of the stroke critical care system.

Note: Authority cited: Sections 1797.107, 1797.176, 1797.254, and 1798.150, Health and Safety Code. Reference: Section 1797.102, 1797.103, 1797.104, 1797.176, 1797.204, 1797.220, 1797.222, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

**California Code of Regulations
Title 22. Social Security
Division 9. Prehospital Emergency Medical Services
Chapter 7.2 Stroke Critical Care System**

ARTICLE 1. DEFINITIONS

§ 100270.200. Acute Stroke Ready Hospital

“Acute stroke-ready hospitals” or “Satellite stroke centers” means a hospital able to provide the minimum level of critical care services for stroke patients in the emergency department, and are paired with one or more hospitals with a higher level of stroke services.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code.
Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.

§ 100270.201. Board-certified

“Board-certified” means a physician who has fulfilled all the Accreditation Council for Graduate Medical Education (ACGME) requirements in a specialty field of practice, and has been awarded a certification by an American Board of Medical Specialties (ABMS) approved program.

Note: Authority cited: Sections 1797.107 and 1798.150, Health and Safety Code.
Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.202. Board-eligible

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.203. Comprehensive Stroke Center

“Comprehensive stroke center” means a hospital with specific abilities to receive, diagnose and treat all stroke cases and provide the highest level of care for stroke patients.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code.
Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.

§ 100270.204. Clinical Stroke Team

“Clinical stroke team” means a team of healthcare professionals who provide care for the stroke patient and may include, but is not limited to, neurologists, neuro-

interventionalists, neurosurgeons, anesthesiologists, emergency medicine physicians, registered nurses, advanced practice nurses, physician assistants, pharmacists, and technologists.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.205. Emergency Medical Services Authority

“Emergency Medical Services Authority” or “EMS Authority” means the department in California that is responsible for the coordination and the integration of all state activities concerning emergency medical services (EMS).

Note: Authority cited: Section 1797.107 Health and Safety Code. Reference: Sections 1797.54, 1797.100, and 1797.103, Health and Safety Code.

§ 100270.206. Local Emergency Medical Services Agency

“Local emergency medical services agency” or “local EMS agency” means the agency, department, or office having primary responsibility for administration of emergency medical services in a county and which is designated pursuant Health and Safety Code section 1797.200.

Note: Authority cited: Sections 1797.107, 1797.176, Health and Safety Code. Reference: Sections 1797.94 and 1797.200, Health and Safety Code.

§ 100270.207. Primary Stroke Center

“Primary stroke center” means a hospital that treats acute stroke patients, and identifies patients who may benefit from transfer to a higher level of care when clinically warranted.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and Safety Code. Reference: Sections 1797.94, 1797.103 and 1797.176, Health and Safety Code.

§ 100270.208. Protocol

“Protocol” means a predetermined, written medical care guideline, which may include standing orders.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.209. Quality Improvement

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

Note: Authority cited: Sections 1797.107, 1797.176 and 1798.150 Health and Safety Code. Reference: Sections 1797.103, 1797.174, 1797.202, 1797.204, 1797.220 and 1798.175, Health and Safety Code.

§ 100270.210. Stroke

“Stroke” means a condition of impaired blood flow to a patient’s brain resulting in brain dysfunction, most commonly through vascular occlusion or hemorrhage.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.176, Health and Safety Code.

§ 100270.211. Stroke Call Roster

“Stroke call roster” means a schedule of licensed health professionals available twenty-four (24) hours a day, seven (7) days a week for the care of stroke patients.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103 and 1797.220, Health and Safety Code.

§ 100270.212. Stroke Care

“Stroke care” means emergency transport, triage, diagnostic evaluation, acute intervention and other acute care services for stroke patients that potentially require immediate medical or surgical intervention treatment, and may include education, primary prevention, acute intervention, acute and subacute management, prevention of complications, secondary stroke prevention, and rehabilitative services.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

100270.213. Stroke Critical Care System

“Stroke critical care system” means a subspecialty care component of the EMS system developed by a local EMS agency. This critical care system links prehospital and hospital care to deliver optimal treatment to the population of stroke patients.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.214. Stroke Medical Director

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety

Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.215. Stroke Program Manager

“Stroke program manager” means a registered nurse or qualified individual designated by the hospital with the responsibility for monitoring and evaluating the care of stroke patients and the coordination of performance improvement and patient safety programs for the stroke center in conjunction with the stroke medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.216. Stroke Program

“Stroke program” means an organizational component of the hospital specializing in the care of stroke patients.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.217. Stroke Team

“Stroke team” means the personnel, support personnel, and administrative staff that function together as part of the hospital’s stroke program.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code.

§ 100270.218. Telehealth

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

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, and 1797.220, Health and Safety Code. California Business and Professions Code Sec. 2290.5

§ 100270.219. Thrombectomy-Capable Stroke Center

“Thrombectomy-capable stroke center” means a primary stroke center with the ability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.

Note: Authority cited: Sections 1797.107, and 1798.150, Health and

Safety Code. Reference: Sections 1797.94, 1797.103, and 1797.176, Health and Safety Code.

ARTICLE 2. LOCAL EMS AGENCY STROKE CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.220. Stroke Critical Care System Plan

- (a) The local EMS agency may develop and implement a stroke critical care system.
- (b) The local EMS agency implementing a stroke critical care system shall have a Stroke Critical Care System Plan approved by the EMS Authority prior to implementation.
- (c) The Stroke Critical Care System Plan submitted to the EMS Authority shall include, at a minimum, all of the following components:
 - (1) The names and titles of the local EMS agency personnel who have a role in a stroke critical care system.
 - (2) The list of stroke designated facilities with the agreement expiration dates.
 - (3) A description or a copy of the local EMS agency's stroke patient identification and destination policies.
 - (4) A description or a copy of the method of field communication to the receiving hospital-specific to stroke patients, designed to expedite time-sensitive treatment on arrival.
 - (5) A description or a copy of the policy that facilitates the inter-facility transfer of stroke patients.
 - (6) A description of the method of data collection from the EMS providers and designated stroke hospitals to the local EMS agency and the EMS Authority.
 - (7) A policy or description of how the Local EMS agency integrates a receiving center in a neighboring jurisdiction.
 - (8) A description of the integration of stroke into an existing quality improvement committee or a description of any stroke-specific quality improvement committee.
 - (9) A description of programs to conduct or promote public education specific to stroke.
- (d) The EMS Authority shall, within 30 days of receiving a request for approval, notify the requesting local EMS agency in writing of approval or disapproval of its

Stroke Critical Care System Plan. If the Stroke Critical Care System Plan is disapproved, the response shall include the reason(s) for the disapproval and any required corrective action items.

(e) The local EMS agency shall provide an amended plan to the EMS Authority within 60 days of receipt of the disapproval letter.

(f) The local EMS agency currently operating a stroke critical care system implemented before the effective date of these regulations, shall submit to the EMS Authority a Stroke Critical Care System Plan as an addendum to its next annual EMS plan update, or within 180 days of the effective date of these regulations, whichever comes first.

(g) Any stroke center designated by the local EMS agency before implementation of these regulations may continue to operate. Before re-designation by the local EMS agency at the next regular interval, stroke centers shall be re-evaluated to meet the criteria established in these regulations.

(h) No health care facility shall advertise in any manner or otherwise hold itself out to be affiliated with a stroke critical care system or a stroke center unless they have been designated by the local EMS agency, in accordance with this chapter.

Note: Authority cited: Sections 1797.105, 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.105, 1797.173, 1797.176, 1797.220, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

§ 100270.221. Stroke Critical Care System Plan Updates

(a) The local EMS agency shall submit an annual update of its Stroke Critical Care System Plan, as part of its annual EMS plan submittal, which shall include, at a minimum, all the following:

(1) Any changes in a stroke critical care system since submission of the prior annual plan update or the Stroke Critical Care System Plan addendum.

(2) The status of the Stroke Critical Care System Plan goals and objectives.

(3) Stroke critical care system performance improvement activities.

(4) The progress on addressing action items and recommendations provided by the EMS Authority within the Stroke Critical Care System Plan or status report approval letter, if applicable.

Note: Authority cited: Sections 1797.107, 1797.176, 1797.254, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.176, 1797.220, 1797.222, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

ARTICLE 3. PREHOSPITAL STROKE CRITICAL CARE SYSTEM REQUIREMENTS

§ 100270.222. EMS Personnel and Early Recognition

- (a) The local EMS agency shall establish prehospital care protocols related to the early recognition, assessment, treatment, and transport of stroke patients for prehospital emergency medical care personnel as determined by the local EMS agency.
- (b) The local EMS agency shall require the use of a validated prehospital stroke-screening algorithm for early recognition and assessment.
- (c) The local EMS agency's protocols for the use of online medical direction shall be used to determine the most appropriate stroke center to transport a patient in cases of confusing or complex findings.
- (d) The prehospital treatment policies for stroke-specific basic life support (BLS), advanced life support (ALS), and limited advanced life support (LALS) shall be developed according to the scope of practice and local accreditation.
- (e) Notification of prehospital findings of suspected stroke patients shall be communicated in advance of the arrival to the stroke centers according to the local EMS agency's Stroke Critical Care System Plan.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.92, 1797.103, 1797.176, 1797.189, 1797.206, 1797.214, 1797.220, 1798.150, and 1798.170, Health and Safety Code.

ARTICLE 4. HOSPITAL STROKE CARE REQUIREMENTS AND EVALUATIONS

§ 100270.223. Comprehensive Stroke Care Centers

- (a) Hospitals designated as a comprehensive stroke center by the local EMS agency shall meet the following minimum criteria:
 - (1) Satisfy all the requirements of a thrombectomy-capable and primary stroke center as provided in this chapter.
 - (2) Neuro-endovascular diagnostic and therapeutic procedures available twenty-four (24) hours a day, seven (7) days a week.
 - (3) Advanced imaging, available twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, which shall include but not be limited to:
 - (A) All imaging requirements for thrombectomy-capable centers.

(B) Diffusion-weighted magnetic resonance imaging (MRI) and computed tomography (CT) perfusion imaging.

(4) Transcranial Doppler (TCD) shall be available in a timeframe that is clinically appropriate.

(5) Intensive care unit (ICU) beds with licensed independent practitioners with the expertise and experience to provide neuro-critical care twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five days (365) days per year.

(6) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

(7) A stroke patient research program.

(8) Satisfy all the following staff qualifications:

(A) A neurosurgical team capable of assessing and treating complex stroke and stroke- like syndromes.

(B) A qualified neuro-radiologist, board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(C) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.

(D) Written call schedule for attending neurointerventionalist, neurologist, neurosurgeon providing availability twenty-four (24) hours a day seven (7) days a week.

(9) Provide comprehensive rehabilitation services either on-site or by written transfer agreement with another health care facility licensed to provide such services.

(10) Written transfer agreements with primary stroke centers in the region to accept the transfer of patients with complex strokes when clinically warranted.

(11) A comprehensive stroke center shall at a minimum, provide guidance and continuing stroke-specific medical education to hospitals designated as a primary stroke center with which they have transfer agreements.

(b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety

Code. Reference: Sections 1797.103, 1797.204, 1797.220, 1797.222, and 1798.172, Health and Safety Code.

§ 100270.224. Thrombectomy-Capable Stroke Centers

(a) Hospitals designated as a thrombectomy-capable stroke center by the local EMS agency shall meet the following minimum criteria:

(1) Satisfy all the requirements of a primary stroke center as provided in this chapter.

(2) The ability to perform mechanical thrombectomy for the treatment of ischemic stroke twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.

(3) Dedicated neuro-intensive care unit beds to care for acute ischemic stroke patients twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.

(4) Satisfy all the following staff qualifications:

(A) A qualified physician, board certified by the American Board of Radiology, American osteopathic Board of Radiology, American Board of Psychiatry and Neurology, or the American osteopathic Board of Neurology and Psychiatry, with neuro-interventional angiographic training and skills on staff as deemed by the hospital's credentialing committee.

(B) A qualified neuro-radiologist, board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(C) A qualified vascular neurologist, board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry, or with appropriate education and experience as defined by the hospital credentials committee.

(D) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.

(5) The ability to perform advanced imaging twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, which shall include, but not be limited to, the following:

(A) Computed tomography angiography (CTA).

(B) Diffusion-weighted MRI or CT Perfusion.

- (C) Catheter angiography.
- (D) Magnetic resonance angiography (MRA).
- (E) And the following modalities available when clinically necessary:
 - (i) Carotid duplex ultrasound.
 - (ii) Transesophageal echocardiography (TEE).
 - (iii) Transthoracic Echocardiography (TTE).
- (6) A process to collect and review data regarding adverse patient outcomes following mechanical thrombectomy.
- (7) Written transfer agreement with at least one comprehensive stroke center.
- (b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.204, 1797.220, 1797.222, and 1798.172, Health and Safety Code.

§ 100270.225. Primary Stroke Centers

- (a) Hospitals designated by the local EMS agency as a primary stroke center shall meet all the following minimum criteria:
 - (1) Adequate staff, equipment, and training to perform rapid evaluation, triage, and treatment for the stroke patient in the emergency department.
 - (2) Standardized stroke care protocol/order set.
 - (3) Stroke diagnosis and treatment capacity twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year.
 - (4) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.
 - (5) Continuing education in stroke care provided for staff physicians, staff nurses, staff allied health personnel, and EMS personnel.
 - (6) Public education on stroke and illness prevention.

(7) A clinical stroke team, available to see in person or via telehealth, a patient identified as a potential acute stroke patient within 15 minutes following the patient's arrival at the hospital's emergency department or within 15 minutes following a diagnosis of a patient's potential acute stroke.

(A) At a minimum, a clinical stroke team shall consist of:

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

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

(8) Written policies and procedures for stroke services which shall include written protocols and standardized orders for the emergency care of stroke patients. These policies and procedures shall be reviewed at least every three (3) years, revised as needed, and implemented.

(9) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

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

(11) CT scanning or equivalent neuro-imaging shall be initiated within twenty-five (25) minutes following emergency department arrival.

(12) Other imaging shall be available within a clinically appropriate timeframe and shall, at a minimum, include:

(A) MRI.

(B) CTA and / or Magnetic resonance angiography (MRA).

(C) TEE or TTE.

(13) Interpretation of the imaging.

(A) If teleradiology is used in image interpretation, all staffing and staff qualification

requirements contained in this section shall remain in effect and shall be documented by the hospital.

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

(i) For the purpose of this subsection, a qualified radiologist shall be board certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(ii) For the purpose of this subsection, a qualified neurologist shall be board certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry.

(iii) For the purpose of this subsection, a qualified neurosurgeon shall be board certified by the American Board of Neurological Surgery.

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

(15) Neurosurgical services shall be available, including operating room availability, either directly or under an agreement with a thrombectomy-capable, comprehensive or other stroke center with neurosurgical services, within two (2) hours following the arrival of acute stroke patients to the primary stroke center.

(16) Acute care rehabilitation services.

(17) Transfer arrangements with one or more higher level of care centers when clinically warranted or for neurosurgical emergencies.

(18) There shall be a stroke medical director of a primary stroke center, who may also serve as a physician member of a stroke team, who is board-certified in neurology or neurosurgery or another board-certified physician with sufficient experience and expertise dealing with cerebral vascular disease as determined by the hospital credentials committee.

(b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, 1797.254, and 1798.150, Health and Safety Code. Reference: Sections 1797.102, 1797.103, 1797.104, 1797.176, and 1797.204, 1797.220, 1797.222, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

§ 100270.226. Acute Stroke Ready Hospitals

(a) Hospitals designated by the local EMS agency as an acute stroke ready hospital shall meet all the following minimum criteria:

(1) A clinical stroke team available to see, in person or via telehealth, a patient identified as a potential acute stroke patient within twenty (20) minutes following the patient's arrival at the hospital's emergency department.

(2) Written policies and procedures for emergency department stroke services that are reviewed, revised as needed, and implemented at least every three (3) years.

(3) Emergency department policies and procedures shall include written protocols and standardized orders for the emergency care of stroke patients.

(4) Data-driven, continuous quality improvement process including collection and monitoring of standardized performance measures.

(5) Neuro-imaging services capability that is available twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, such that imaging shall be performed and reviewed by a physician within forty-five (45) minutes following emergency department arrival.

(6) Neuro-imaging services shall, at a minimum, include CT or MRI, or both.

(7) Interpretation of the imaging.

(A) If teleradiology is used in image interpretation, all staffing and staff qualification requirements contained in this section shall remain in effect and shall be documented by the hospital.

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

(i) For the purpose of this subsection, a qualified radiologist shall be board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology.

(ii) For the purpose of this subsection, a qualified neurologist shall be board-certified by the American Board of Psychiatry and Neurology or the American Osteopathic Board of Neurology and Psychiatry.

(iii) For the purpose of this subsection, a qualified neurosurgeon shall be board-

certified by the American Board of Neurological Surgery.

(8) Laboratory services shall, at a minimum, include blood testing, electrocardiography and x-ray services, and be available twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days per year, and able to be completed and reviewed by physician within sixty (60) minutes following emergency department arrival.

(9) Neurosurgical services shall be available, including operating room availability, either directly or under an agreement with a thrombectomy-capable, primary or comprehensive stroke center, within three (3) hours following the arrival of acute stroke patients to an acute stroke-ready hospital.

(10) Provide IV thrombolytic treatment and have transfer arrangements with one or more thrombectomy-capable, primary or comprehensive stroke center(s) that facilitate the transfer of patients with strokes to the stroke center(s) for care when clinically warranted.

(11) There shall be a medical director of an acute stroke-ready hospital, who may also serve as a member of a stroke team, who is a physician or advanced practice nurse who maintains at least four (4) hours per year of educational time in cerebrovascular disease;

(12) Clinical stroke team for an acute stroke-ready hospital at a minimum shall consist of a nurse and a physician with training and expertise in acute stroke care.

(b) Additional requirements may be stipulated by the local EMS agency medical director.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.103, 1797.204, 1797.220, 1797.222, and 1798.172, Health and Safety Code.

§ 100270.227. EMS Receiving Hospitals (Non-designated for Stroke Critical Care Services)

(a) An EMS receiving hospital that is not designated for stroke critical care services shall do the following, at a minimum and in cooperation with stroke receiving centers and the local EMS agency in their jurisdictions:

(1) Participate in the local EMS agency's quality improvement system, including data submission as determined by the local EMS agency medical director.

(2) Participate in the inter-facility transfer agreements to ensure access to a stroke critical care system for a potential stroke patient.

Note: Authority cited: Sections 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Sections 1797.88, 1797.103, 1797.176, 1797.220, 1798.100, 1798.150, 1798.170, and 1798.172, Health and Safety Code.

ARTICLE 5. DATA MANAGEMENT, QUALITY IMPROVEMENT AND EVALUATION

§ 100270.228. Data Management Requirements

- (a) The local EMS agency shall implement a standardized data collection and reporting process for stroke critical care systems.
- (b) The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency.
- (c) The prehospital stroke patient care elements shall be compliant with the most current version of the California EMS Information Systems (CEMSIS) database and the National EMS Information System (NEMSIS) database.
- (d) The hospital stroke patient care elements shall be consistent with the U.S. Centers for Disease Control and Prevention, Paul Coverdell National Acute Stroke Program Resource Guide, dated October 24, 2016, which is hereby incorporated by reference.
- (e) All hospitals that receive stroke patients via EMS shall participate in the local EMS agency data collection process in accordance with local EMS agency policies and procedures.
- (f) The prehospital care record and the hospital data elements shall be collected and submitted by the local EMS agency, and subsequently to the EMS Authority, on no less than a quarterly basis.

Note: Authority cited: Sections. 1797.107, 1797.176, and 1798.150, Health and Safety Code. Reference: Section 1797.102, 1797.103, 1797.204, 1797.220, 1797.222, 1797.227, and 1798.172, Health and Safety Code.

§ 100270.229. Quality Improvement and Evaluation Process

- (a) Each stroke critical care system shall have a quality improvement process that shall include, at a minimum:
 - (1) Evaluation of program structure, process, and outcome.
 - (2) Review of stroke-related deaths, major complications, and transfers.
 - (3) A multidisciplinary Stroke Quality Improvement Committee, including both prehospital and hospital members.

(4) Participation in the QI process by all designated stroke centers and prehospital providers involved in the stroke critical care system.

(5) Evaluation of regional integration of stroke patient movement.

(6) Participation in the stroke data management system.

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

(b) The local EMS agency shall be responsible for on-going performance evaluation and quality improvement of the stroke critical care system.

Note: Authority cited: Sections 1797.107, 1797.176, 1797.254, and 1798.150, Health and Safety Code. Reference: Section 1797.102, 1797.103, 1797.104, 1797.176, 1797.204, 1797.220, 1797.222, 1797.250, 1798.170, and 1798.172, Health and Safety Code.

My Health System M:L Report

7/18/2023

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My Facility M:L Report
 94153
 2022-2022: Annually



| Measure Group | Measure Name | Alameda Cou... 01/01/2022-12... | |
|---|---|------------------------------------|-------|
| Advanced Notification by EMS/MSU | % | 27.95% | |
| | Total | 789 | |
| Arrival Mode | % EMS from home/scene | 51.33% | |
| | % Mobile Stroke Unit | 0.04% | |
| | % Transfer from other hospital | 11.34% | |
| | % Walk-ins | 33.58% | |
| Arrival to Device (EVT) | % EMS or patients directly presenting within 90 min | 1.59% | |
| | % Transfers from outside hospital/MSU within 60 ... | 6.78% | |
| Arrival to Thrombolytics | % Within 30 minutes | 49.12% | |
| | % Within 30 minutes (EMS Arrival) | 56.25% | |
| | % Within 45 minutes | 84.34% | |
| | % Within 45 minutes (EMS Arrival) | 88.48% | |
| | % Within 60 minutes | 95.35% | |
| Door-in-door out within 90 minutes | % Within 60 minutes (EMS Arrival) | 95.59% | |
| | For MSU | 0.00% | |
| | For Patients Arriving by EMS | 6.67% | |
| | For Walk-in patients | 0.00% | |
| EMS FMC to EVT | Median | 188.50 | |
| EMS FMC to Thrombolytics | Median | 60.50 | |
| Gender | % Female | 49.45% | |
| | % Male | 50.51% | |
| | % Unknown | 0.04% | |
| Ischemic Stroke Treatment | % Alteplase | 1.10% | |
| | % EVT | 3.12% | |
| | % No Treatment | 30.11% | |
| | % Tenecteplase | 6.64% | |
| IV thrombolytic at an outside hospital or EMS / Mobile Stroke Unit? | % | 1.10% | |
| | Alteplase | 0 | |
| | Tenecteplase | 0 | |
| | Total | 31 | |
| M:L Prehospital Rate-Based Measures | AHASTRS: IV Thrombolytic Arrive by 3.5 Hour, Tre... | 0.00% | |
| Median Time from LKW | To Arrival (EMS) | 224.00 | |
| | To Arrival (Mobile Stroke Unit) | 0.00 | |
| | To Arrival (Transfer from other hospital) | 1092.00 | |
| | To Arrival (Walk In) | 584.50 | |
| Number of Records | Elective Carotid Intervention only | 4 | |
| | ICh | 316 | |
| | Ischemic | 1902 | |
| | No stroke related diagnosis | 82 | |
| | Stroke not otherwise specified | 75 | |
| | Subarachnoid Hemorrhage | 96 | |
| | TIA | 348 | |
| | Total Number of Stroke Records | 2823 | |
| | Patient Demographics | Median Age | 71.00 |
| | Race | % American Indian or Alaska Native | 0.50% |
| % Asian | | 24.97% | |
| % Black or African American | | 20.84% | |
| % Hispanic Ethnicity | | 12.75% | |
| % Native Hawaiian or Pacific Islander | | 0.71% | |
| % UTD | | 10.17% | |
| % White | 25.83% | | |

M:L Prehospital Rate-Based Measures

7/18/2023

Summary

| Measure Name | Health System Care Opportunities | Health System Adherence Score | M:L Region Care Opportunities | M:L Region Adherence Score | State Adherence Score | National Adherence ... |
|--|----------------------------------|-------------------------------|-------------------------------|----------------------------|-----------------------|------------------------|
| AHASTR13: Time to Intravenous Thrombolytic Therapy - 60 min | 215 | 95,3% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR14: Documentation of Time LKW | 1151 | 29,5% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR175: Documentation of Time of Discovery of Stroke Symptoms | 1288 | 15,6% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR178: Evaluation of Blood Glucose | 1327 | 40,7% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR179: Hospital Pre-Notification with Triage Findings | 443 | 33,4% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR181: Identification of Suspected Strokes - Rate Based | 1374 | 31,4% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR182: On-Scene Times <=15 minutes for Suspected Stroke | 382 | 60,7% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR184: Stroke Screen Performed and Reported | 1329 | 24,2% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR186: Stroke Severity Screen Performed and Reported - Rate Based | 1329 | 0,0% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR27: Door-in-Door-Out Times at First Hospital Prior to Transfer for Acute Therapy | 18 | 5,6% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR39: Pre-notification | 1419 | 55,3% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR48: Time to Intravenous Thrombolytic Therapy - 30 min | 171 | 49,1% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR49: Time to Intravenous Thrombolytic Therapy - 45 min | 198 | 84,3% | 0 | 0,0% | 0,0% | 0,0% |
| AHASTR5: IV Thrombolytic Arrive by 3,5 Hour, Treat by 4,5 Hour | 252 | 95,2% | 0 | 0,0% | 0,0% | 0,0% |

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My Facility M:L Report

2/29/2024

My Facility M:L Report
 Alameda County Emergency Medical Services
 2023-2023: Annually



| Measure Group | Measure Name | Alameda Cou... 01/01/2023-12... |
|---|---|------------------------------------|
| | % Walk-ins | 33,96% |
| Arrival to Device (EVT) | % EMS or patients directly presenting within 90 min | 8,76% |
| | % Transfers from outside hospital/MSU within 60 ... | 21,95% |
| Arrival to Thrombolytics | % Within 30 minutes | 64,91% |
| | % Within 30 minutes (EMS Arrival) | 68,38% |
| | % Within 45 minutes | 86,87% |
| | % Within 45 minutes (EMS Arrival) | 86,54% |
| | % Within 60 minutes | 94,52% |
| | % Within 60 minutes (EMS Arrival) | 95,91% |
| Door-in-door out within 90 minutes | For MSU | 0,00% |
| | For Patients Arriving by EMS | 25,00% |
| | For Walk-in patients | 20,00% |
| EMS FMC to EVT | Median | 151,00 |
| EMS FMC to Thrombolytics | Median | 52,00 |
| Gender | % Female | 47,83% |
| | % Male | 52,17% |
| | % Unknown | 0,00% |
| Ischemic Stroke Treatment | % Alteplase | 0,00% |
| | % EVT | 4,38% |
| | % No Treatment | 29,77% |
| | % Tenecteplase | 10,54% |
| IV thrombolytic at an outside hospital or EMS / Mobile Stroke Unit? | % | 1,55% |
| | Alteplase | 0 |
| | Tenecteplase | 0 |
| | Total | 41 |
| M:L Prehospital Rate-Based Measures | AHASTRS: IV Thrombolytic Arrive by 3.5 Hour, Tre... | 0,00% |
| Median Time from LKW | To Arrival (EMS) | 189,00 |
| | To Arrival (Mobile Stroke Unit) | 719,00 |
| | To Arrival (Transfer from other hospital) | 866,50 |
| | To Arrival (Walk In) | 632,50 |
| Number of Records | Elective Carotid Intervention only | 3 |
| | ICH | 333 |
| | Ischemic | 1921 |
| | No stroke related diagnosis | 21 |
| | Stroke not otherwise specified | 9 |
| | Subarachnoid Hemorrhage | 101 |
| | TIA | 259 |
| | Total Number of Stroke Records | 2647 |
| Patient Demographics | Median Age | 71,00 |
| Race | % American Indian or Alaska Native | 0,49% |
| | % Asian | 25,58% |
| | % Black or African American | 20,51% |
| | % Hispanic Ethnicity | 11,86% |
| | % Native Hawaiian or Pacific Islander | 0,60% |
| | % UTD | 11,45% |
| | % White | 41,44% |
| Reasons for delay in thrombolytics | % Overall | 3,78% |
| | Eligibility Reason | 83 |
| | Medical Reason | 25 |
| Transfer Status | % Transfer Out | 3,59% |

| Base Physician Contact Template Highland Hospital Base Physician – 510-535-6000 | |
|--|---|
| Situation | <ul style="list-style-type: none"> ▪ Identify yourself/unit number ▪ State purpose of call: (e.g. AMA consult, destination decision, etc.) ▪ Provide basic patient demographics (e.g. age/gender) ▪ Reason for patient contact/EMS activation |
| Background | <ul style="list-style-type: none"> ▪ Provide history of present illness/injury ▪ Medical history |
| Assessment | <ul style="list-style-type: none"> ▪ Vital signs ▪ Physical findings ▪ Treatment provided |
| Recommendation/Request | <ul style="list-style-type: none"> ▪ State your recommendation/request ▪ Confirm Base Physician’s recommendation/orders |

| Hospital Notification Template | |
|---|--|
| Basic Notifications | |
| <ol style="list-style-type: none"> 1. Unit Number 2. Transport code 3. Age & Gender 4. Chief Complaint 5. V/S stable or detailed V/S if abnormal | <ol style="list-style-type: none"> 6. Pertinent negatives/positives 7. Treatment(s) 8. Repeat ETA 9. Check for questions |
| Specialty care patient notifications | |
| For each category below, include info from the basic notification template plus the appropriate category below | |
| Trauma | |
| <ol style="list-style-type: none"> 1. Mechanism of Injury 2. Injuries | <ol style="list-style-type: none"> 3. GCS – each category of E/V/M + total 4. Detailed Vital Signs |
| Cardiac Arrest / ROSC | |
| <ol style="list-style-type: none"> 1. Airway – non-patent, patent, airway placed/not-placed 2. Breathing – absent/spontaneous 3. Circulation – pulses present/absent | <ol style="list-style-type: none"> 4. Total estimated down time 5. Summary of treatment(s) given |
| Stroke Alert | |
| <ol style="list-style-type: none"> 1. Last seen normal time 2. Stroke Assessment/Scale findings | <ol style="list-style-type: none"> 3. Blood glucose |
| Sepsis | |
| <ol style="list-style-type: none"> 1. Temperature 2. Suspected source of infection (if known) | <ol style="list-style-type: none"> 3. Detailed Vital Signs |
| STEMI | |
| <ol style="list-style-type: none"> 1. Estimated onset of S/S 2. Was 12-lead ECG Transmitted | <ol style="list-style-type: none"> 3. Detailed Vital Signs |
| Pediatric Patients | |
| <ol style="list-style-type: none"> 1. Patient’s weight-based color code | <ol style="list-style-type: none"> 2. Status of parent/guardian |
| Note: Detailed Vital Signs should include: RR, HR, B/P, SpO2, GCS (number of each category E/V/M) | |



ALAMEDA COUNTY
EMERGENCY MEDICAL SERVICES
CONTINUOUS QUALITY IMPROVEMENT PLAN

2024

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I. Introduction

AUTHORITY

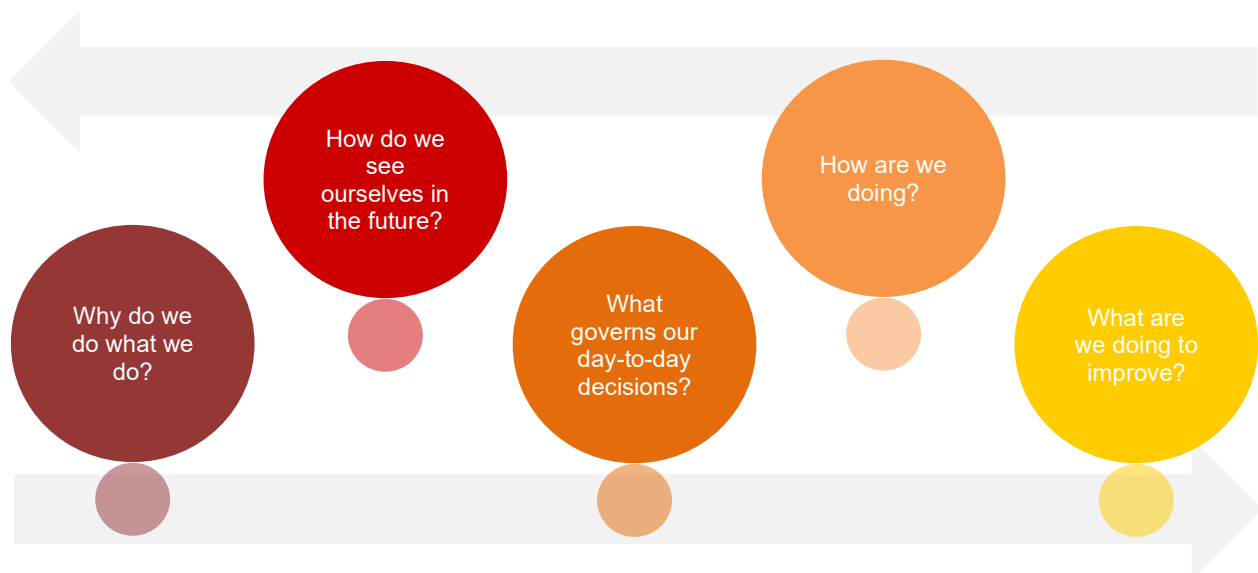
The Alameda County EMS Quality Improvement Plan satisfies the requirements of [Title 22, Division 9, Chapter 12, Article 4 of the California Code of Regulations](#) and [Division 2.5, Chapter 4 of the Health and Safety Code](#). Additionally, [EMSA document #166 “Emergency Medical Services System Quality Improvement Program Model Guidelines”](#) provided further 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

ALAMEDA COUNTY EMERGENCY MEDICAL SERVICES AGENCY

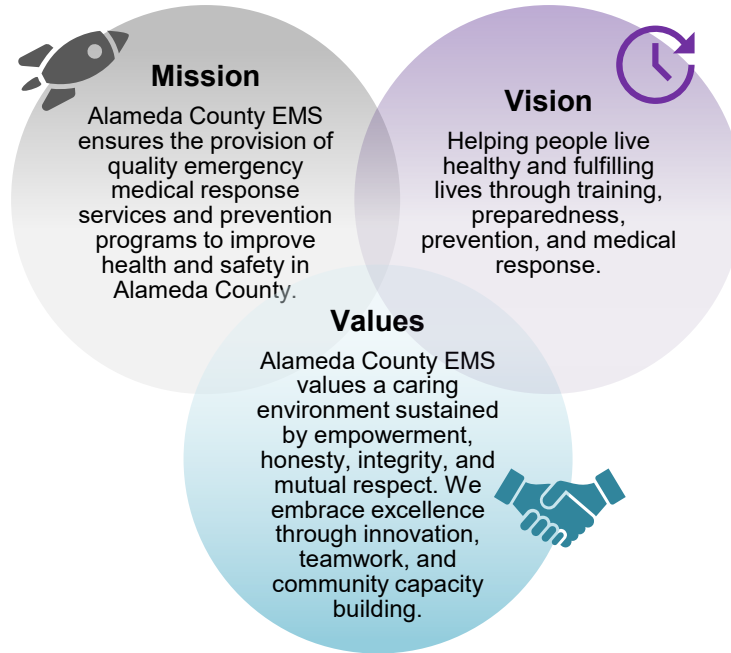
Improving patient health outcomes is at the forefront of the Alameda County EMS Agency’s Continuous Quality Improvement (CQI) program. Our mission is centered on elevating the overall quality of emergency medical services, ensuring each patient receives the best possible care. Emergency Medical Dispatchers (EMD), Basic Life Support (BLS), and Advanced Life Support (ALS) clinicians are often the earliest point of contact in a patient’s health journey and play a pivotal role in influencing a patient’s outcome and chance for survival. The Alameda County CQI Program aims to set new benchmarks for excellence. As the landscape of emergency healthcare evolves, our commitment remains strong to continuously improve and safeguard the health of those visiting or living in our community.

CQI is non-punitive and strongly centered in education. Mistakes threatening patient safety are rarely the fault of individuals and far more likely to be natural consequences of poorly designed systems. William Edwards Deming determined, “every system is perfectly designed to get the results it gets.” The Alameda County CQI program embodies a Just Culture® defined as “a culture that holds organizations accountable for the systems they design and for how they respond to individual behaviors in fair and just manners.” It is our responsibility as the Alameda County EMS Agency to engineer clear policies, recovery strategies, and effective barriers to achieve positive outcomes.

This plan serves as a resource for each Alameda County EMS provider’s CQI Plan. All pragmatic improvement plans, and each activity within it, work best when they are simple and focused. While numerous CQI models may vary in methodology, all focus on answering five (5) fundamental questions that are addressed throughout this plan:



MISSION, VISION, AND VALUES



STARCARE

Enhancing the overall mission, vision, and values of Alameda County EMS is STARCARE. Paramedic author and educator, Thom Dick, developed this important framework that incorporates key values into the decision-making process for EMS clinicians. This structure is adopted locally and contributes to a more ethically driven practice within the EMS system.

| | | | |
|--|---|---|--|
| <p>Safe</p> <p>Were my actions safe for me, for my colleagues, for other professionals and for the public?</p> | <p>Team-Based</p> <p>Were my actions taken with due regard for the opinions and feelings of my co-workers, even those from other agencies?</p> | <p>Attentive to Human Needs</p> <p>Did I treat my patient as a person? Did I keep them warm? Was I gentle? Did I use their name throughout the call? Did I tell them what to expect in advance? Did I treat their family/relatives with respect?</p> | <p>Respectful</p> <p>Did I act toward my patient, my colleagues, my first responders, the hospital staff, and the public with the kind of respect that I would have wanted to receive myself?</p> |
| <p>Customer Accountable</p> <p>If I were face-to-face right now with the customers I dealt with on this response, could I look them in the eye and say, "I did my very best for you."</p> | <p>Appropriate</p> <p>Was my care appropriate medically, professionally, legally, and practically, considering the circumstances I faced?</p> | <p>Reasonable</p> <p>Did my actions make sense? Would a reasonable colleague of my experience have acted similarly under the same circumstances?</p> | <p>Ethical</p> <p>Were my actions fair and honest in every way? Are my answers to these questions honest with integrity?</p> |

GOALS AND OBJECTIVES

The purpose of the Alameda County CQI program is to narrow the gap between performance and expectations with the goal of improving patient outcomes. This plan outlines our commitment to continuously monitor, review, evaluate, and improve the delivery of prehospital care services. Our program objectives are as follows:



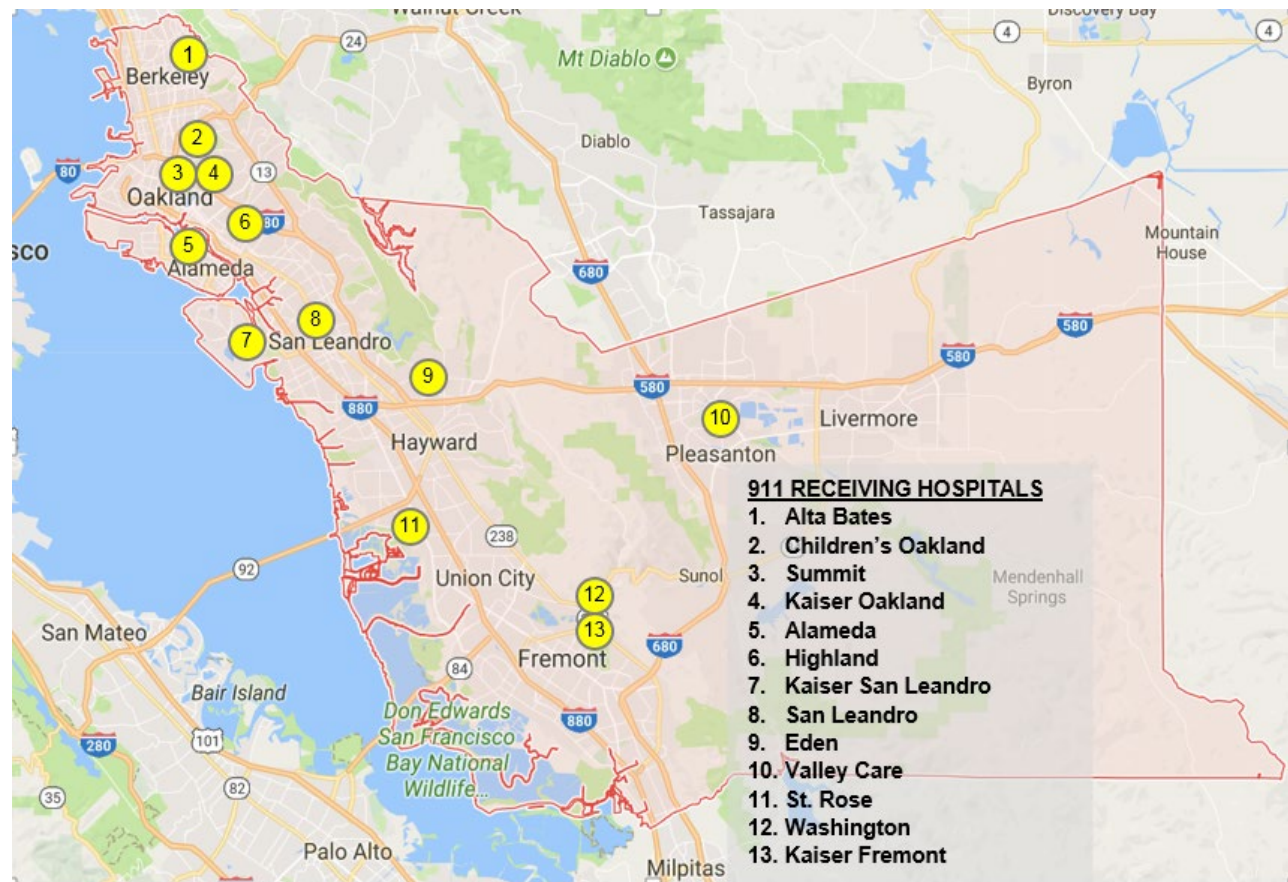
- ✓ Reduce pain and suffering and improve the health outcomes of patients in Alameda County
- ✓ Assure the delivery of patient care is safe and equitable across all demographics including race, sex, and age
- ✓ Assure adherence to local policies and field guidelines through establishing structure, process, and outcome metrics
- ✓ Continuously evaluate the effectiveness of local policies and field guidelines
- ✓ Create a culture of learning where EMS clinicians feel safe to participate in CQI activities without fear of repercussions, and become the driving force behind system enhancements
- ✓ Build consensus and jointly design system changes with all EMS stakeholders
- ✓ Use data, and evidence-based improvement science, to drive decision-making processes

II. Structure, Organizational Description, Responsibilities

ALAMEDA COUNTY DEMOGRAPHICS

Alameda County is both geographically and demographically diverse. The entire county covers 739 square miles and includes highly dense urban areas; the shoreline of San Francisco Bay is on the western border, low- and high-density residential areas, and a high concentration of industrial sites, and rural, wilderness and parks areas that stretch to the east. More than 1.6 million people live in Alameda County according to the [2023 Census Data](#).

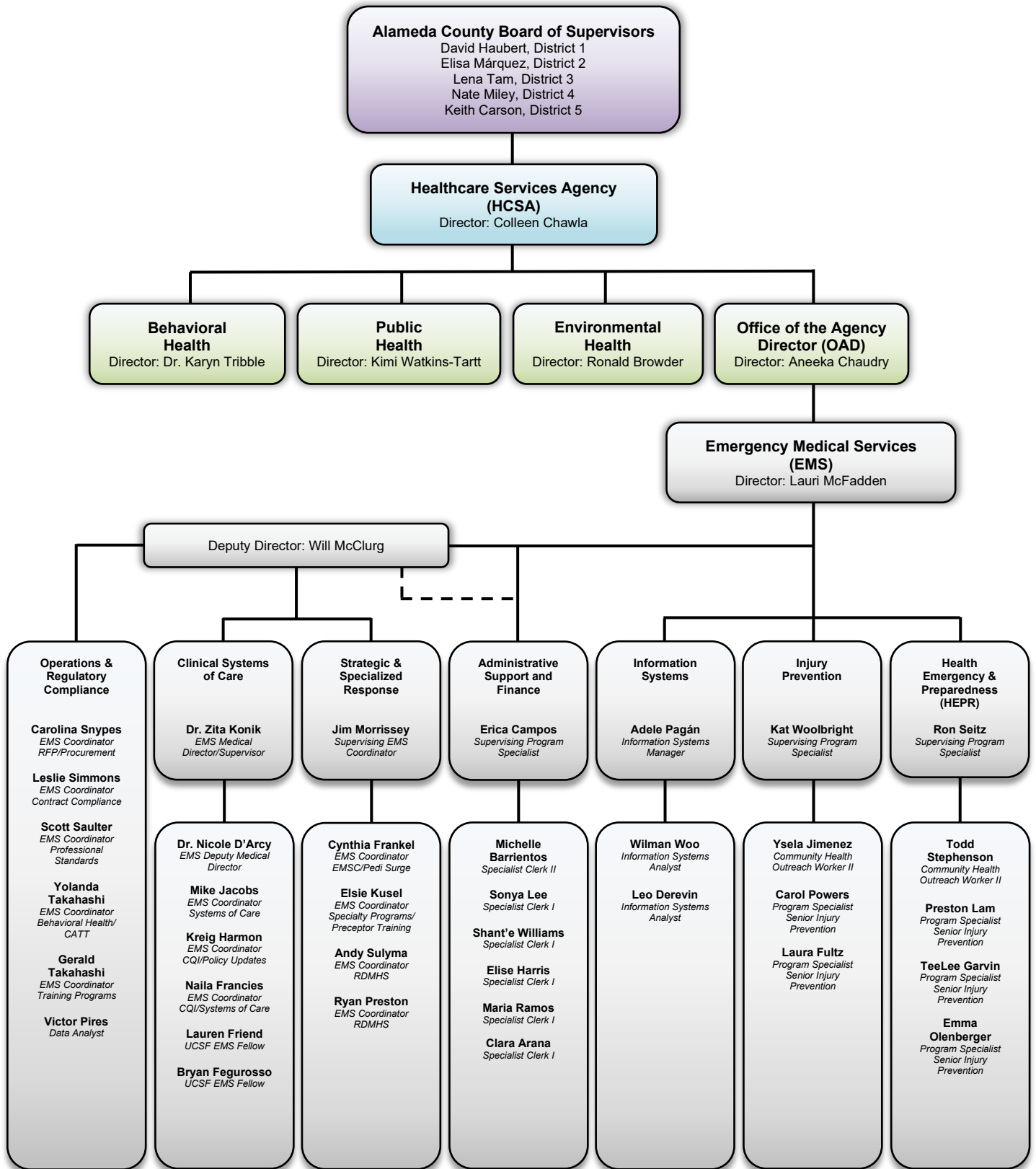
The City of Oakland, in the north part of the County, is the largest city with a population of 412,000+. Other large cities include Fremont in the south (210,000+), the City of Hayward in the mid-part of the County (146,000+), and the City of Berkeley in the northern sector of the County (105,000+). Approximately 160,000+ people reside in the cities of Livermore, Dublin and Pleasanton that are located in eastern Alameda County.



The vast ethnic, racial, and cultural diversity is a strength of this community. While it is difficult to quantify the number of languages spoken in Alameda County, there are five (5) recognized [threshold languages](#), defined by the California Department of Healthcare Services as ≥ 3000 speakers per language or $\geq 5\%$ of the Medi-Cal Population that speak the language per county. Locally, these are, English, Spanish, Chinese (Cantonese and Mandarin), Tagalog, and Vietnamese. It is important to acknowledge while Cantonese and Mandarin are categorized as one language, they are structurally different languages.

This plan emphasizes our responsibility of collecting and analyzing data through an equity lens, ensuring all members of our community have the same access to emergency medical services and receive the same level of excellent clinical care.

ALAMEDA COUNTY ORGANIZATIONAL STRUCTURE



EMS SYSTEM STAKEHOLDERS

The Alameda County EMS system responds to approximately 160,000 medical emergencies each year and completes approximately 110,000 transports. Within the cities of Alameda, Albany, Berkeley and Piedmont, the ALS fire departments provide ambulance transport services in addition to first response. Outside of these cities, ALS fire departments provide first response units and Falck provides emergency transport services under contract with the County. Below is a list of the EMS stakeholders in Alameda County.



SPECIALIZED EMS PROGRAMS

Stroke System of Care

Refer to the [Stroke System Plan](#) for quality improvement efforts for this system of care

STEMI/Cardiac Arrest System of Care

Refer to the [STEMI System Plan](#) for quality improvement efforts for these systems of care

Trauma System of Care

Refer to the [Trauma System Plan](#) for quality improvement efforts for this system of care

EMS for Children (EMSC) System of Care

Alameda County EMS oversees a robust system of care for pediatrics. Refer to the EMSC System Plan for quality improvement efforts for this system of care

Critical Care Paramedics (CCP)

Critical Care Paramedics deliver highly specialized care when transporting patients between facilities or when responding directly to the scene of an emergency. CCPs perform detailed patient assessments, provide invasive out-of-hospital care e.g., ventilator management, and specialized treatments including advanced medication infusions. The San Francisco County EMS Agency and the Alameda County EMS Agency are jointly designing common CCP protocols, expanding CCP scope of practice, and CCP accreditation reciprocity.

Community Assessment and Transport Team (CATT)

The Community Assessment and Transport Team is a crisis response system intended to reduce the rate of involuntary detentions and increase the efficiency of linking clients to needed services. A behavioral health clinician is paired with an EMT in a non-emergency vehicle and offers transport for a broad range of dispositions (Psychiatric Emergency Services, Crisis Residential Treatment Facility, sobering center, shelter, emergency departments, etc.). CATT is a collaboration among core Alameda County Health Care Services Agency programs - Behavioral Health Care Services, Emergency Medical Services, and Alameda Care Connect (Whole Person Care) – as well as 911 dispatch, the County Sheriff's Office, city police departments, city health and human services, and other relevant services to ensure a crisis response team is available to meet the needs of our community.

Telehealth

Telehealth is relatively new in the prehospital environment. Falck and the Hayward Fire Department (HFD) utilize different versions of telehealth for low acuity patients who may be better served by resources offered outside of the Emergency Department. This new program is intended to connect patients with the needed services while limiting demand on the hospitals. MD Ally, used by Falck, and Tele911, used by HFD, are currently activated in the field by EMS clinicians. It is our goal to integrate these services into dispatch centers to prevent unnecessary emergency responses and limit the demand on the 9-1-1 system. The EMS Telehealth Guidelines policy is attached in this plan (Appendix A).

QUALITY IMPROVEMENT RESPONSIBILITIES – GENERAL GUIDELINES

1. The EMS Agency shall establish and facilitate a system wide quality improvement program to monitor, review, evaluate and improve the delivery of prehospital care services.
 - 1.1 The program shall involve all system participants and shall include, but not be limited to the following activities:
 - 1.2.1 **Prospective** - designed to prevent potential problems.
 - 1.2.2 **Concurrent** - designed to identify problems or potential problems during the course of patient care.
 - 1.2.3 **Retrospective** - designed to identify potential or known problems and prevent their recurrence.

- 1.2.4 **Reporting/Feedback** - all quality improvement activities will be reported to the EMS Agency in a manner to be jointly determined. As a result of Q.I./Q.A. activities, changes in system design may be made.
2. Each agency shall submit a Quality Improvement Plan, based on the appropriate policy to the EMS Agency for approval, no later than January 31st of each year.
3. Appropriate revisions shall be made as requested by the EMS Agency.
4. Each agency shall conduct an annual review of their QI Plan.
5. The EMS Agency will evaluate the implementation of each agency's QI Plan.

QUALITY IMPROVEMENT RESPONSIBILITIES – ALAMEDA COUNTY EMS AGENCY

1. Prospective
 - 1.1 Comply with EMS statues and regulations pursuant to [Title 22, Division 9, California Code of Regulations](#) and [Division 2.5 of the Health and Safety Code](#).
 - 1.2 Coordinate prehospital quality improvement committees with the EMS system.
 - 1.3 Plan, implement and evaluate the emergency medical services system including public and private agreements and operational procedures.
 - 1.4 Implement advanced life support systems and limited advanced life support systems
 - 1.5 Approve and monitor prehospital training programs.
 - 1.6 Certification and accreditation of prehospital personnel.
 - 1.7 Establish policies and procedures to assure medical control and oversight, which include dispatch, basic life support, advanced life support, patient destination, patient care guidelines and quality improvement requirements.
 - 1.8 Facilitate implementation by system participants of required Quality Improvement plans.
 - 1.9 Design reports for monitoring identified problems and/or trends analysis.
 - 1.10 Approve standardized corrective action plan for identified deficiencies in prehospital and base hospital personnel.
2. Concurrent
 - 2.1 Site visits to monitor and evaluate system components
 - 2.2 On call availability for unusual occurrences, including but not limited to:
 - 2.2.1 Multicasualty Incidents (MCI)
 - i. Ambulance Rerouting and Hospital Bypass
3. Retrospective
 - 3.1 Evaluate the process developed by system participants for retrospective analysis of prehospital care.
 - 3.2 Evaluate identified trends in the quality of prehospital care delivered in the system.
 - 3.3 Establish procedures for implementing the Certificate Review Process for prehospital emergency medical personnel.
 - 3.4 Monitor and evaluate the Incident Review Process.
4. Reporting/Feedback
 - 4.1 Evaluate submitted reports from system participants and make changes in system design as necessary.
 - 4.2 Provide feedback to system participants when applicable or when requested on Quality Improvement issues.

- 4.3 Design prehospital research and efficacy studies regarding the prehospital use of any drug, device or treatment procedure where applicable.

QUALITY IMPROVEMENT RESPONSIBILITIES – COMMUNICATION CENTERS

1. Prospective
 - 1.1 Participation on committees as specified by the EMS Agency.
 - 1.2 Education
 - 1.2.1 Orientation to the EMS system
 - 1.2.2 Continuing education activities to further the knowledge base of the dispatcher, to include but not limited to:
 - 1.2.2.1 Recording review
 - 1.2.2.2 Educational programs based on problem identification and trend analysis
 - 1.2.2.3 Discussion of selected calls
 - 1.2.3 Participation in certification and training of the EMD
 - 1.2.4 Establish procedure for informing all EMDs of system changes
 - 1.3 Evaluation - Develop criteria for evaluation of individual EMDs to include, but not limited to:
 - 1.3.1 Recording review or other documentation as available
 - 1.3.2 Evaluation of new employees
 - 1.3.3 Routine
 - 1.3.4 Problem oriented
 - 1.3.5 Design standardized corrective action plans for individual EMD deficiencies.
 - 1.4 Certification
 - 1.4.1 Initial certification
 - 1.4.2 Re certification
2. Concurrent Activities
 - 2.1 Establish a procedure for evaluation of EMDs utilizing performance standards through direct observation
3. Retrospective Analysis
 - 3.1 Develop a process for retrospective analysis of dispatched calls, utilizing audio recording and dispatcher report form, to include but not limited to:
 - 3.1.1 High-risk
 - 3.1.2 High-volume
 - 3.1.3 Problem oriented calls
 - 3.1.4 Any call requested to be reviewed by EMS or other appropriate agency.
 - 3.1.5 Specific audit topics established through the Quality Improvement Committee.
 - 3.2 Develop performance standards for evaluating the quality of care delivered by the EMD through retrospective analysis.
 - 3.3 Participation in the incident review process
 - 3.4 Comply with reporting and other quality improvement requirements as specified by the EMS Agency.
 - 3.5 Participation in prehospital research and efficacy studies requested by the EMS Agency and/or the Quality Improvement Committee.
4. Reporting/Feedback
 - 4.1 Develop a process for identifying trends in the quality of dispatch care
 - 4.1.1 Report as specified by the EMS Agency

- 4.1.2 Design and participate in educational offerings based on problem identification and trend analysis
- 4.1.3 Make approved changes in internal policies and procedures based on trend analysis

| PSAP and Dispatch Call Handling Structure in Alameda County | | | | |
|--|--|---|--|-------------------------|
| Call Location | Primary PSAP Receive 9-1-1 Call | Fire 1st Response Dispatch | Ambulance Dispatch | EMD* Provided By |
| Alameda City | Alameda Police PSAP | Call transferred from PD PSAP to ACRECC who dispatches fire units/ambulances | ACRECC dispatches city ambulances | ACRECC |
| Alameda County (and areas served by County Fire) | County Sherriff (unincorporated and Dublin); San Leandro Police PSAP; Livermore Lab PSAP | Calls transferred from various PD PSAPs to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Albany | Albany Police PSAP | Albany PD dispatches fire units | Albany PD dispatches city ambulances | None |
| Berkeley | Berkeley PD PSAP (dual police and fire) | Berkeley PD dispatches fire units | Berkeley PD dispatches city ambulances | ACRECC |
| Camp Parks | City of Dublin Police PSAP | Call transferred from Dublin PD PSAP to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Emeryville | Emeryville Police PSAP | Call transferred from Emeryville PD to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Fremont | Fremont Police PSAP | Call transferred from PD PSAP to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Hayward | Hayward Police PSAP | Hayward PD PSAP dispatches fire units and transfers call to ACRECC | ACRECC dispatches Falck ambulances | ACRECC |
| Livermore | Livermore Police PSAP | Call transferred from Livermore PD PSAP to ACRECC who dispatches fire units | ACRECC dispatches Paramedic Plus ambulances | ACRECC |
| Pleasanton | Pleasanton Police PSAP | Call transferred from Pleasanton PD to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Newark | Newark Police PSAP | Call transferred from PD PSAP to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Oakland | Oakland Police PSAP | Call transferred from PD PSAP to Oakland Fire Dispatch who dispatches fire units | Oakland Fire Dispatch transfers call to ACCREC who dispatches Falck ambulances | Oakland Fire Dispatch |
| Piedmont | Piedmont Police/Fire (Joint PSAP) | Piedmont PD/Fire dispatches fire and city ambulances | Piedmont PD/Fire PSAP | None |
| East Bay Regional Parks | EBRP PSAP and dispatch | EBRP dispatches Parks units and transfers call to ACRECC or to the transport city PSAPs | ACRECC dispatches Falck ambulances; local PSAPs dispatch fire units/ambulances | ACRECC |
| Union City | Union City Police PSAP | Call transferred from PD PSAP to ACRECC who dispatches fire units | ACRECC dispatches Falck ambulances | ACRECC |
| Cellular Calls | CA Highway Patrol | Per response jurisdiction | Varies by jurisdiction | Varies by jurisdiction |

QUALITY IMPROVEMENT RESPONSIBILITIES – ALS PROVIDER AGENCIES

1. Prospective
 - 1.1 Participation on committees as specified by the EMS Agency.
 - 1.2 Education
 - 1.2.1 Orientation to EMS system
 - 1.2.2 Continuing Education
 - 1.2.3 Participate in certification courses and the training of prehospital care providers.
 - 1.2.4 Offer educational programs based on problem identification and trend analysis.
 - 1.2.5 Establish procedure for informing all field personnel of system changes
 - 1.3 Evaluation - Develop criteria for evaluation of individual paramedics to include, but not limited to:
 - 1.3.1 PCR review/Recording review or other documentation as available
 - 1.3.2 Ride-along
 - 1.3.3 Evaluation of new employees
 - 1.3.4 Routine
 - 1.3.5 Problem-oriented
 - 1.3.6 Design standardized corrective action plans for individual paramedic deficiencies
 - 1.4 Certification/Accreditation - establish procedures, Based on Alameda County policies, regarding:
 - 1.4.1 Initial certification/accreditation
 - 1.4.2 Recertification/Continuing Accreditation
 - 1.4.3 ITLS or PHTLS certification
 - 1.4.4 ACLS certification
 - 1.4.5 PALS or PEPP
 - 1.4.6 Preceptor authorization
 - 1.4.7 Other training as specified by the EMS Agency.
2. Concurrent Activities
 - 2.1 Ride-along - Establish a procedure for evaluation of paramedics utilizing performance standards through direct observation
 - 2.2 Provide availability of Field Supervisors and/or Quality Improvement Liaison personnel for consultation/assistance.
 - 2.3 Provide patient information to the base hospital to facilitate obtaining patient follow-up information from receiving hospitals.
3. Retrospective Analysis
 - 3.1 Develop a process for retrospective analysis of field care, utilizing PCRs and audio recording (if applicable), to include but not limited to:
 - 3.1.1 High-risk
 - 3.1.2 High-volume
 - 3.1.3 Problem-oriented calls
 - 3.1.4 Any call requested to be reviewed by EMS or other appropriate agency.
 - 3.1.5 Specific audit topics established through the Quality Council.
 - 3.2 Develop performance standards for evaluating the quality of care delivered by field personnel through retrospective analysis.
 - 3.3 Participate in the Incident Review Process
 - 3.4 Comply with reporting and other quality improvement requirements as specified by the EMS Agency.
 - 3.5 Participate in prehospital research and efficacy studies requested by the EMS Agency and/or the Quality Improvement Committee

4. Reporting/Feedback
 - 4.1 Develop a process for identifying trends in the quality of field care.
 - 4.1.1 Report as specified by the EMS Agency.
 - 4.1.2 Design and participate in educational offering based on problem identification and trend analysis.
 - 4.1.3 Make approved changes in internal policies and procedures based on trend analysis.

QUALITY IMPROVEMENT RESPONSIBILITIES – EMS AIRCRAFT PROVIDER AGENCIES

1. Assign a liaison to interact with other EMS provider agencies, base hospital(s), and EMS Agency
2. Assure Agency’s EMS personnel and pilots are currently and appropriately credentialed at all times
3. Assure Agency’s personnel are fully oriented to EMS system prior to assigning to EMS response duties
 - 3.1 Orientation to include pertinent policies, protocols, hospital locations, map reading, documentation requirements, etc.
 - 3.2 Establish procedure for informing agency personnel of EMS system changes and updates
4. Provide the EMS Agency with clinical and response time data necessary for monitoring and evaluating the EMS system, particularly for trauma patients as part of the EMS trauma audit process
5. Participate in EMS Agency Quality Improvement activities

QUALITY IMPROVEMENT RESPONSIBILITIES – RECEIVING CENTERS

1. A Receiving Hospital is a hospital designated as such by the Alameda County Health Officer and is licensed as a Basic Emergency Service or has in-house physician coverage 24 hours per day
2. A Receiving Hospital shall:
 - 2.1 Accept all emergency patients transported by EMS system units unless ambulance diversion has been initiated in accordance with Alameda County Ambulance Diversion Policy and the facility's approved internal diversion protocol.
 - 2.2 Admit emergency patients to the Hospital if appropriate, the patient accepts admission, and the Hospital has space available. If transfer to another hospital is appropriate, the patient shall be transferred according to Alameda County Interfacility Transfer Guidelines.
 - 2.3 Procure and maintain an operational radio for two-way voice communication on the County MEDNET, meeting County specifications, and place this equipment in the emergency department.
 - 2.4 Cooperate with the Alameda County Emergency Medical Services Agency and the Alameda County Health Care Services Agency in gathering and providing statistics and information needed for monitoring and evaluating prehospital programs.
 - 2.5 Cooperate with designated Alameda County Base Hospitals and ALS Provider Agencies in providing follow-up information regarding patient diagnosis, disposition and outcome.
 - 2.6 Follow and abide by the standards established for ALS programs and for Receiving Hospitals, including those standards pertaining to professional staffing.

- 2.7 Ensure that the emergency department staff, and other appropriate hospital personnel possess sufficient skill and knowledge in field procedures that are continued within the emergency department.
- 2.8 Participate in the Receiving Hospital Committee and Trauma Audit Committee (TAC) meetings as requested.
- 2.9 Participate in training of prehospital personnel, in cooperation with and as coordinated by the EMS Agency Medical Director or designee.
- 2.10 Provide hospital census and bed availability information to the EMS agency through the "Reddinet" system daily by 7:00 a.m.
- 2.11 Participate in "HAVBED" drills/exercises as directed by the Alameda County EMS Agency.

QUALITY IMPROVEMENT RESPONSIBILITIES – BASE HOSPITAL

1. An ALS Base Hospital is a hospital designated by the Alameda County Emergency Medical Services Agency and has:
 - 1.1 A written contractual agreement with Alameda County
 - 1.2 Primary responsibility for the direct, online medical control of calls received from the field.
2. The Hospital shall agree to:
 - 2.1 Utilize voice communications and be available to field personnel through a consistent channel, frequency, or telephone number twenty-four (24) hours a day, three hundred sixty-five (365) days a year.
 - 2.2 Provide physician response within sixty (60) seconds of receipt of call. Physician orders and consultation shall be provided directly by the physician.
 - 2.3 Initiate a Base Hospital Report Form completed by the Base Coordinator each time that the Base Hospital is contacted by an ALS unit with patient data.
 - 2.3.1 The document is a medical record, and as such, should meet criteria for all medical records, (e.g., must be in ink, be retained for seven (7) years, etc.)
 - 2.4 The form must list all communications in chronological order by time and include a brief description of all communications received or transmitted. Each form shall include:
 - 2.4.1 Patient's run number
 - 2.4.2 Patient's chief complaint/problem
 - 2.4.3 Unit number
 - 2.4.4 The Base Hospital Physician
 - 2.4.5 Patient destination
 - 2.4.6 Pertinent comments
 - 2.5 Record all communications between Base Hospital and ALS units.
 - 2.5.1 Recording are considered to be part of the patient's medical record and will be retained for a minimum of 100 days.
 - 2.5.2 Recordings may be copied (in writing or by duplicating the recording) for teaching purposes. The patient's name should be omitted.
 - 2.5.3 The Base Hospital shall provide a copy of any recording requested by the EMS Agency.
 - 2.6 Abide by all standards, protocols, policies, procedures and contracts established by the County relating to prehospital ALS guidelines.

QUALITY IMPROVEMENT MEETINGS

The Alameda County EMS Agency hosts and facilitates numerous quality improvement-related meetings with system partners, to continue fostering collaboration and jointly design system-changes. Each meeting will have several EMS agency representatives including the EMS medical director and deputy medical director in attendance when possible. All meetings listed below are externally facing.

- **Quality Council** (Quality Council Charter attached as Appendix B)
 - Cadence: Monthly
 - Facilitator: Kreig Harmon; EMS Coordinator
 - Purpose: Advisory group to the Alameda County EMS Agency, Identifies QI needs, Present prehospital/hospital performance data, 'catch-all' meeting for all things clinical.
- **Base Tape Reviews**
 - Cadence: Monthly
 - Facilitator: Kreig Harmon; EMS Coordinator
 - Purpose: Highland Base Hospital coordinates EMS cases to review for QA/QI
- **Receiving Hospital Committee**
 - Cadence: Quarterly
 - Facilitator: Leslie Simmons; EMS Coordinator & Ryan Preston; RDMHS
 - Purpose: Forum for Hospital and ED leadership, prehospital agencies, and Alameda County EMS to discuss relevant system issues, identify areas for improvement, and review policy changes
- **STEMI Systems of Care**
 - Cadence: April, August, November
 - Facilitator: Mike Jacobs
 - Purpose: Prehospital/hospital performance data, develop change ideas, best practices/research
- **Cardiac Arrest Systems of Care**
 - Cadence: April, August, November
 - Facilitator: Mike Jacobs
 - Purpose: Presenting both prehospital/hospital performance data for acute STEMI patients, develop change ideas, shorten time to definitive treatment, and share best practices and new research
- **Stroke Systems of Care**
 - Cadence: April, August, November
 - Facilitator: Mike Jacobs
 - Purpose: To share both prehospital/hospital performance data for acute stroke patients, develop change ideas, shorten time to definitive treatment, and share best practices and new research
- **Regional Trauma Coordinating Committee (RTCC) – Bay Area**
 - Cadence: Quarterly
 - Facilitator: Mike Jacobs
 - Purpose: Regional coordination of trauma systems of care for ten (10) Bay Area Counties, includes LEMSA, receiving center, and prehospital participation.
- **EMS for Children (EMSC) System of Care**
 - Cadence: Biannual
 - Facilitator: Cynthia Frankel
 - Purpose: Coordinates quality improvement initiative with hospital and prehospital providers
- **Data Steering Committee**
 - Cadence: Quarterly
 - Facilitator: Naila Francies
 - Purpose: Ensuring configuration consistency across all provider instances of ESO, compliance with timely CEMSIS data submission, improving methods of capturing clinically significant data
- **Basic Life Support (BLS) Provider Meeting**
 - Cadence: Quarterly
 - Facilitator: Leslie Simmons
 - Purpose: System evaluation/coordination for IFT providers permitted to operate in Alameda County
- **Medical Dispatch Review Committee**
 - Cadence: Quarterly
 - Facilitator: Andy Sulyma
 - Purpose: Clinical and operational Coordination between the ACRECC, OFD, Falck, and the EMS Agency.
- **Ad Hoc Committees**
 - *Equipment and Supplies*
 - *Policy Change Workgroups*
 - *APOT*

III. Data Collection and Reporting

EMS DATABASES AND ANALYTICS

Accurate data collection remains a top priority as CQI activity hinges on valid documentation at the key entry point. Currently, all Alameda County prehospital organizations utilize ESO as their Electronic Health Record (EHR). ESO remains compliant with Version 3.5.0 of the National Emergency Medical Services Information System (NEMSIS) and the California Emergency Medical Services Information System (CEMSIS). All ESO data is exported in real-time to CEMSIS from each individual provider agency. The Alameda County EMS Agency has access to an ESO “umbrella” account for viewing access to these records.

It is our role as the LEMSA to integrate available data systems between all stakeholders including dispatch centers, prehospital provider agencies, receiving centers, and community partners. The Alameda County EMS Agency has access to both hospital and prehospital data systems which provides essential information for meaningful quality improvement initiatives and research projects. The databases used to collect EMS information are as follows:

- ESO
- Priority Dispatch AQUA Ascent
- First Watch
- First Pass
- Biospatial
- ReddiNet
- Cardiac Arrest Registry to Enhance Survival (CARES)
- American Heart Association:
 - Get With The Guidelines (GWTG) Stroke
 - Get With The Guidelines (GWTG) Coronary Artery Disease

The databases above offer varying levels of analytics and the following software programs are used to supplement and produce more sophisticated data analysis:

- ESO Insights
- Microsoft Excel
- Microsoft Power BI
- Tableau
- Python

HEALTHCARE DATA EXCHANGE (HDE)

HDE allows for sharing of patient outcome information and detailed physician notes with the EMS providers who initiated care. This bi-directional communication between the receiving centers and prehospital providers ESO platform is active for the following seven (7) hospitals St. Rose, Highland, San Leandro Hospital, Alameda Hospital, John George Psychiatric Pavilion, Washington Hospital, and UCSF Benioff’s Children’s Hospital Oakland. The remaining eight (8) acute care facilities are working towards the goal of having HDE in the next several years.

UNUSUAL OCCURRENCE (UO) REPORTING

Unusual Occurrence Reporting is designed to establish minimum criteria for EMS event notification to the LEMSA and formalize a process for operational and clinical feedback from EMS stakeholders. Information collected from these reports is crucial to identifying system issues, especially regarding patient safety, and relies on open-self reporting. Currently, UOs are completed on a PDF form and submitted through email to the EMS agency. Our goal is to begin using a combination of Smartsheet's and ImageTrend's License Management System to simplify the process for the front-end user while improving our ability to track and manage UO events. The Alameda County [Unusual Occurrences Form](#) is included in this plan (Appendix C).

AD HOC SURVEYS

Soliciting feedback directly from EMS clinicians is vital, and challenging, in large systems such as Alameda County. In the past year, several surveys have been sent to EMS clinicians via google sheets and smart sheets for topics such as, education interests, policy updates, language barriers with patients, and notification of hard offload times. These online surveys have been very successful and continue to be an excellent tool for quickly receiving field input.

IV. Evaluation of Indicators

SYSTEM EVALUATION PRINCIPLES

What is not measured cannot be managed. Indicators, metrics, and measures are terms used interchangeably in this plan describing the same thing; they are gauges telling us how our system is doing. The purpose of organizing data into standardized formats is to create easily understandable visualizations identifying strong performance and opportunities for change. (See Appendix D: Developing an Indicator). Every system will have differences in performance. Aiming to minimize this variation is our CQI goalpost, as eliminating variation entirely is unrealistic. In any data analysis, including the quality indicators in this plan, all the below factors are considered when evaluating information:

- The validity and reliability of the data input and output
- Common cause variation versus special cause variation
- Population dynamics: What are they doing?
- Provider dynamics: What are we doing?

CALIFORNIA EMS CORE QUALITY MEASURES

Alameda County has participated in the Core Measures Project since 2010. The measures listed below are submitted to the Emergency Medical Services Authority (EMSA) annually prior to the prescribed deadline. Below is the data submitted for the year 2021.

| Measure ID # | Measure Name | Numerator Value (Subpopulation) | Denominator Value (Population) | Reported Value (%) |
|--------------|--|---------------------------------|--------------------------------|--------------------|
| TRA-2 | Transport of Trauma Patients to a Trauma Center | 2825 | 3004 | 94% |
| HYP-1 | Treatment Administered for Hypoglycemia | 1108 | 1523 | 73% |
| STR-1 | Prehospital Screening for Suspected Stroke Patients | 1984 | 2012 | 99% |
| PED-3 | Respiratory Assessment for Pediatric Patients | 167 | 176 | 95% |
| RST-4 | 911 Requests for Services That Included a Lights and/or Sirens Response | 219550 | 292776 | 75% |
| RST-5 | 911 Requests for Services That Included a Lights and/or Sirens Transport | 8508 | 104318 | 8% |

ALAMEDA COUNTY EMS AGENCY INDICATORS

Alameda County EMS has developed local indicators that are reported to the EMS system no less than bi-annually through various Quality Improvement and System of Care meetings. This list does not include ad hoc measures for short-term projects and will continue evolving to meet the needs of the system. Additionally, many of the metrics are dis-aggregated by race, and sex, to assess for equitable delivery of care.

| Category | Area | Indicators | Type |
|--|--|---|-----------------------------------|
| (1) Personnel | TBD | TBD | Process |
| (2) Equipment and Supplies | TBD | TBD | Process |
| (3) Documentation | Electronic Health Records (EHR) | Successful export of data in CEMISIS/NEMISIS | Process |
| | | EHR Locked within \leq 72 Hours of Incident Creation Date | Process |
| (4) Clinical Care and Patient Outcomes | Stroke | Blood Glucose Level - Stroke Alerts | Process |
| | | Last Known Well Time - Stroke Alerts | Process |
| | | Stroke Screening Documented - Stroke Alerts | Process |
| | | Stroke Alerts Transported to a Stroke Receiving Center | Process |
| | | Dispatched to On Scene Time (90 th Percentile) - Stroke Alerts | Process |
| | | Scene Time (90 th Percentile) - Stroke Alerts | Process |
| | | Transport Time (90 th Percentile) - Stroke Alerts | Process |
| | | Arrival by EMS - Stroke Activations Receiving Thrombolytics | Process |
| | | Door-to-CT Time (90 th Percentile) | Process |
| | | CT-to-Needle Time (90 th Percentile) | Process |
| | | Door-to-Needle Time (90 th Percentile) | Process |
| | | Dispatched Time-to-Needle Time (90 th Percentile) | Process |
| | | Door-In-Door-Out Times for Large Vessel Occlusion Strokes (90 th Percentile) | Process |
| | | STEMI/ACS | ASA Administration - STEMI Alerts |
| | STEMI Alerts Transported to STEMI Receiving Centers | | Process |
| | Dispatched to On Scene Time (90 th Percentile) - STEMI Alerts | | Process |
| | Scene Time (90 th Percentile) - STEMI Alerts | | Process |
| | Transport Time (90 th Percentile) - STEMI Alerts | | Process |
| | 12-lead EKG for Patients with Cardiac Complaints | | Process |
| | Arrival by EMS - STEMI Activations Receiving PCI | | Process |
| | Door-to-Cath Lab Time (90 th Percentile) | | Process |
| | Cath Lab-to-PCI Time (90 th Percentile) | | Process |
| | Door-to-PCI Time (90 th Percentile) | | Process |
| | Dispatched Time-to-PCI Time (90 th Percentile) | Process | |
| | Cardiac Arrest (Non-Traumatic) | Double Sequential Defibrillation after the Third Defibrillation | Process |
| | | Admitted to Hospital | Process |
| | | Neurologically Intact Survival - (CPC 1-2) | Outcome |
| Overall Survival - (CPC 1-4); <i>Alameda County & National</i> | | Outcome | |
| Survival - Utstein 1; <i>Alameda County & National</i> | | Outcome | |
| Survival - Utstein 2; <i>Alameda County & National</i> | | Outcome | |
| Transports vs. Field Pronouncements | | Process | |

| | | | |
|--|-------------------|--|-----------|
| | | Use of LUCAS or Mechanical Compression Device | Process |
| | | ETC02 Use During Cardiac Arrest Resuscitation | Process |
| | | Epinephrine Administration of 3 Rounds Maximum | Process |
| | Trauma | Scene Time (90 th Percentile) - Trauma Alerts | Process |
| | | Scene Time ≤ 10 Minutes | Process |
| | | Scene Time ≤ 20 Minutes | Process |
| | | Pre-Arrival Notification for Trauma Patients Meeting Trauma Triage Criteria | Process |
| | | Transport to a Trauma Receiving Center for Patients Meeting Trauma Triage Criteria | Process |
| | | ETC02 Usage - Traum Alerts | Process |
| | | Oxygen Administration for Hypoxia - Trauma Alerts | Process |
| | Pediatrics | Accuracy of Pediatric Medication Administration | Process |
| | | Non-Traumatic Cardiac Arrest Survival - (CPC 1-4) | Outcome |
| | | Non-Traumatic Cardiac Arrest Hospital Admissions | Process |
| | | Respiratory Assessment for Respiratory Distress | Process |
| | | Albuterol Administration for Bronchospasm | Process |
| | | Supraglottic Airway Device - i-GEL Success Rates | Process |
| | | Scene Time (90 th Percentile) - Trauma Alerts | Process |
| Pediatric Trauma Alerts Transported to a Pediatric Trauma Receiving Center | | Process | |
| Fentanyl Administered for Pain ≥ 7 | | Process | |
| Treatment Administered for Hypoglycemia | | Process | |
| Blood Pressure Assessment for Patients ≤ 3 years of age | | Process | |
| Estimated Weight or Peditape Color Documented for All Patients Receiving a Weight-Based Medication | Process | | |
| (5) Skill Maintenance and Competency | Airway | Orotracheal Intubation Success - Overall (Per Patient) | Process |
| | | Orotracheal Intubation Success - First Pass | Process |
| | | Supraglottic Airway Device Success - Overall (Per Patient) | Process |
| | | Supraglottic Airway Device Success - First Pass | Process |
| | | ETC02 with Orotracheal Intubation | Process |
| | | ETC02 with Supraglottic Airway Devices | Process |
| | | Cormack Lehane Documentation for Orotracheal Intubation Attempts | Process |
| (6) Transportation/ Facilities | TBD | TBD | Process |
| | TBD | TBD | Process |
| (7) Public Education and Prevention | Cardiac Arrest | Bystander CPR | Process |
| | | AED Usage | Process |
| | Opioid Safety | Leave-Behind Narcan | Structure |
| (8) Risk Management | Refusal of Care | AMAs vs. Transports | Process |
| | | BLS Initiated AMAs with a Documented ALS Assessment | Process |
| | Opioid Safety | Clinical Opiate Withdrawal Scale ≥ 7 for Buprenorphine Administrations | Process |
| | Injury Prevention | TBD | TBD |

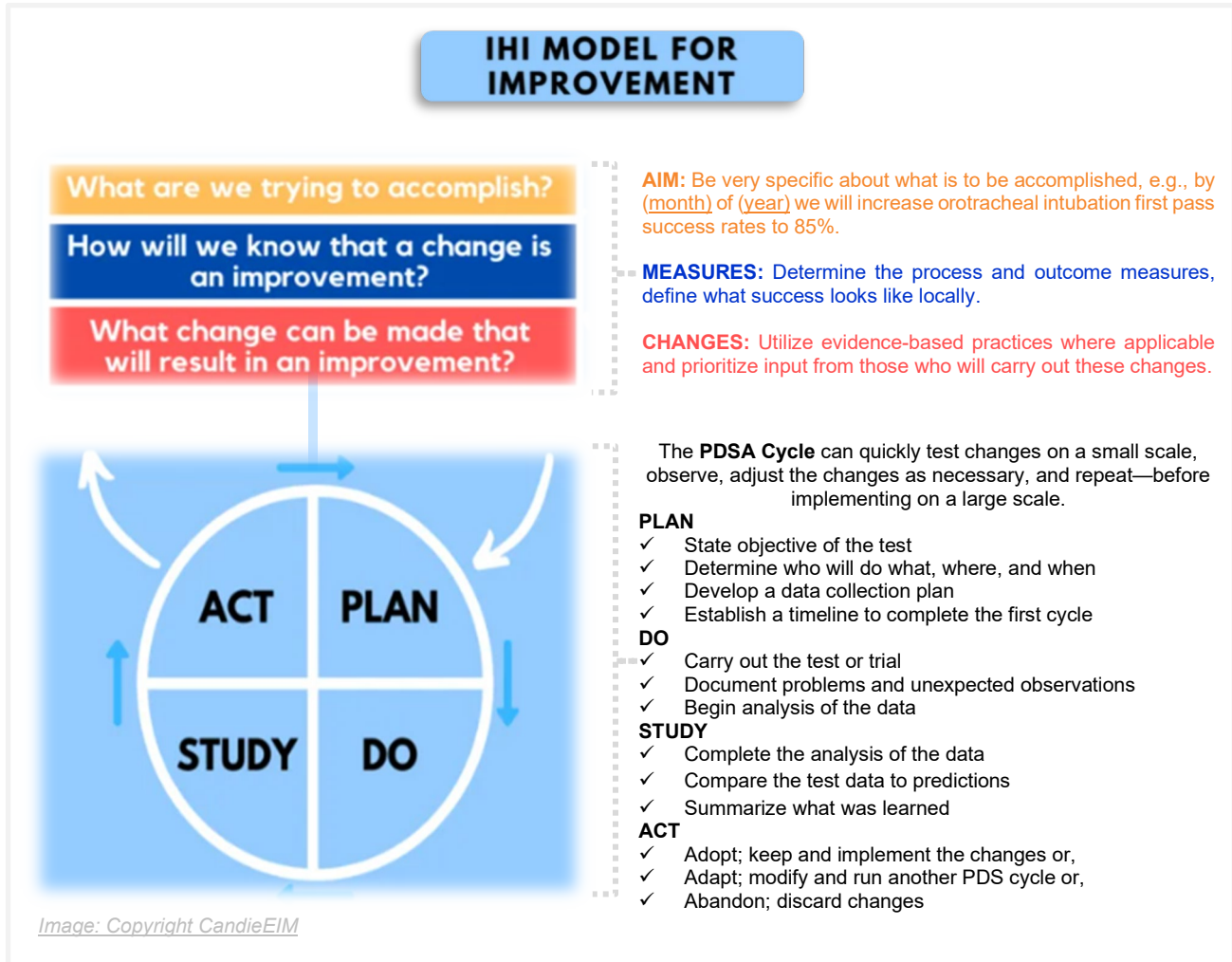
PROVIDER AGENCY INDICATORS

Each EMS provider agency is responsible for developing a CQI plan to monitor internal indicators and perform quality improvement activities pursuant to [Title 22, Division 9, Chapter 12, Article 4 of the California Code of Regulations](#). Quality improvement indicators are not exclusive to clinical performance and should include operational metrics as well. Alameda County EMS has developed Quality Indicators and Activities Recommendations to assist in the developing metrics (Appendix E). This is only meant to be a resource and provider agencies are not obligated to adopt the metrics. These recommendations list core quality activities and quality indicators for PSAPs, Dispatch, First Responders, Transport Agencies and Receiving Hospitals.

V. Action to Improve

IMPROVEMENT METHODOLOGIES

Fundamentally, there are two things every quality improvement initiative needs; data to support why action is necessary, and a clear objective. Various models exist for the action of quality improvement such as, the Institute for Healthcare Improvement (IHI) Model for Improvement, Six Sigma, and the Program/Project Management Model (Appendix F). All are proven methods and at least one of these methods should be followed when developing a system change. The Alameda County EMS Agency predominantly uses the IHI Model for Improvement as the methodology of choice.



FIELD GUIDELINES AND POLICY CHANGES

Refining field guidance is key to improving the delivery of prehospital care. Applying evidence-based best practices and staying current with the latest EMS research is foundational to our approach. The Alameda County EMS Agency is committed to reviewing policies and protocols at least once annually. Input from EMS clinicians on the field guideline is invaluable to driving relevant system changes. Feedback is currently provided in various formats; our goal is to formalize and simplify this process to allow for better data collection. The policy review process is included in this plan (Appendix G).



VI. Training and Education

PRINCIPLES

Training and education are fundamental to the success of quality improvement and is addressed in collaboration with quality and training experts from all partners throughout the EMS system. This section reviews EMS training as well as community outreach and education, highlighting the vital role of public engagement during medical emergencies.

EMS TRAINING AND EDUCATION

EMS Orientation

All EMTs and Paramedics are required to completing an orientation class hosted by Alameda County EMS within 30 days of beginning employment or field training and evaluation process. This orientation is continuously being refined to evolve with the needs of the system.

Annual Policy Updates

Each year, Alameda County EMS agency hosts a large train-the-trainer session to review policy changes for the coming year and subsequent training materials. This is usually accompanied by several videos created with system partners from receiving centers, and prehospital agencies. Our goal is to begin providing multiple training sessions across the county support agencies with the immense lift of training. Protocols are available via the field guideline handbook, updated and printed annually, and via smartphone application available on iOS and android. It is our intention to avoid making protocol updates more than once annually unless necessary secondary to patient safety issues.

Educational and CE Opportunities

Once monthly, Alameda County Health Services Highland partners with Alameda County EMS to host Base Tape Reviews. The Base Station Medical Director selects cases that present great learning opportunities and foster important conversations, some of which lead to system-wide policy changes. These sessions are offered ten (10) times a year and will become eligible for one credit of Continuing Education (CE). The Stroke and STEMI Receiving Centers have expressed interest in collaborating with Alameda County to host a Stroke/STEMI EMS conference. This would be free of charge to Alameda County providers and offer a platform to showcase local subject matter experts in these systems of care.

EMS Corps

Trains youth from our community as Emergency Medical Technicians (EMTs) and prepares them for careers in healthcare and public service. EMS Corps is a 5-month paid program for young people from marginalized communities between the ages of 18 and 26.

Preceptor and Field Evaluator Training

The Alameda County EMS Agency's Paramedic Preceptor/Field Training Officer Workshop is a full-day, interactive training that covers learning domains, helps refine teaching strategies, assists in developing internship/training plans and provides teaching scenarios. Other information on EMS education, training and regulations are available to participants. The workshop is facilitated by experienced, respected paramedic preceptors and field training officers.

COMMUNITY OUTREACH AND EDUCATION

Injury Prevention

The Safe Kids program partners with community organizations to provide public education and assistance for reducing preventable injuries in youth including, Child Passenger Safety, Helmet Safety, and Railway Safety (what about drowning)? The Senior Injury Prevention Program (SIPP) partners with community organizations to provide public education and assistance to reduce preventable injuries to older adults including, medication management, fall prevention, bone density screening, home modifications, and physical training sessions.

Stop the Bleed

Stop the Bleed is a national awareness campaign and call-to-action intended to cultivate grassroots efforts that encourage bystanders to become trained, equipped, and empowered to help in a bleeding emergency before professional help arrives. Alameda County EMS Coordinator, Elsie Kusel, coordinates and teaches Stop the Bleed classes for community members across the county.

CPR in Schools

CPR 7 was a program developed in 2010 for public school 7th graders in Alameda County. Since the State of California recently passed legislation requiring 9th grade health science students be trained in CPR as a graduation requirement, CPR 7 transitioned into CPR 9 using CPR Anytime training kits. ALCO EMS continues to support the school CPR training efforts.

Project Heartsafe

Supports placement, training, and maintenance of AEDs at public locations. Additionally, the Alameda County EMS Agency is currently in the process of purchasing 100+ Avive AEDs for local law enforcement agencies. When a cardiac arrest notification is sent through dispatch, the nearest Avive AED will initiate an alarm notification and voice message with arrest location information

VII. Annual Update

CQI UPDATES - 2023

| # | 2023 CQI Activities |
|---|--|
| 1 | Pediatric Medication Administration project: updated the length-based resuscitation tapes to reflect NAEMSO recommended dosages, purchased tapes for all county provider agencies, created a training video, and implemented a 100% QA process to improve the accuracy of pediatric medication administration |
| 2 | Began new process to reduce APOT times: implemented a Hard offload Policy allowing EMS to offload their patient in an available bed or chair if patient meets policy criteria. |
| 3 | Began QI project to reduce language barriers to care |
| 4 | Sharing system-wide performance data as standing agenda items at various QI meetings Quality Council, Stroke/STEMI, and data steering meetings. |
| 5 | Updated CQI Plan Metrics and developed ESO Insights Dashboards |
| 6 | <p>Protocol/Policy Updates:</p> <ul style="list-style-type: none"> ▪ Dual Sequence Defibrillation ▪ Adopted 2021 ACS Trauma Triage Guidelines ▪ Sexual Assault treatment updated ▪ Human Trafficking Reporting ▪ Buprenorphine ▪ Removal of weight-based Pediatric Medications, replaced with Pediatape process ▪ Requiring bougie for every orotracheal intubation |

CQI GOALS - 2024

| # | 2024 CQI Goals |
|----|--|
| 1 | Update the Unusual Occurrence (UO) process to SmartSheets and ImageTrend LMS |
| 2 | Improve Accuracy for Pediatric Medication Administration |
| 3 | Re-establish Lifeack Codestat and Zoll equivalent with annotation services |
| 4 | Establish an easily accessible form for EMS clinicians to offer feedback on local protocols year-round |
| 5 | Add and additional 10-15 annual training sessions to our calendar at various provider locations |
| 6 | Establish an EMS Symposium with system partners |
| 7 | Increase documentation of ASA for STEMI to 95% per quarter |
| 8 | Reduce on scene times for STEMI and Stroke to 90 th percentile ≤ 15 min |
| 9 | Offer multiple interactive ESO Insights tutorials for Alameda County QI managers |
| 10 | Collect Field Training and Evaluation Plans from all providers |
| 11 | Incorporate CCP metrics into this CQI plan |
| 12 | Incorporate Dispatch MPDS metrics from ACCREC and OFD into this CQI plan |
| 13 | Establish a Cardiac Arrest Meeting centering Dispatch and Prehospital performance with the goal of increasing our Utstein 2 %. |
| 14 | Purchase 100 Avive AEDs for various Law Enforcement Agencies |
| 15 | Reduce APOT times – hard offload |
| 16 | Establish a Community Outreach and Education Meeting with all system partners and community |
| 17 | Create internal BI dashboards for all Systems of Care |
| 18 | Infrequent and LOSOP skills as condition of continuous paramedic accreditation |
| 19 | MD ally, dispatch diverted calls |
| 20 | |

Appendices

A-G

APPENDIX A: EMS TELEHEALTH GUIDELINES



Alameda County
Emergency Medical Services Agency

EMS Telehealth Guidelines

Effective: 7/1/2023

Review: 7/1/2026

Approved: [Link to Record of Revisions and Approvals](#)

I. Purpose

To provide guidance for Alameda County EMS personnel on safe and appropriate utilization of telehealth in the pre-hospital environment. Telehealth connects EMS patients directly with advanced practitioners and is intended to supplement the existing "Assess and Refer Guidelines."

II. Indications for Utilizing Telehealth

- a. The appropriate candidate for telehealth is a clinically stable patient, as defined below, that is:
 - i. open to the option of not being transported to the hospital
 - ii. identified by an EMS clinician as not requiring transport to the hospital and;
 - iii. consents to being seen by a telehealth clinician

- b. Telehealth can be utilized for a wide variety of patients that have low acuity concerns that do not necessitate, or would not benefit from, transport to an emergency department. Additionally, it allows for continuity of medical care and social services for patients with limited or no access to healthcare. Below are examples of these services; this is not an exhaustive list:
 - i. Assisting the patient in navigating the complexities of their healthcare system
 - ii. Providing information about the patient's medical conditions or diagnoses
 - iii. Developing a care plan for the patient
 - iv. Transportation arrangements to a pharmacy, physician's office, urgent care, etc.
 - v. Prescription refills; excludes opioids and controlled substances (e.g., Xanax)
 - vi. Referrals for follow-up care
 - vii. Referrals to dental care

III. Clinical Criteria

- a. All clinical criteria below **must** be met:
 - i. Heart Rate <120 and >60

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Emergency Medical Services Agency

- ii. Respiratory Rate <20 and >10
- iii. Systolic BP <180mmHg and >100 mmHg iv. Diastolic BP <100mmHg and >60mmHg
- v. Blood Glucose <250mg/dL and >60mg/dL
- vi. Pulse Oximetry on room air >94%
- vii. Alert and Oriented to person, place, time, and event or at baseline mentation with a guardian, caregiver, or responsible party accompanying them
- viii. Full patient assessment completed
- ix. Patient is \geq 18 yrs. or guardian has legal and mental decision-making capacity and consents to Telehealth consultation; or
 - 1. Patient is \geq 15 who is legally emancipated and has mental decision-making capacity and consents to Telehealth consultation; or
 - 2. Patient is pregnant and seeking pregnancy related care

IV. Contradictions for Utilizing Telehealth

- a. Do not utilize telehealth in the following circumstances:
 - i. The patient does not meet the above Clinical Criteria
 - ii. The patient meets criteria for a Trauma, STEMI, or Stroke Alert
 - iii. Serious or life-threatening illness or injury is present
 - iv. Impairment due to substance use
 - v. When Base Hospital physician consultation is the more appropriate action, for example:
 - 1. The patient is resistant to transport and does not meet the above Clinical Criteria
 - 2. Hospital destination determination is needed
 - 3. Determination of death in the field is needed
 - 4. Requesting medication orders outside of locally approved dosing or scope
 - vi. The patient meets any criterion outlined in "Section 4: BASE CONTACT" of the Consent and Refusal Guidelines

V. Procedure for Utilizing Telehealth

- a. Collect the patient's full name, DOB, address, and phone number
- b. Request and obtain consent from the patient or their legal guardian to contact an advanced practitioner via telehealth
- c. Access your agency's telehealth platform in accordance with established procedures
- d. Provide a brief report to the telehealth practitioner
- e. Obtain the telehealth practitioner's full name and incident reference number
- f. Allow the telehealth practitioner to engage with the patient and/or the patient's guardian
- g. Remain on scene initially, to ensure successful communication between patient and practitioner, offering assistance if needed

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Alameda County
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- h. Clear the scene when reasonably appropriate to do so. There is no expectation EMS will remain on scene for the duration of time the practitioner engages with the patient. This can be a timely process upwards of 1-2 hours in some cases. For this reason, it is
- i. highly suggested that patient engagement with the telehealth provider be done with an electronic device that belongs to the patient when possible. This enables EMS resources to return to service more expeditiously, provides the patient the opportunity to have private interaction with the telehealth provider, and empowers the patient to seek future telehealth engagement on their own when appropriate.

VI. Documentation

- a. Complete an ePCR for the patient contact per the Alameda County EMS field guide
- b. In the FLOWCHART section, under OTHER, complete "Telemedicine Consultation"
- c. In the narrative, provide a summary of the telehealth encounter including the reason for utilizing telehealth and the practitioner's full name, if possible.
- d. For the disposition:
 - i. If utilizing MDAll, select MDAll as the destination facility. This action transfers the patient information to MDAll electronically and initiates the telehealth consultation.
 - ii. If utilizing platform other than MDAll, select "Patient Treated, Transferred Care to a Telehealth Provider," if the patient is not transported as a result.

APPENDIX B: QUALITY COUNCIL CHARTER

EMS Leadership/Quality Council (QC) Charter

The EMS Agency Director works with the EMS Medical Director, EMS QI Coordinator, and the Quality Council to oversee the Alameda County EMS QI program.

Quality Council Purpose:

- Serves as the Technical Advisory Group (TAG) for Alameda County EMS
- Identifies Quality Improvement needs
- Charter (and/or serve as) Quality Task Force(s) to improve system-wide processes (also known as Process Improvement Teams)
- Provides input for the EMS System Quality Improvement Plan
- Develops Quality Indicators
- Contributes to the development of a consistent approach to developing quality indicators and gathering and analyzing data
- Contributes to the development of a consistent approach to research
- Monitors and evaluates system data reports to identify opportunities for improvement and training needs

Quality Council Membership:

- EMS Medical Director (Chair)
- EMS Director
- EMS Quality Improvement Coordinator
- EMS Quality Improvement Coordinators from each fire department
- Private 911 ambulance transport provider Quality Manager
- Base Hospital Paramedic Liaison Nurse
- One Paramedic and one EMT representing fire department in each of the North, South and East zones of Alameda County (6 total members)
- One Paramedic and one EMT from the 911 private medical transport provider agency
- One representative from an air transport provider
- Two representatives from Receiving Hospitals
- One representative each from OFD dispatch and ACRECC
- One representative from a permitted IFT provider

Quality Council Chairperson: EMS Medical Director

Meetings:

- Monthly
- Two hours with a planned agenda

APPENDIX C: UNUSUAL OCCURRENCE FORM

Alameda County EMS Agency Unusual Occurrence Form

All of the following information must be documented on this form

This form may be completed electronically - 'tab' through the fields.

The form can be sent as an e-mail attachment: 'file'>>'send to'>>'mail recipient as attachment'

Submit this form to: alco.uo@acgov.org PCR attached

Date of Occurrence: _____ Time: _____ Patient ID: _____

Location: _____ Unit #: _____ CMED/Agency Incident # : _____

Form completed by: Name: _____ Title: _____ Agency: _____

Other(s) involved (include name, title and agency):

Witness(es) (persons familiar with incident; include name, title, department, relationship):

Nature of Occurrence

1. Check all appropriate boxes

2. Attach PCR or other appropriate documentation

- Morbidity or mortality to a patient
- Potential legal liability
- Issues with political ramifications or involving political figures
- Incident resulting in termination or resignation pending the investigation for clinical issues
- An action reported or intended to be reported to EMSA or other regulatory agency
- Major violation of EMS protocol (serious potential for patient harm) Policy #: _____

Could this event cause a community reaction or represent a threat to public health and safety?* Yes No
If yes, contact the EMS Medical Director at (510) 618-2042

Date contacted: _____ Time: _____

Others notified: (Name, agency, title)

Specific issue (be brief): _____

Details of Occurrence (provide facts, observations, and direct statements):

Immediate efforts to resolve this issue: _____ None

TREND REPORT INFORMATION:

- Patient Maltreatment
- Treatment Error/ Omission
- Medication error
- Documentation Omission/Error
- Other: **Affecting** Patient Care
- Other: **Not Affecting** Patient Care
- Specify: _____
- Citizen Concern

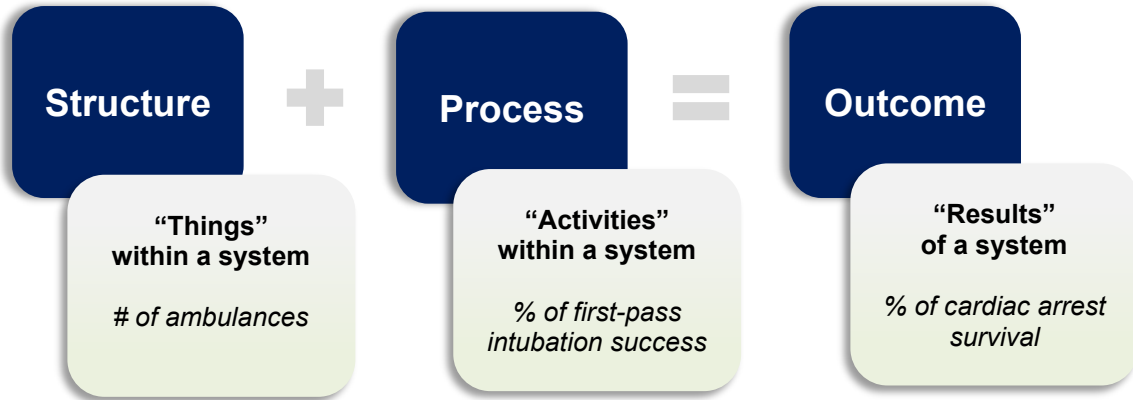
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*See reverse

APPENDIX D: DEVELOPING AN INDICATOR

Organizing an Indicator

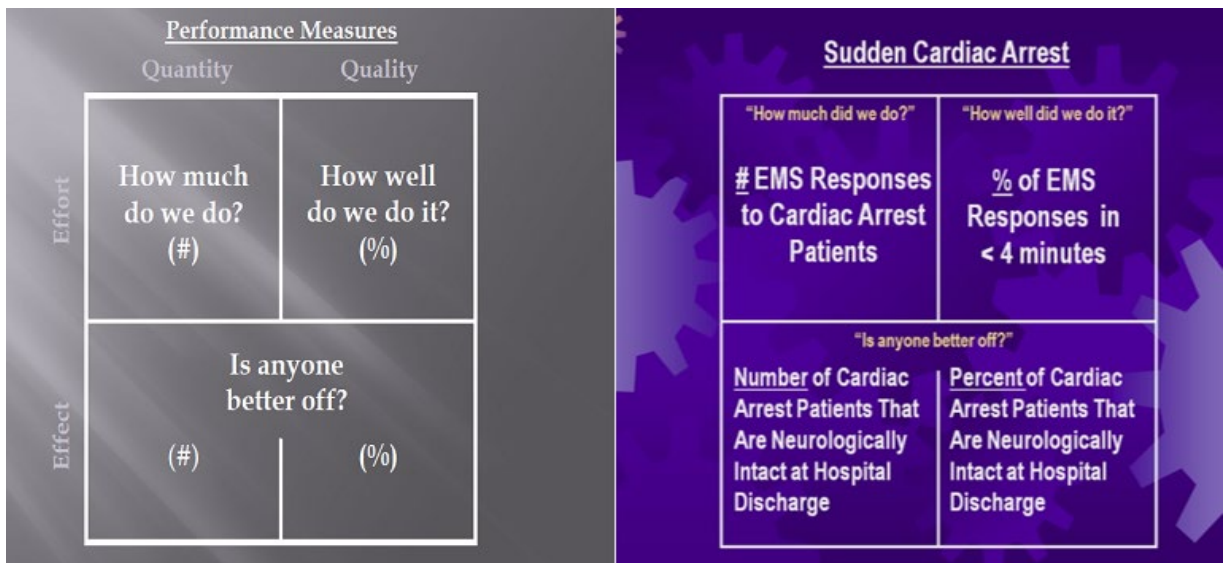
Indicators can be organized into three categories, structure, process, and outcome. Improving outcomes is the most important goal of quality improvement initiatives.



Results Based Accountability (RBA) Model

RBA uses a practical model for developing meaningful performance measures by asking 3 simple questions:

1. **How much do we do?** (*Structure*) Input resource components are measured, such as leadership, workforce, suppliers, equipment, etc. These are the least important measures and the easiest to obtain. This question helps to identify things such as infrequent skills.
2. **How well do we do it?** (*Process*) The efficiency of design and delivery of work processes, productivity and operational performance are measured.
3. **Is anyone better off?** (*Outcome*) The result or outcome of patient care, support services, and fulfillment of public responsibilities are measured. These are the most important performance measures and the most difficult to obtain. These performance measures assess the quality effect of our efforts.



Indicator Specification Sheet (ISS)

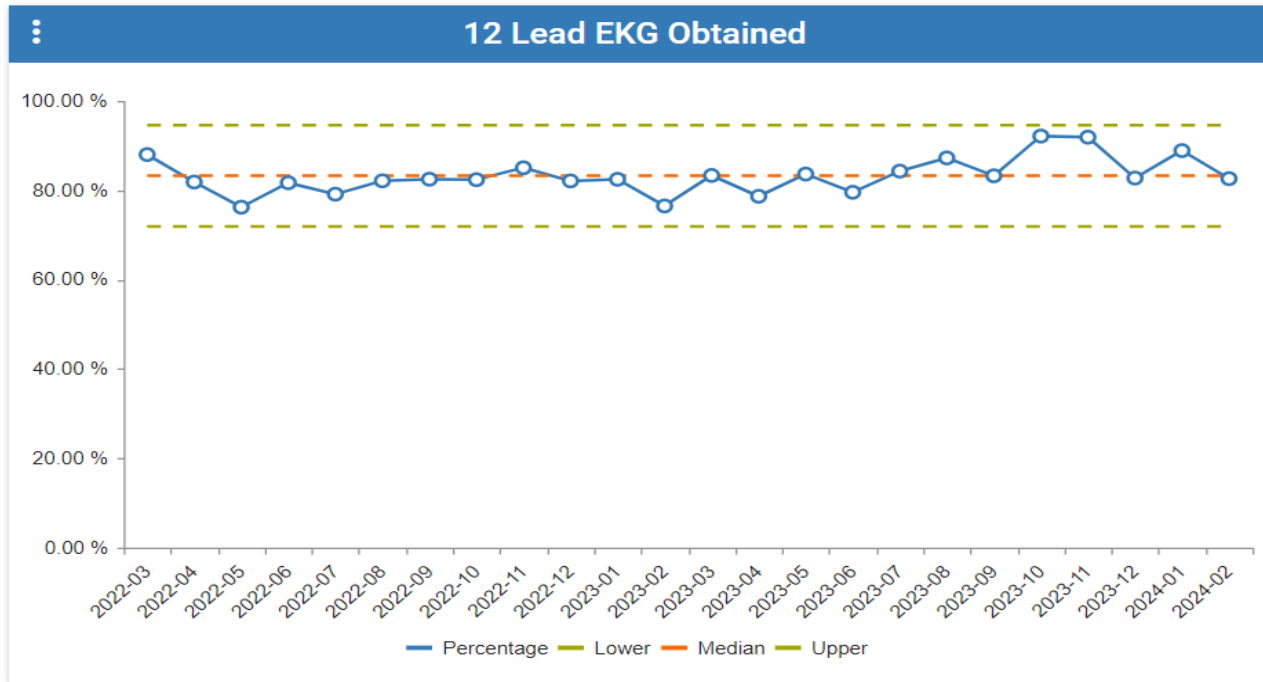
Defining performance indicators is key to ensure the data quality is consistent and reliable. An ISS should be written in locally agreed upon nomenclature and/or utilizing the NEMESIS data dictionary. Steps to developing an ISS include: 1) engaging stakeholders and subject experts for consensus on where and how to get the data, 2) identify the data sources and elements and then query the data 3) review the report and validate results.

| | | |
|---|---|--|
| Performance Measure ID | | |
| Performance Measure Name | | |
| Description | | |
| Type of Measure | Structure, Process, or Outcome | |
| Reporting Value Units | %, 90th Percentile Time, etc. | |
| Denominator Statement (population) | | |
| Denominator Inclusion Criteria | Criteria | Data Elements |
| | | NEMESIS codes/attributes if applicable |
| Numerator Statement (sub-population) | | |
| Numerator Inclusion Criteria | Criteria | Data Elements |
| | Denominator Criteria, AND: | NEMESIS codes/attributes if applicable |
| Exclusion Criteria | Criteria | Data Elements |
| | | |
| Indicator Formula Numeric Expression | The formula is to divide (/) the numerator (N) by the denominator (D) and then multiply (x) by 100 to obtain the (%) value the indicator is to report. Therefore, the indicator expressed numerically is $N/D = \%$ | |
| Example of Final Reporting Value (number and units) | 85%, or 60 minutes, etc. | |
| Benchmarks | Performance goal of 90%, or 45 minutes, etc. | |
| References | | |

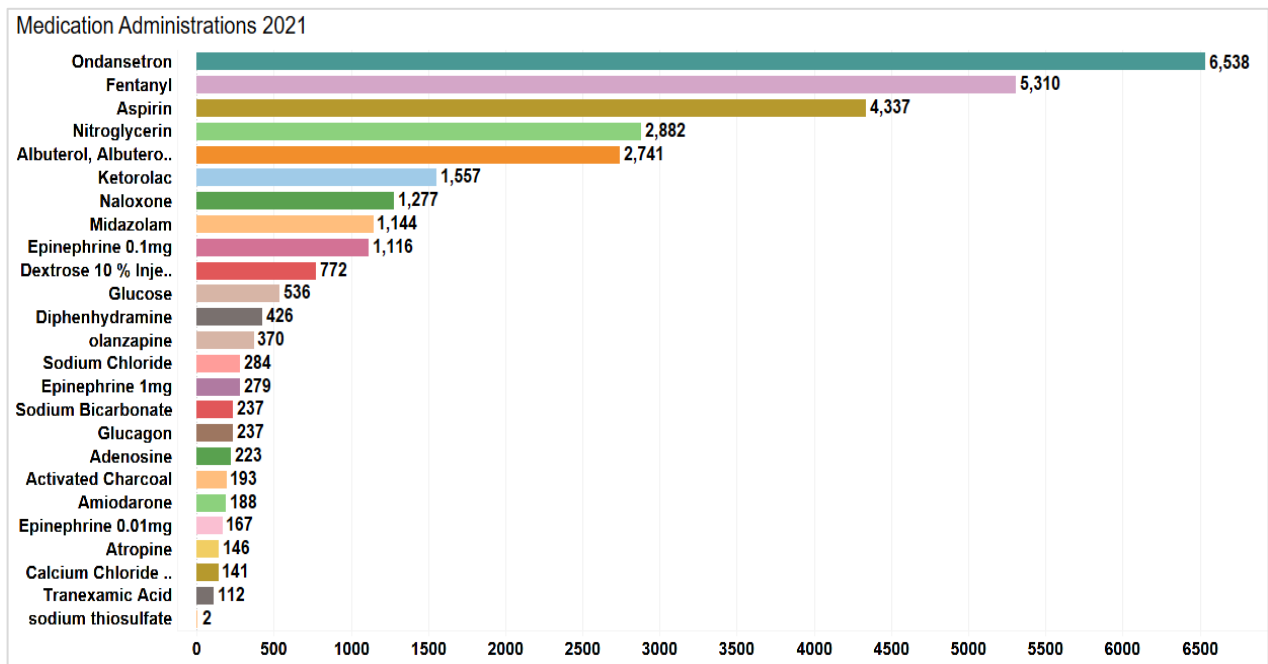
Visualizing Data

Plotting measurements over time is one of the most powerful ways to display data. Selecting the best chart to tell the story is as important as the metric itself. Use color, size, scale, and labels to clearly explain the metric. The use of charts is essential in the analysis of processes. While many different types of charts exist, the following charts provide the best process analysis.

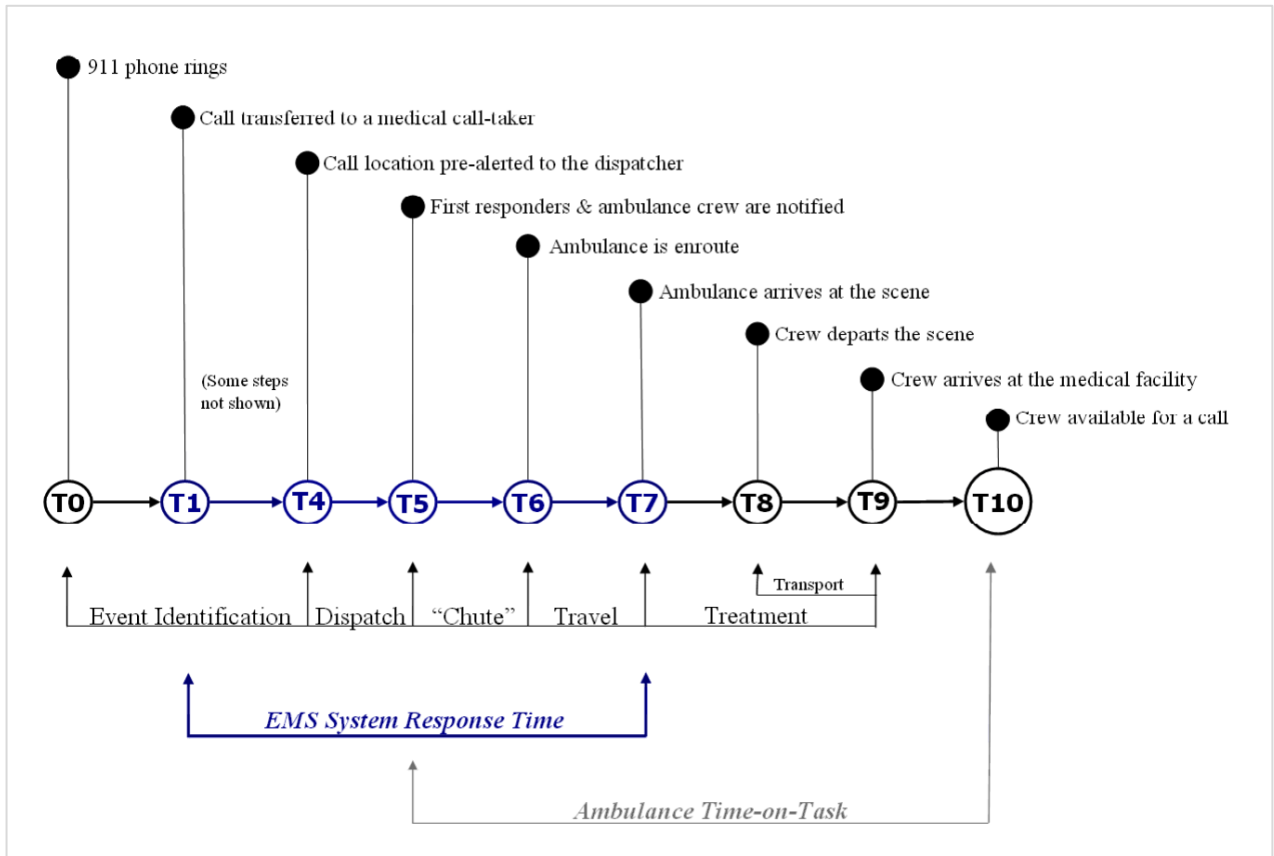
Control Charts measures how a process changes over time. If given two different numbers, one will be bigger than the other. However, if given a series of numbers over a period of time and then “plotting the dots”, a picture of a process starts to emerge. Control charts are a necessary tool all organizations should use to determine whether a process is improving or merely operating within some variation, e.g., common cause vs. special cause.



Horizontal Bar Charts identify ranked process contributing factors and/or characteristics.



Flow Charts provide a picture of the structure of an organization or the workflow of a process over time.



APPENDIX E: EMS PROVIDER QUALITY INDICATORS AND ACTIVITIES

| PSAPs | Dispatch Centers | First Responders | Ambulance Services | Receiving Hospitals |
|--|--|---|---|---|
| Personnel/Resource Management | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> Workload Management Matching schedules to demand Resource deployment practices Risk Management Employee welfare <p>Indicators</p> <ul style="list-style-type: none"> Workload Management Employee Satisfaction Employee Turnover Rate | <p>Activities</p> <ul style="list-style-type: none"> Workload Management Matching schedules to demand Resource deployment practices Risk Management Employee welfare <p>Indicators</p> <ul style="list-style-type: none"> Workload Management Employee Satisfaction Employee Turnover Rate | <p>Activities</p> <ul style="list-style-type: none"> Workload Management Matching schedules to demand Resource deployment practices Risk Management Employee welfare <p>Indicators</p> <ul style="list-style-type: none"> Workload Management Employee Satisfaction Employee Turnover Rate | <p>Activities</p> <ul style="list-style-type: none"> Workload Management Matching schedules to demand Resource deployment practices Risk Management Employee welfare <p>Indicators</p> <ul style="list-style-type: none"> Workload Management Employee Satisfaction Employee Turnover Rate | <p>Activities</p> <ul style="list-style-type: none"> Workload Management Matching schedules to demand Resource deployment practices Risk Management Employee welfare <p>Indicators</p> <ul style="list-style-type: none"> Workload Management Employee Satisfaction Employee Turnover Rate |
| Equipment/Supplies | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> Maintaining and upgrading equipment and information systems Inventory Control Sharing of Resources <p>Indicators</p> <ul style="list-style-type: none"> Provider surveys/feedback Ease of use Resources involved in personnel skills training Resources involved equipment acquisition, associated equipment costs, maintenance, resupply and consumables Equipment durability/failures | <p>Activities</p> <ul style="list-style-type: none"> Maintaining and upgrading equipment and information systems Inventory Control Sharing of Resources <p>Indicators</p> <ul style="list-style-type: none"> Provider surveys/feedback Ease of use Resources involved in personnel skills training Resources involved equipment acquisition, associated equipment costs, maintenance, resupply and consumables Equipment durability/failures | <p>Activities</p> <ul style="list-style-type: none"> Maintaining and upgrading equipment and information systems Inventory Control Sharing of Resources <p>Indicators</p> <ul style="list-style-type: none"> The effect of the equipment on patient pain/suffering and outcome Patient surveys/feedback Provider surveys/feedback Ease of use Resources involved in personnel skills training Resources involved equipment acquisition, associated equipment costs, maintenance, resupply and consumables Equipment durability/failures | <p>Activities</p> <ul style="list-style-type: none"> Maintaining and upgrading equipment and information systems Inventory Control Sharing of Resources <p>Indicators</p> <ul style="list-style-type: none"> The effect of the equipment on patient pain/suffering and outcome Patient surveys/feedback Provider surveys/feedback Ease of use Resources involved in personnel skills training Resources involved equipment acquisition, associated equipment costs, maintenance, resupply and consumables Equipment durability/failures | <p>Activities</p> <ul style="list-style-type: none"> Maintaining and upgrading equipment and information systems Inventory Control Sharing of Resources <p>Indicators</p> <ul style="list-style-type: none"> The effect of the equipment on patient pain/suffering and outcome Patient surveys/feedback Provider surveys/feedback Ease of use Resources involved in personnel skills training Resources involved equipment acquisition, associated equipment costs, maintenance, resupply and consumables Equipment durability/failures |
| Documentation | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> Integration of Data Systems and Reporting <p>Indicators</p> | <p>Activities</p> <ul style="list-style-type: none"> Integration of Data Systems and Reporting <p>Indicators</p> | <p>Activities</p> <ul style="list-style-type: none"> Integration of Data Systems and Reporting Documentation reviews (especially non-transport, critical patients, under-triages) <p>Indicators</p> <ul style="list-style-type: none"> PCR data field compliance PCR Printing compliance | <p>Activities</p> <ul style="list-style-type: none"> Integration of Data Systems and Reporting Documentation reviews (especially non-transport, critical patients, under-triages) <p>Indicators</p> <ul style="list-style-type: none"> PCR data field compliance PCR Printing compliance | <p>Activities</p> <ul style="list-style-type: none"> Integration of Data Systems and Reporting Documentation reviews (especially non-transport, critical patients, under-triages) <p>Indicators</p> <ul style="list-style-type: none"> PCR data field compliance PCR Printing compliance |

| PSAPs | Dispatch Centers | First Responders | Ambulance Services | Receiving Hospitals |
|--|---|---|--|---|
| Operations/Clinical Care/Patient Outcome | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Unusual occurrence investigations • Error Management <ul style="list-style-type: none"> • Error reporting system (including self-reporting) • Correct assignment of resources • Call Reviews • Peer Reviews <p>Indicators</p> <ul style="list-style-type: none"> • Time increments • Call volume • Calls per call taker • Correct prioritization • Accuracy of location identification • Correct provision of prearrival instructions • Correct transfer • Time of day distribution • Equipment failures • Unusual occurrence tracking • Complaint and Commendation tracking | <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Unusual occurrence investigations • Error Management <ul style="list-style-type: none"> • Error reporting system (including self-reporting) • Correct assignment of resources • Call Reviews • Peer Reviews <p>Indicators</p> <ul style="list-style-type: none"> • Time increments • Call volume • Calls per call taker • Correct prioritization • Categorization accuracy • Correct patient condition code • Accuracy of location identification • Correct provision of prearrival instructions • EMD compliance • Correct transfer • Time of day distribution • Equipment failures • Unusual occurrence tracking • Complaint and Commendation tracking | <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Unusual occurrence investigations • Error Management <ul style="list-style-type: none"> • Error reporting system (including self-reporting) • Correct assignment of resources • Call Reviews • Peer Reviews <p>Indicators</p> <ul style="list-style-type: none"> • Tracking critical procedures • Pain reduction Indicators • Patient centered outcomes and changes • Patient satisfaction surveys • Verifiable and accurate data collection • Over triage/Undertriage • Unusual occurrence tracking • Complaint and Commendation tracking | <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Unusual occurrence investigations • Error Management <ul style="list-style-type: none"> • Error reporting system (including self-reporting) • Correct assignment of resources • Call Reviews • Peer Reviews <p>Indicators</p> <ul style="list-style-type: none"> • Tracking critical procedures • Pain reduction Indicators • Patient centered outcomes and changes • Patient satisfaction surveys • Verifiable and accurate data collection • Over triage/Undertriage • Unusual occurrences • Complaints and Commendations | <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Unusual occurrence investigations • Error Management <ul style="list-style-type: none"> • Error reporting system (including self-reporting) • Correct assignment of resources • Call Reviews • Peer Reviews <p>Indicators</p> <ul style="list-style-type: none"> • Patient diagnosis • Pain reduction Indicators • Time to definitive treatment • Pt length of stay • Pt morbidity/mortality • Verifiable and accurate data collection • Over triage/Undertriage • Unusual occurrence tracking • Complaints and Commendations |
| Education and Skills Competency | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Continuing education • Skills competencies • New procedures and technology • Emergency Medical Dispatch training and continuing ed. • Field Training/Evaluations • Mass casualty/disaster drills • Research Studies <p>Indicators</p> <ul style="list-style-type: none"> • Skills performance measures | <p>Activities</p> <ul style="list-style-type: none"> • Training link to QI • Continuing education • Skills competencies • New procedures and technology • Emergency Medical Dispatch training and continuing ed. • Field Training/Evaluations • Mass casualty/disaster drills • Research Studies <p>Indicators</p> <ul style="list-style-type: none"> • Skills performance measures | <p>Activities</p> <ul style="list-style-type: none"> • Training linked to Quality Improvement findings • Continuing education • New procedures and technology • Skill competencies • Recertification • Driver training • Mass casualty/disaster drills • Annual EMS training requirements • Protocol Development • Field Training/Evaluations • Research Studies • Establish patient outcome feedback loop to field providers <p>Indicators</p> <ul style="list-style-type: none"> • Skills performance measures | <p>Activities</p> <ul style="list-style-type: none"> • Training linked to Quality Improvement findings • Continuing education • New procedures and technology • Skill competencies • Recertification • Driver training • Mass casualty/disaster drills • Annual EMS training requirements • Protocol Development • Field Training/Evaluations • Research Studies • Establish patient outcome feedback loop to field providers <p>Indicators</p> <ul style="list-style-type: none"> • Skills performance measures | <p>Activities</p> <ul style="list-style-type: none"> • Training linked to Quality Improvement findings • Continuing education • New procedures and technology • Skill competencies • Recertification • Mass casualty/disaster drills • Protocol Development • Field Training/Evaluations • Research Studies • Establish patient outcome feedback loop to field providers <p>Indicators</p> <ul style="list-style-type: none"> • Skills performance measures |

| PSAPs | Dispatch Centers | First Responders | Ambulance Services | Receiving Hospitals |
|--|--|--|---|--|
| Transport/Facilities | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> • Facility management • Disaster Resources/Caches | <p>Activities</p> <ul style="list-style-type: none"> • Facility management • Disaster Resources/Caches | <p>Activities</p> <ul style="list-style-type: none"> • Fleet management • Facility management • Resource deployment practices • Disaster Resources/Caches <p>Indicators</p> <ul style="list-style-type: none"> • Response times • Call time increments • Time on task • Call volume • Mutual aid requests • Accident rates • Vehicle/equipment failure rates • Simultaneous demand | <p>Activities</p> <ul style="list-style-type: none"> • Fleet management • Facility management • Resource deployment practices • Disaster Resources/Caches <p>Indicators</p> <ul style="list-style-type: none"> • Response times • Call time increments • Time on task • Call volume • Mutual aid requests • Accident rates • Vehicle/equipment failure rates • Simultaneous demand | <p>Activities</p> <ul style="list-style-type: none"> • Facility management • Disaster Resources/Caches • Reddinet Updates <p>Indicators</p> <ul style="list-style-type: none"> • Number and distribution of base contacts • Time to answer communications from field • Quantity of patients received • Frequency and duration of diversion • Number of patients received at wrong facility • Quantity of secondary transfers • Wait Times (drop times) |
| Public Education and Prevention | | | | |
| <ul style="list-style-type: none"> • Community CPR • AED Programs • Bay Area Journal Club • Disaster Preparedness • Injury Prevention | <ul style="list-style-type: none"> • First Aid • When to call 911 • Vials of Life type programs • Referrals to other social and health care services (211) | <ul style="list-style-type: none"> • End of Life Care., POLST, Hospice • Neighborhood Safety • Violence Prevention • Illness Prevention • Stroke/Cardiac | | |
| Risk Management | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> • Specialized safety and risk training • CAL OSHA training and policy compliance • Unusual Occurrence investigations • Patient/Customer complaint Investigations <p>Indicators</p> <ul style="list-style-type: none"> • Illness/Injury rates and their severity • Unusual Occurrence tracking including "near misses" | <p>Activities</p> <ul style="list-style-type: none"> • Specialized safety and risk training • CAL OSHA training and policy compliance • Unusual Occurrence investigations • Patient/Customer complaint investigations <p>Indicators</p> <ul style="list-style-type: none"> • Illness/Injury rates and their severity • Unusual Occurrence tracking including "near misses" | <p>Activities</p> <ul style="list-style-type: none"> • Specialized safety and risk training • CAL OSHA training and policy compliance • Unusual Occurrence investigations • Patient/Customer complaint investigations <p>Indicators</p> <ul style="list-style-type: none"> • Illness/Injury/Exposure rates and their severity • Vehicle accident rate • "Near misses" • Unusual Occurrence tracking including "near misses" • Patient/Customer complaint tracking • Medication/Treatment error identification and tracking | <p>Activities</p> <ul style="list-style-type: none"> • Specialized safety and risk training • CAL OSHA training and policy compliance • Unusual Occurrence investigations • Patient/Customer complaint investigations <p>Indicators</p> <ul style="list-style-type: none"> • Illness/Injury/Exposure rates and their severity • Vehicle accident rate • Unusual Occurrence tracking including "near misses" • Patient/Customer complaint tracking • Medication/Treatment error identification and tracking | <p>Activities</p> <ul style="list-style-type: none"> • Specialized safety and risk training • CAL OSHA training and policy compliance • Unusual Occurrence investigations • Patient/Customer complaint investigations <p>Indicators</p> <ul style="list-style-type: none"> • Illness/Injury/Exposure rates and their severity • Unusual Occurrence tracking including "near misses" • Patient/Customer complaint tracking • Medication/Treatment error identification and tracking |
| Transparency | | | | |
| <p>Activities</p> <ul style="list-style-type: none"> • Periodic and consistent reporting to policy-makers and governing entity • Timely, accurate, and complete data and information delivered to County EMS Agency • Open Communication • Development of a Non-Punitive Error Reporting Process | <p>Activities</p> <ul style="list-style-type: none"> • Periodic and consistent reporting to policy-makers and governing entity • Timely, accurate, and complete data and information delivered to County EMS Agency • Open Communication • Development of a Non-Punitive Error Reporting Process | <p>Activities</p> <ul style="list-style-type: none"> • Periodic and consistent reporting to policy-makers and governing entity • Timely, accurate, and complete data and information delivered to County EMS Agency • Open Communication • Development of a Non-Punitive Error Reporting Process | <p>Activities</p> <ul style="list-style-type: none"> • Periodic and consistent reporting to policy-makers and governing entity • Timely, accurate, and complete data and information delivered to County EMS Agency • Open Communication • Development of a Non-Punitive Error Reporting Process | <p>Activities</p> <ul style="list-style-type: none"> • Periodic and consistent reporting to policy-makers and governing entity • Timely, accurate, and complete data and information delivered to County EMS Agency • Open Communication • Development of a Non-Punitive Error Reporting Process |

APPENDIX F: ADDITIONAL QUALITY IMPROVEMENT METHODOLOGIES

Six Sigma Model

The focus of Six Sigma is reducing variation or the defect rate, measured by Sigma level, or “Defects per Million Opportunities.” The Six Sigma improvement framework consists of six basic steps, known as DMAIC.

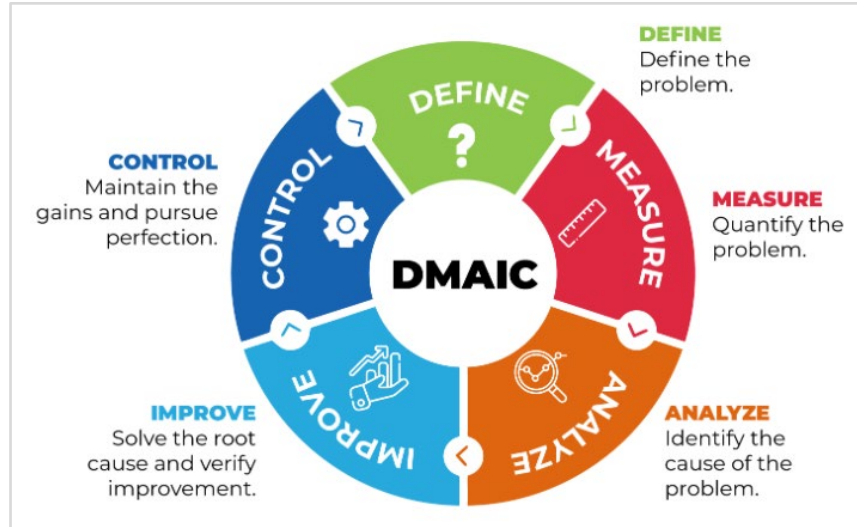


Image: Copyright iCert Global

Program/Project Management Model

| | |
|--------------------------------|---|
| Program/Project Title | A short title that labels the program/project should be concise and clear. |
| Purpose | A clear program/project purpose related to the overall EMS Purpose to improve health and reduce pain and suffering should be clearly defined in one sentence. |
| Vision | Where we see the program/project in the future related to the overall EMS Vision should be clearly defined in one sentence. |
| Values | The main concerns and cares of the program/project related to the overall EMS Values of STARCARE should be stated. |
| Program/Project Scope | The parameters of the program/project, what is included and/or not included, “what’s in or out”, should be defined. |
| Program/Project Members | The program/project leader and members should be listed. The roles and responsibilities of the leader and each member should be clearly defined. |
| Measurements, Outcome | Established benchmarks and measures as well as other innovative data measures that are pertinent to the improvement program/project should be established. Results and measurements from the patient’s perspective are essential. |
| Improvement Projects | Define the specific work being done within the Quality Improvement program/project. |
| Schedule | The difference between a wish and a goal is that a goal contains a deadline. Intermediate and final project deadlines should be determined and followed. |

APPENDIX G: POLICY REVIEW PROCESS

Policy Review Process

1. INTRODUCTION

- 1.1 The policy review process is an advisory process to the EMS Medical Director for the formulation of medical protocols. Policy suggestions and/or draft policies are accepted from committees, system participants, individuals, and/or interested parties.
- 1.2 Policies will be evaluated on an annual basis with adequate time allowed for training and distribution. Specific recommendations for additions, deletions and/or revisions should be forwarded to the EMS Agency.

2. POLICY PROCESS

2.1 Written Public Comment Draft

- 2.1.1 The EMS office will distribute draft policies to the appropriate system participants and/or interested parties for written comments.
- 2.1.2 Policies under consideration that affect the EMS system as a whole will be sent out for review by all systems participants. A policy under consideration that applies to a limited group will only be sent to those who would be directly affected.
- 2.1.3 The time frame allowed for the return of comments will be 60 days. Comments may be mailed or faxed to the EMS office but must be received no later than 4 p.m. on the deadline date.
- 2.1.4 All comments will be reviewed by the EMS Medical Director. All suggestions will be taken into consideration.

2.2 Public Testimony

- 2.2.1 Public comments will be heard at the next most appropriate Emergency Medical Oversight Committee (EMOC) meeting (usually in August)
- 2.2.2 A final draft of the policy will be distributed prior to the meeting.
- 2.2.3 Time will be allotted at the meeting for public testimony and discussion. All recommendations will be taken into consideration during the finalization of the policy.

3. ANNUAL POLICY REVIEW PROCESS TIMELINE

| Policy Review Process | Timeline |
|---|---------------------------------|
| Deadline for policy ideas | April |
| Written public comment draft released | May |
| Written comments due back to EMS | June |
| Public Testimony at EMOC | July |
| Finalized policies released | August |
| Update training | August/September |
| Effective date of new policies | January 1 of Policy Year |

Specific dates set annually. Subject to change.

Alameda County EMS Agency

EMERGENCY MEDICAL SERVICES FOR CHILDREN SYSTEM PLAN



1000 San Leandro Blvd., Suite 200
San Leandro, CA 94577
www.ems.acgov.org

6/24/2024

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Goals and Objectives

The primary goal of Alameda County’s EMS for Children (EMSC) Plan is to develop a program focusing on reducing pediatric disability and death through injury prevention efforts as well as ensuring that prehospital providers and 911 receiving facilities are adequately prepared to receive and care for pediatric patients for both day-to-day operations as well as in a disaster or surge events. Alameda County EMS believes that all children – no matter where they live, attend school, or travel in Alameda County – should receive the best care possible in any emergent situation. Should an emergency or disaster occur, our goal is to ensure that emergency personnel are properly trained in pediatrics, that ambulances and emergency departments have the equipment, supplies, and medications needed to treat children of all sizes, and that well-defined and evidence-based pediatric treatment protocols and procedures are in place.

To deliver the best possible pediatric care, we must routinely evaluate our training and knowledge to identify our strengths and weaknesses using appropriate and measurable indicators. By doing so, we can systematically evaluate and improve our key processes and foster our organizational learning and knowledge sharing.

The Alameda County EMS for Children System Plan has been written in accordance with Title 22, Division 9, Chapter 14 of the California Code of Regulations.

EMSC Program – Prevention, Prehospital, and Facility Information

Alameda County has thirteen acute care receiving facilities to serve our community as noted in the table below:

| Receiving Facilities | Pediatric Trauma | Pediatric Psych | Adolescent Psych | NICU | PICU |
|--|-------------------------|------------------------|-------------------------|-------------|-------------|
| Alameda Hospital (Alameda Health System) | | | | | |
| Alta Bates Summit – Berkeley | | | | ✓ | |
| UCSF Benioff Children’s Hospital Oakland | ✓ | ✓ | | ✓ | ✓ |
| Eden Medical Center | | | | | |
| Highland Hospital (Alameda Health System) | | | | ✓ | |
| Kaiser – Fremont | | | | | |
| Kaiser – Oakland | | | | ✓ | ✓ |
| Kaiser – San Leandro | | | | ✓ | |
| San Leandro Hospital (Alameda Health System) | | | | ✓ | |
| St. Rose Hospital | | | | | |
| Stanford Health Care Tri-Valley Hospital | | | | ✓ | |
| Alta Bates Summit – Oakland | | | | | |
| Washington Hospital | | | | ✓ | |

All of the facilities, have emergency departments which routinely care for pediatric patients. Two facilities – UCSF Benioff Children’s Hospital-Oakland and Willow Rock – are pediatric specific receiving centers – seeing no adult patients – and one of the facilities, John George Psychiatric

Pavilion, does not accept any pediatric patients.

Alameda County, with a population of just over 1.6 million residents of which, based upon the 2022 U.S. Census, has 20.1% of the population under the age of 18. Only approximately 4% of all EMS transports in Alameda County are for patients less than 18 years of age. In 2022, 4,736 pediatric patients were transported via EMS: 769 with traumatic injuries, 3,823 with medical complaints, and 144 with “unknown” reasons. With the limited exposure to pediatric patients and the rarely encountered seriously ill or injured pediatric patient, it is critical to continuously train our personnel to effectively manage this population by being prepared, organized, and knowledgeable to take care of any emergent situation that may arise.

Emergency Medical Services for Children in Alameda County has four distinct and equally important components. These components are injury prevention, prehospital care, definitive care at receiving facilities and pediatric surge preparedness. Alameda County EMS works collaboratively with our system partners to continually improve each of the four components.

Prevention

Alameda County EMS is the only EMS Agency in the State of California to have an injury prevention division. Alameda County EMS Injury Prevention (ALCO EMS IP), while also providing Senior Injury Prevention, has a significant focus on Childhood Injury and is the lead agency for Safe Kids Alameda County, a member of Safe Kids Worldwide as well as other national and community organizations. ALCO EMS IP provides education, training, and safety equipment to enhance pediatric safety and reduce potential injuries. Efforts include:

- Car Safety Seat and Booster Installation Instruction
- Car Safety Seat and Booster Distributions
- Child Bicycle Helmet Education
- Child Bicycle Helmet Distributions
- Teen Impact Driver Safety Instruction
- Child Pedestrian Safety Education
- Annual Safe Kids Day Health and Wellness Fair

Prehospital Providers

Alameda County Emergency Medical Services are provided by our fire department first response advanced life support, fire transport in the cities of Alameda, Albany, Berkeley, and Piedmont, and with a private transport provider utilized in the remaining portions of the county. The EMS Agency Medical Director and EMS Agency Coordinators oversee the system and collaborate with individual prehospital care providers. The majority of fire departments and the private provider have medical directors, educators, and liaisons responsible for overseeing their individual organizations and report to the Alameda County EMS Agency regularly. Prehospital pediatric care is supported by [written policies, protocols, plans](#), pediatric specific equipment (Exhibit B), and online medical control whenever needed. Annual EMS prehospital training is provided on pediatric policies and procedures.

Hospital Pediatric Receiving Centers – Definitive Care

California State Regulations define a Pediatric Receiving Center (PedRC) as a licensed general acute care hospital with, at a minimum, a permit for standby or basic emergency services that has been formally designated as one of four types of PedRCs pursuant to Title 22, sections 100450.218 through 100450.222, by the local EMS agency for its role in an EMS system.

Currently, Alameda County receiving facilities are all considered pediatric ED receiving centers. Formal hospital PedRC designations such as Comprehensive, Advanced, or General, per regulations, have not yet been assigned and approved. However, all hospitals have been given the EMS for Children regulation requirements and are aware of the intent to formally designate in the near future. This plan outlines the requirements for our facilities to apply for designation pursuant to the standards set forth by the above-mentioned EMS for Children regulations. It is the intention of the Alameda County EMS Agency to have all receiving facilities with emergency rooms in Alameda County to meet at least the General PedRC level requirements for designation. Additionally, we believe that UCSF Benioff Children’s Hospital would meet the Comprehensive PedRC level requirement and that Kaiser Oakland would meet the Advanced or Comprehensive PedRC level requirement.

National Pediatric Readiness Project (NPRP)

Alameda County EMS Agency will begin its efforts to assess and designate official EMSC statuses with hospital executed agreements, in alignment with regulations, for our receiving facilities in 2024. We have been actively working with our facilities through the National Pediatric Readiness Project (NPRP) initiative. All of our receiving facilities with emergency rooms have successfully completed the NPRP evidence-based survey in 2023 and identified the Pediatric Emergency Care Coordinators (PECCs). Upon receipt of their NPRP survey results, and in partnership with UCSF Benioff Children’s Hospital Oakland, Alameda County EMS schedules pediatric readiness site visits at each hospital every two years. During the EMS pediatric readiness site visit session, NPRP and surge capacities are reviewed with a robust simulation training and assessment. The goal is to identify effective pediatric capabilities and readiness strengths as well as opportunities to enhance their care for pediatric patients day to day and in a pediatric surge event. Following the Hospital Pediatric Readiness Site Visits, each hospital is provided with an executive summary and resource packet customized to their needs.

Pediatric SMEs from the Western Regional Pediatric Emergency Management Alliance (WRAP-EM) and the Pediatric Pandemic Network (PPN) including the Alameda County EMS EMSC Coordinator lead and facilitate the Pediatric Readiness Hospital Site Visits. Ongoing communication, training, and follow-up virtual calls (to provide assessment feedback, identify gaps and future resource needs) are offered to the hospital PECCs, pediatric hospitalists, and others as needed.

Prehospital Pediatric Readiness Project (NPPRP)

In 2024, Alameda County EMS is extending the pediatric readiness process to the prehospital setting by using the NPPRP evidence based prehospital assessment tools with customization as needed for our prehospital care providers and incorporating a similar review and simulation training component in partnership with UCSF Benioff Children’s Hospital Oakland. The prehospital assessments will align with the National and State EMSA EMSC

recommendations:

- <https://emscimprovement.center/domains/prehospital-care/prehospital-pediatric-readiness/>
- <https://emscimprovement.center/domains/prehospital-care/prehospital-pediatric-readiness/checklist-faq/>

EMSC – Patient Flow

Upon activation of 911, injured or ill pediatric patients are identified by communication center dispatchers. The majority of Alameda County is triaged through one of two ACE-accredited communications centers who utilize the Medical Priority Dispatch System. Dispatcher-assisted care is immediately rendered, when appropriate through pre-arrival instructions, while field personnel are en route, with the overall goal being to improve patient outcomes by reducing disability and death.

Prehospital personnel utilize Alameda County EMS Agency [policies and protocols](#) to assess stability, initiate treatment, and determine the most appropriate destination. Due to the geography of our county almost all patients, if transport is indicated, are transported by ground ambulance. Seldom are local air ambulances (e.g., REACH, CHP) utilized.

To expedite transfer at arrival and for continuity of care, EMS personnel notify the emergency department by radio as soon as possible of an incoming pediatric patient. Communication includes their unit number and transport code, age and gender of the patient, chief complaint of the illness or injury (including mechanism), treatments, vital signs, and estimated time of arrival.

Additionally, all pediatric patients transported via ambulance are measured with a color-coded length-based tape and the color is reported in the electronic health record as well as to the receiving facility prior to the patient's arrival. This allows enhanced preparation for the emergency department team.

Currently, Alameda County has not integrated the PedRCs concept in the EMS Field Policy Manual or implemented any destination changes for pediatric patients. For medical and minor injury complaints, patients may be transported to any one of our thirteen 911 receiving facilities with emergency departments. Any injured pediatric patient with anatomic or physiologic findings based on the Alameda County Trauma Triage Protocol are transported to UCSF Benioff Children's Hospital Oakland. Should a severely injured child arrive at any other facility within Alameda County, the hospitals use the trauma re-triage procedure, described in [protocol](#), to expedite transfer of care to the UCSF Benioff Children's Hospital Oakland.

The table on page 2 lists those facilities with Neonatal and Pediatric Intensive Care as well as specialized pediatric and adolescent behavioral health capabilities. Facilities lacking those capabilities are encouraged to have transfer and transport agreements in place to facilitate those needs. NICU and PICU availability is not currently factored into EMS transport destination decision making, however would likely play a role in future designation. Pediatric and adolescent behavioral health destination decisions are currently dictated by [protocol](#).

Alameda County EMS intends to recognize PedRC designations from contiguous counties. While Alameda County EMS providers are encouraged to use receiving facilities within Alameda County when making destination decisions, it is recognized that extenuating circumstances may exist where transport to a facility outside of Alameda County is the closest and most appropriate destination.

As with any specialty designation, Alameda County EMS shall review the designation made by contiguous or other LEMSAs and ensure that there is an EMSC plan that is approved by EMSA. Alameda County has the luxury of a children’s hospital and facilities with advanced pediatric capabilities in our county, so the majority of our critically ill or injured pediatric patients would be taken to those facilities. However, it is recognized that there are several circumstances, to include but not limited to parental choice or the need for specialty care not available in county such as burn care, that may lead to pediatric patients being transported out of our county, particularly in the far east and south portions of our county. We will work collaboratively with our neighboring LEMSAs to ensure that appropriate pediatric destinations are identified to meet the needs of these patient populations.

EMSC – Data Management and Quality Improvement

Both prehospital and hospital programs have several components to ensure a high level of quality care. These include:

- Structure of Programs and Oversight
- Data collection and reporting (audits, benchmarking, etc.)
- Evaluation of EMS system indicators
- Quality Improvement and Assurance Cycles
- Training and education
- Re-evaluation and iterative feedback

The Alameda County EMS Agency EMSC and Pediatric QI Committee has been established and meets biannually (and more frequently as we strengthen our program). The first meeting this year was held in May 2024 to review performance data, identify areas in need of improvement, and carry out and monitor improvement efforts. Attendees include the prospective PedRC Medical Directors, Program Managers, hospital PECCs, EMS Agency personnel including the Medical Director and EMSC Coordinator, and EMS stakeholders (fire and private providers).

EMS data is collected via our electronic medical record keeping program, ESO, and we are actively working with ESO to construct Health Data Exchanges (HDE) with our receiving facilities. Currently HDE is active with six of our receiving facilities. Tentative timelines for HDE being established with the remaining facilities is noted in the table below:

| Receiving Facilities | HDE Status |
|---------------------------------------|-------------------|
| Alameda Hospital (AHS) | Active |
| Alta Bates Summit Hospital – Berkeley | Tentative 2Q 2024 |
| UCSF Benioff Children’s Hospital | Active 2023 |
| Eden Medical Center | Tentative 2Q 2024 |

| | |
|--|-------------------|
| Highland Hospital (AHS) | Active |
| Kaiser – Fremont | Tentative 2Q 2024 |
| Kaiser – Oakland | Tentative 2Q 2024 |
| Kaiser – San Leandro | Tentative 2Q 2024 |
| San Leandro Hospital (AHS) | Active |
| St. Rose Hospital | Active |
| Stanford Health Care Tri-Valley Hospital | Tentative 3Q 2024 |
| Alta Bates Summit Hospital Oakland | Tentative 2Q 2024 |
| Washington Hospital | Active |

All such records that include Protected Health Information (PHI) as defined by the Health Insurance Portability and Accountability Act (HIPAA) are handled confidentially per the statute. If at any time a hospital or the EMS Agency identifies a need for improvement, an EMS Unusual Occurrence Form may be generated, and a performance improvement action plan will be developed by the EMS Medical Director and/or PedRC Committee recommendations.

Data elements collected through ESO, HDE, and facility follow up will include, at minimum, the following:

1. **ESO Electronic Health Record:** Baseline data from pediatric ambulance transports, including, but not limited to:

- a. Arrival time/date to the emergency department
- b. Date of birth
- c. Mode of arrival
- d. Gender
- e. Primary impression
- f. Race/ethnicity
- g. Housing status

2. **HDE:** Basic outcomes for EMS quality improvement activities, including but not limited to:

- a. Admitting hospital name, if applicable
- b. Discharge or transfer diagnosis
- c. Time and date of discharge or transfer from the Emergency Department
- d. Disposition from the Emergency Department
- e. External cause of injury
- f. Injury location
- g. Residence zip code

3. **HDE and Facility Follow Up:** Specific patient outcome and disposition data from receiving facilities related to:

- a. Cardiopulmonary or respiratory arrests.
- b. Child maltreatment cases.
- c. Deaths.

- d. ICU Admissions.
- e. OR Admissions.
- f. Transfers.
- g. Trauma Admissions.

Additionally, specific pediatric prehospital quality performance measures may be developed, and outcome data may be requested regarding the following interventions and subset of patients:

- a. Airway Management – Assessment, Monitoring, Airway Maneuvers
- b. Allergic Reactions Treatment and Outcome
- c. Asthma (Respiratory distress with bronchospasm > = 2-year-old)
- d. Behavioral Health
- e. Bronchiolitis (Respiratory distress < 2 years old)
- f. Cardiopulmonary or respiratory arrests.
- g. Croup Treatment and Outcome
- h. Death
- i. Pain – (including Pediatric Intranasal Fentanyl for Prehospital Pain Management)
- j. Medication Safety
- k. Seizures Treatment and Outcome
- l. Shock Recognition and Treatment
- m. Spinal Care Risk Assessment and Management
- n. Trauma

Current Pediatric Data Metrics (Prehospital) – May-June 2024

| Alameda County EMS Pre-Hospital Metrics _ Pediatric (≤14yrs) | | | |
|--|-------------|--|----------------|
| Category | Metric Name | Metric Description | Type of Metric |
| Cardiac | PCAR -1 | Cardiac Arrest Survival - Non-Traumatic Arrest | Outcome |
| | PCAR-2 | Cardiac Arrest Hospital Admissions - Non-Traumatic Arrest | Outcome |
| Respiratory / Airway | PRESP-1 | Respiratory Assessment for Respiratory Distress | Process |
| | PRESP-2 | Bronchodilator Administration for Bronchospasm (Transports Only) | Process |
| | PRESP-3 | Supraglottic Airway Device - i-GEL Success Rates | Process |
| Trauma | PTRA-1 | 90th Percentile Scene Times for Trauma Alerts | Process |
| | PTRA-2 | Trauma Alerts Transported to a Pediatric Trauma Receiving Center | Process |
| | PTRA-3 | Patients Meeting Critical Trauma Criteria documented as a Trauma Alert | Process |
| | PTRA-4 | Appropriate Use of Pediatric Trauma Re-Triage | Process |
| Medication Administration | PMED-1 | Accuracy for all Weight-Based Pediatric Medication Administrations | Process |
| Seizures | PSEIZ-1 | Midazolam Administration for Active Seizures | Process |

| | | | |
|------------------------|----------------|---|---------|
| Pain Management | PPAIN-1 | Fentanyl Administered for Pain ≥ 7 | Process |
| Other | PEDS-1 | Treatment Administered for Hypoglycemia with Altered Mental Status | Process |
| | PEDS-2 | Blood Pressure Assessment for Patients < 3 years of age | Process |
| | PEDS-3 | Weight or Peditape Color for all Patients Receiving a Weight-Based Medication | Process |
| | PEDS-4 | Blood Glucose Level Assessment for Altered Mental Status | Process |
| | PEDS-5 | Appropriate Destination for Pediatrics on an Involuntary Psychiatric Hold (5585) [≤ 17 yrs] | Process |

Alameda County has already been working collaboratively with the Pediatric Emergency Care Applied Research Network (PECARN). PECARN is a federally funded multi-institutional network for research in pediatric emergency medicine. The goal of PECARN is to conduct meaningful and rigorous multi-institutional research into the prevention and management of acute illnesses and injuries in children and youth across the continuum of emergency medicine. UCSF is a participating PECARN site with Alameda County EMS as is their prehospital affiliate. Alameda County EMS is actively involved in enrolling patients in the Pediatric Dose Optimization for Seizures in EMS (PediDOSE) study. This study is a prehospital study that is hoping to define the best method of calculating midazolam dose treatment for status epilepticus in pediatric patients.

Data collection will strive to be as consistent as possible with current National and State EMSA evidence-based metrics including:

- <https://emscimprovement.center/domains/prehospital-care/prehospital-pediatric-readiness/pprp-toolkit/quality-improvement-qi-process-improvement-pi/>
 - [Pediatric Readiness in Emergency Medical Services Systems:](#)
 - Prehospital QI
 - Education and Competencies for Providers
 - Equipment and Supplies
 - Interactions with Systems of Care
 - Coordination of Pediatric Emergency Care
 - Patient and Family-Centered Care in EMS
 - Patient and Medication Safety
 - Policies, Procedures, and Protocols
 - Quality Improvement/Performance Improvement
- <https://emscimprovement.center/programs/partnerships/performance-measures/>
- <https://emsa.ca.gov/wp-content/uploads/sites/71/2022/11/SYS-100-11-2022-2023-Data-11-8-2022-First.pdf>

EMSC – Injury and Illness Prevention Planning

Although our EMS Agency has not previously formalized an EMSC System Plan, for several years we have promoted and formally addressed pediatric injury and illness prevention, and planning activities via prehospital, hospital, and public education.

1. We have provided free public education on Hands-Only CPR and Stop the Bleed, working closely with Wilma Chan Highland Hospital and [EMS Corps](#), to bring

- education and needed tools directly to public venues such as the Oakland Zoo.
2. In 2023, Alameda County EMS Injury Prevention Division (ALCO EMS IP) became trainers for the [Impact Teen Driving](#) Program. The program has been implemented in several schools so far, with an intent to expand to other schools in the future.
 3. Community health activities are an important aspect of injury and illness prevention. Each year ALCO EMS IP orchestrates the Safe Kids Day Health and Wellness Fair which is an all-day free event typically hosted at the Oakland Arena. The event consists of bike safety education, diaper distributions, bicycle helmet and car seat distributions, and an opportunity for various local health and safety organizations to get their messages out to the community.
 4. ALCO EMS IP has had a helmet safety program for several years, assisting in providing helmets to those who cannot afford them as well as those who present without one. Helmets are free and range in size from toddler (2-4 years of age) to a large teen/adult size. Helmet distribution halted due to COVID but resumed with Safe Kids Day Health and Wellness Fair in June 2023.
 5. ALCO EMS IP conducts regular monthly child safety seat inspections at the EMS Agency office. In addition, they work with our law enforcement and community organizations to provide education and free safety inspections for child safety seats throughout our community.
 6. ALCO EMS IP regularly distributes hundreds of child safety and booster seats each year during inspection events and through community outreach groups, providing them for a significantly reduced cost or free.
 7. ALCO EMS IP is the lead agency for Safe Kids Alameda County, a member of Safe Kids Worldwide which is a nonprofit organization working to help families and communities keep kids safe from injuries. Safe Kids works with an extensive network of more than 400 coalitions in the United States and with partners in more than 30 countries to reduce traffic injuries, drownings, falls, burns, poisonings and more.

As the LEMSA, our agency provides oversight and system integration for Pediatric Receiving Center Quality Improvement activities including:

- Creating a Pediatric Receiving Center designation plan, to include specialized pediatric care, for approval by the LEMSA
- Developing or revising specific pediatric policies, procedures, and protocols
- Developing and revising Pediatric Surge Plans consistent with HPP/ASPR requirements, Western Regional Alliance for Pediatric Emergency Management (WRAP-EM), Pediatric Pandemic Network, and National Pediatric Disaster Coalition subject matter expertise.
- Developing and distributing “Pediatric Surge PLAYBOOK” educational tools and resources; participating in National and State Conferences to promote pediatric surge readiness education and partnerships
- Receiving and investigating EMS Unusual Occurrence pertaining to pediatric care
- Reviewing performance improvement plans for issues identified by CQIP
- Producing and distributing pediatric data reports
- Reviewing annual CQIP updates from designated PedRCs and EMS service providers

- Scheduling and staffing EMS stakeholder EMSC and Pediatric QI meetings
- Establishing future goals and objectives using evidence-based practice and with our stakeholders' input, we will:
 1. Support and promote our existing illness and injury prevention programs, and
 2. Focus on CQI for ensuring appropriateness and accuracy of prehospital pediatric medications.

Effectiveness of the EMSC Program can be directly related to the effectiveness of training received by all constituents. Administrative and medical oversight is heavily involved at all training levels. All paramedics accredited in Alameda County are required to maintain PALS certification to ensure readiness to respond to pediatric emergencies.

Prehospital education on pediatric care, guided by data and our process improvement activities, is provided on an on-going and as needed basis throughout the year.

EMSC – Pediatric Surge Planning

The 2022 RSV and Respiratory Illness Pediatric Surge event highlighted the significant national limitations and gaps in pediatric inpatient critical care capability, and pediatric patient transfer capacity. In order to ensure effective pediatric operational all-hazard response, the priority Pediatric Surge Planning remains an area we continue to discuss and revise with our Healthcare Preparedness Program (HPP). The [Pediatric Surge plan](#) is an Annex to our Healthcare Preparedness Program (HPP) Response Plan Summary Document. This Pediatric Surge Annex references and aligns with the Alameda County Response Plans including a summary of the Alameda County Medical Health Operational Area Coordinator (MHOAC) Program plans and procedures that would be activated to support the healthcare facility response in an emergency. The EMSC Coordinator supports the MHOAC to conduct pediatric customized polls as needed in actual events. The pediatric surge staffed bed capability is updated daily via ReddiNet.

The EMSC Coordinator leverages pediatric subject matter experts across multiple pediatric networks as needed. The EMSC Coordinator contributed to the published WRAP-EM Pediatric Surge PLAYBOOK which is an attachment to the ALCO Pediatric Surge Plan mentioned above: <https://wrap-em.org/index.php/jit-resources/pediatric-surge-playbook>. The EMSC Coordinator is also the EMS Liaison to the National Pediatric Disaster Coalition (NPDC).

Pediatric scenarios and component capabilities are routinely integrated into disaster exercises and trainings to emphasize the nuance of pediatric patient triage, movement, and surge expansion. Alameda County EMS has recommended pediatric surge expansion and decompression strategies for a catastrophic event which are included in the Pediatric Surge Annex to the HPP Response plan and tested with WRAP-EM and in annual HPP required exercises. Additional information and guidance are available in the EMS Field Guide and on the [ALCO EMS Website – EMS for Children](#).

EMSC Alameda County EMS Agency Staff

| Name | Title |
|-----------------------|---|
| Lauri McFadden | EMS Director |
| William McClurg | EMS Deputy Director |
| Zita Konik, MD | EMS Medical Director |
| Nicole D'Arcy, MD | Deputy EMS Medical Director |
| Cynthia Frankel, RN | EMS Coordinator; EMSC Program Coordinator |
| Naila Francies, EMT-P | EMS Coordinator |
| Kat Woolbright | Injury Prevention Program Manager |

Exhibit A – Pediatric Transport Volume – 2023 and 2022

2023

| Destination Location Name 2023 | Count of Transports |
|---|---------------------|
| Children's Hospital & Research Center Oakland | 1,375 |
| Washington Hospital, Fremont | 342 |
| Stanford Health Care Tri-Valley Hospital | 245 |
| Kaiser Permanente, San Leandro Medical Center | 242 |
| Kaiser Permanente, Oakland Medical Center | 211 |
| Kaiser Permanente, Fremont | 191 |
| Eden Medical Center | 157 |
| Kaiser Permanente, Walnut Creek | 104 |
| Saint Rose Hospital | 81 |
| San Leandro Hospital | 63 |
| Alameda County Medical Center, Highland | 54 |
| Willow Rock Center | 35 |
| Stanford Health Care | 28 |
| Alta Bates Summit Medical Center, Alta Bates Campus | 24 |
| Alta Bates Summit Medical Center, Summit Campus | 24 |
| Alameda Hospital | 19 |
| Santa Clara Valley Medical Center | 11 |
| San Ramon Regional Medical Center | 6 |
| Lucille Packard Children's Hospital at Stanford | 5 |
| John Muir Medical Center, Walnut Creek | 4 |
| Kaiser Permanente, Richmond | 3 |
| UCSF Benioff Children's Hospital | 2 |
| Saint Francis Memorial Hospital | 2 |
| Alta Bates Summit Medical Center, Herrick Campus | 2 |
| Regional Medical Center of San Jose | 1 |
| Kaiser Permanente, Antioch | 1 |
| John George Psychiatric Pavilion | 1 |
| TOTAL | 3,233 |

2023

| TRANSPORTED PEDI PTS BY AGE - 2023 | | |
|------------------------------------|-------------|---------|
| Age | Number | Percent |
| <1 | 367 | 11% |
| 1 | 408 | 13% |
| 2 | 234 | 7% |
| 3 | 212 | 6% |
| 4 | 157 | 5% |
| 5 | 122 | 4% |
| 6 | 115 | 4% |
| 7 | 126 | 4% |
| 8 | 105 | 3% |
| 9 | 101 | 3% |
| 10 | 133 | 4% |
| 11 | 187 | 6% |
| 12 | 245 | 8% |
| 13 | 360 | 11% |
| 14 | 392 | 12% |
| TOTAL | 3264 | |

| TRANSPORTED TYPE PEDI PT. 2023 | |
|--------------------------------|-------------|
| MEDICAL | 76% |
| TRAUMA | 22% |
| TRAUMA & MEDICAL | 2% |
| UNK | 0% |
| TOTAL | 3264 |

2022

| Destination - 2022 | TOTAL |
|---|-------------|
| Alameda Hospital | 61 |
| Alta Bates Berkeley | 117 |
| California Pacific Medical Center | 2 |
| Eden Medical Center | 325 |
| Highland Hospital | 269 |
| John George Psychiatric Pavilion | 2 |
| John Muir Medical Center, Walnut Creek | 6 |
| Kaiser Antioch | 3 |
| Kaiser Fremont | 314 |
| Kaiser Manteca | 1 |
| kaiser Modesto | 1 |
| Kaiser Oakland | 333 |
| Kaiser Richmond | 8 |
| Kaiser San Leandro | 426 |
| Kaiser Santa Clara | 1 |
| Kaiser Walnut Creek | 130 |
| Lucille Packard Children's Hospital at Stanford | 5 |
| Regional Medical Center | 8 |
| San Joaquin General Hospital | 3 |
| San Leandro Hospital | 140 |
| San Ramon Regional Medical Center | 9 |
| Santa Clara Valley Medical Center | 11 |
| SF General Hospital | 1 |
| St Francis Hospital | 1 |
| St Rose Hospital | 155 |
| Stanford Health Care Tri-Valley Hospital | 309 |
| Stanford Palo Alto Campus | 21 |
| Alta Bates Summit Hospital Oakland | 65 |
| Sutter Tracy Community Hospital | 1 |
| UCSF Benioff Children's Oakland | 1416 |
| Washington Hospital | 523 |
| Willow Rock Center | 54 |
| Other Specified Location | 15 |
| TOTAL | 4736 |

| TRANSPORTED PEDI PTS BY AGE, 2022 | | |
|--|---------------|----------------|
| Age | Number | Percent |
| 1 | 472 | 9.97% |
| 2 | 309 | 6.52% |
| 3 | 209 | 4.41% |
| 4 | 168 | 3.55% |
| 5 | 154 | 3.25% |
| 6 | 142 | 3.00% |
| 7 | 137 | 2.89% |
| 8 | 140 | 2.96% |
| 9 | 141 | 2.98% |
| 10 | 164 | 3.46% |
| 11 | 164 | 3.46% |
| 12 | 272 | 5.74% |
| 13 | 340 | 7.18% |
| 14 | 399 | 8.42% |
| 15 | 455 | 9.61% |
| 16 | 486 | 10.26% |
| 17 | 584 | 12.33% |
| TOTAL | 4,736 | 100% |

| TRANSPORTED TYPE PEDI PT. 2022 | |
|---------------------------------------|----------------|
| MEDICAL | 3,823 (80.73%) |
| TRAUMA | 769 (16.24%) |
| UNK | 144 (0.03%) |
| TOTAL | 4,736 |

Exhibit B – Pediatric-Specific Equipment List

| Minimum Supply Specifications | BLS | ALS Non- Transport | ALS Transport |
|--|--------------------------|--------------------------|--------------------------|
| AIRWAY EQUIPMENT | | | |
| Oropharyngeal Airways (Sizes 0-3) | 1 each | 1 each | 1 each |
| Nasopharyngeal Airways (14, 18, 22, 26 Fr.) | 1 each | 1 each | 1 each |
| McIntosh Laryngoscope Blades (#2, #1) | | 1 each | 1 each |
| Miller Laryngoscope Blades (#2, #1) | | 1 each | 1 each |
| Pediatric Magill Forceps | | 1 each | 1 each |
| i-gel Supraglottic Airway (1.0, 1.5, 2.0, 2.5) | 2 each (optional) | 1 each (1.0 optional) | 1 each (1.0 optional) |
| Pediatric/Infant Non-Rebreather Masks | 1 each | 1 each | 1 each |
| Pediatric End-Tidal CO ₂ Sampling Nasal Cannula | | 1 each | 1 each |
| Pediatric BVM with O ₂ reservoir and facemask | 1 each | 1 each | 1 each |
| Infant BVM with O ₂ reservoir and facemask | 1 each | 1 each | 1 each |
| Pediatric Suction Catheters (6, 10, 18 Fr.) | 1 each | 1 each | 1 each |
| EQUIPMENT AND SUPPLIES | | | |
| AED “Hands-Off” Defib Pads | 1 set | | |
| Pediatric Blood Pressure Cuff | 1 each | 1 each | 1 each |
| Infant Blood Pressure Cuff | 1 each | 1 each | 1 each |
| Bulb Syringe (Optional if in Delivery Kit) | 1 each | 1 each | 1 each |
| Delivery Kit Sterile, prepackaged to include: <ul style="list-style-type: none"> • Minimum of two (2) umbilical cord clamps • Scissors (may be separate) • Aspirating Bulb Syringe • Gloves • Drapes • Antiseptic Solution | 1 each | 1 each | 1 each |
| EMS Approved Length Based Resuscitation Tape (LBRT) | | 1 each | 1 each |
| Monitor/Defibrillator “Hands Off” Pediatric Defib Pads | | 1 each | 1 each |
| IMMOBILIZATION EQUIPMENT | | | |
| Pediatric Spine Board with Velcro Straps and Head Harness | 1 each (IFT Optional) | 1 each | 1 each |
| IV EQUIPMENT/SYRINGES/NEEDLES | | | |
| Pediatric Arm Boards | | 1 each | 1 each |
| IV Catheters (22G, 24G) | | 2 each | 2 each |
| EZ-IO 15mm Needle Set (Pink) | | 1 each (optional) | 2 each (optional) |
| EZ-IO 25mm Needle Set (Blue) | | 1 each | 2 each |
| T-connector | | 1 each | 2 each |

Attachment 1: Hospital NPRP Assessment

- Link: <https://www.pedsready.org/>

Attachment 2: Prehospital Pediatric NPRP Assessment – Link <https://emspedsready.org/>

Attachment 3: EMSC and Pediatric Clinical Committees - Description

- Pediatric integration and QI occur in Alameda County EMS regularly held meetings with Alameda County EMS partners (monthly or quarterly)
 - Alameda County EMS Pediatric Clinical Monthly Meetings
 - **Alameda County EMSC and Pediatric QI Meetings (Bi-Annual) ***
 - BLS Providers
 - Medical Dispatch Review Committee
 - Receiving Hospital Meeting
 - EMS Quality Council
 - Disaster Preparedness Healthcare Coalition (DPHC) Quarterly Meetings
 - Cardiac Arrest System of Care Meeting

* Includes EMS Pediatric Receiving Hospital and Prehospital PECCs

EMSC and Pediatric QI Committee

OBJECTIVES

- A standing committee that advises on pediatric hospital and prehospital care.
- The subcommittee's goals are the evaluation of pediatric policies and protocols for the EMS system with the responsibility for addressing system vulnerabilities and needs.
- The subcommittee supports the EMS Medical Directors by evaluating topics and data related to identified issues such as clinical research on prehospital pediatric care, clinical outcomes, community education, interfacility transfers, repatriation, and long-term outcomes.

TIMEFRAME

- Scheduled: Two times per year.

LEAD AND FACILITATORS

- EMSC Coordinator supported by EMS Medical Directors, EMS Administrators, and QI Coordinator

TARGET GROUP

- Representatives from Pediatric Specialty Hospitals (including: PECCs and ED Medical/Nursing Directors from Pediatric Receiving Centers); Alameda County Pediatric Specialty Centers for Critical Care include UCSF Benioff Children's Hospital and Kaiser Oakland Medical Center.
- Representatives from each non-specialty pediatric receiving hospital ((hospital administration, PECCS, and one clinical expert) who are knowledgeable about the pediatric cases reviewed at each institution's pediatric committee
- Representatives from Prehospital EMS Provider Agencies (EMS Liaisons, QI, PECCs, and Medical Directors)

Attachment 4: Pediatric Resources, Research and Pediatric Policies – Links:

- <https://emscimprovement.center/news/pecarn-cooperative-agreements-awarded-2023/>
- <https://pecarn.org/research-nodes/>
- [Alameda County EMS Website - EMSC Resources https://wrap-em.org/](https://wrap-em.org/)