STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

EDMUND G. BROWN JR., *Governor*

EMERGENCY MEDICAL SERVICES AUTHORITY
10901 GOLD CENTER DRIVE, SUITE 400
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875

November 25, 2015

Jackie Lowther, EMS Director
County of Santa Clara Emergency Medical Services
976 Lenzen Avenue, Suite 1200
San Jose, CA 95126

Dear Ms. Lowther:

This letter is in response to the 2014 EMS Plan Update submission to the EMS Authority on October 15, 2015 from the County of Santa Clara.

I. Introduction and Summary:

The EMS Authority has concluded its review of the County of Santa Clara's 2014 EMS Plan Update and is approving the plan as submitted.

II. History and Background:

The EMS Authority is responsible for the review of EMS Plans and for making a determination on the approval or disapproval of the plan, based on compliance with statute and the standards and guidelines established by the EMS Authority consistent with H&S Code § 1797.105(b).

The California Health and Safety (H&S) Code § 1797.254 states:

> *"Local EMS agencies shall* ***annually*** *(emphasis added) submit an emergency medical services plan for the EMS area to the authority, according to EMS Systems, Standards, and Guidelines established by the authority".*

Historically, we have received EMS Plan documentation from the County of Santa Clara for the following years: 1994, 1996, 1999, 2001, 2004–2005, 2007-2011 and, most current, its 2014 plan submission. County of Santa Clara received its last Five-Year Plan approval in 2011 and its last annual Plan Update approval in 2014 for its 2012 plan submission.

III. Analysis of EMS System Components:

Following are comments related to the County of Santa Clara's 2014 EMS Plan Update. Areas that indicate the plan submitted is concordant and consistent with applicable guidelines or regulations and H&S Code § 1797.254 and the EMS system components identified in H&S Code § 1797.103 are indicated below:

	Approved	Not Approved	
A.	☒	☐	System Organization and Management
B.	☒	☐	Staffing/Training
C.	☒	☐	Communications
D.	☒	☐	Response/Transportation

1. Ambulance Zones
   - Please see the attachment on the EMS Authority's determination of the exclusivity of County of Santa Clara's ambulance zones.

	Approved	Not Approved	
E.	☒	☐	Facilities/Critical Care
F.	☒	☐	Data Collection/System Evaluation
G.	☒	☐	Public Information and Education
H.	☒	☐	Disaster Medical Response

IV. Conclusion:

Based on the information identified, the County of Santa Clara may implement areas of the 2014 EMS Plan Update that have been approved. Pursuant to H&S Code § 1797.105(b):

> *"After the applicable guidelines or regulations are established by the Authority, a local EMS agency may implement a local plan…unless the Authority determines that the plan does not effectively meet the needs of the persons served and is not consistent with the coordinating activities in the geographical area served, or that the plan is not concordant and consistent with applicable guidelines or regulations, or both the guidelines and regulations established by the Authority.*

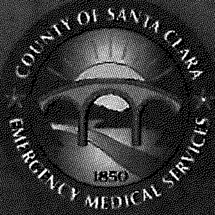
V. **Next Steps:**

The County of Santa Clara's annual EMS Plan submission will be due on November 25, 2016. If you have any questions regarding the plan review please contact Jeff Schultz, EMS Plans Coordinator, at (916) 431-3688.

Sincerely,

Howard Backer, MD, MPH, FACEP
Director

Attachment



County of Santa Clara
Emergency Medical Services Agency

976 Lenzen Avenue, Suite 1200
San José, CA 95126
408.885.4250 voice 408.885.3538 fax

2014

EMERGENCY MEDICAL SERVICES PLAN UPDATE

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

SYSTEM ASSESSMENT FORMS 3

TABLE 1: SUMMARY OF SYSTEM STATUS 18

TABLE 2: SYSTEM RESOURCES AND OPERATIONS 27

TABLE 3: PERSONNEL/TRAINING 34

TABLE 4: COMMUNICATIONS 35

TABLE 5: RESPONSE/TRANSPORTATION 36

TABLE 6: FACILITIES/CRITICAL CARE 37

TABLE 7: DISASTER MEDICAL 38

TABLE 8: RESPONSE/TRANSPORTATION/PROVIDERS 40

TABLE 9: FACILITIES 68

TABLE 10: APPROVED TRAINING PROGRAMS 79

TABLE 11: DISPATCH AGENCIES 84

AMBULANCE ZONE SUMMARY FORM 97

ATTACHMENT A – SANTA CLARA COUNTY TRAUMA SYSTEM PLAN UPDATE 2014

Executive Summary

The Santa Clara County EMS System continued to make progress toward several long term goals. The EMS Agency with the collaboration of system stakeholders, focused efforts on providing public and stakeholder awareness education; studying hospital diversion and ambulance wait times; and implementation of several new EMS policies and plans. The following accomplishments occurred in 2014:

Public Education

Through coordinated social media and traditional outreach methods, promoted monthly public education campaigns related to emergency medical services. These monthly campaigns included "Medical Alerts;" "Santa Clara County Emergency Alert System (AlertSCC);" "Pool Safety;" "Stroke Awareness;" "Preventing Snake Bites;" and "Pull to the Right for Sirens & Lights."

The County EMS Agency created and released four videos as educational resources for those who live, work and played in Santa Clara County. Each video provided insight into the 911 Emergency Medical Services System and featured some of the equipment used by the EMS professionals in the County's EMS System. Video released in 2014 include:

- "The Santa Clara County EMS System Overview"
  This video provided a summary of the services provided in the County's EMS System.
- "An Inside Look: Santa Clara County 911 Ambulances"
  This video provided an orientation to the capabilities and equipment contained within the County's 911 Ambulances.
- "Santa Clara County EMS Radio System & Communications Procedures"
  This video provided guidance for the use of the County's EMS Communication System.
- "Santa Clara County Multiple Patient Management Plan"
  This video provided an overview of how to implement the County's Multiple Patient Management Plan during mass casualty incidents.

Social Media

The EMS Agency actively used social media to promote and distribute information about EMS events. On the EMS Agency's Facebook page and Twitter feed, visitors were provided information about monthly educational campaigns and training announcements; recognition of EMS providers; and information about EMS meetings and forums.

Hospital Diversion and Delay of Ambulances at Hospital Emergency Departments

The EMS Agency, collaborating with local hospitals, the County Communications Department, and the County EOA emergency ambulance provider, hosted a Lean Six Sigma Black Belt Course to provide advanced statistical process control training to EMS System stakeholders and to statistically evaluate the root causes of extended wall times in Santa Clara County. The study shows the importance of understanding, defining and measuring the problem, before solving the problem. This study was a good example of the EMS System emerging as a learning and quality-focused meta-organization.

Policy Development and Implementation

The County EMS Agency developed and implemented several new policies related to the expansion the EMS System's electronic patient care record system. Additionally, one operational policy to enhance responder safety was activated.

- "Peripheral and Supplementary Data Integration"
  The purpose of this policy is to identify supplementary data sources and describe the minimum requirements for utilization, integration, and transmittal of that data to and from County Data Systems.

- "Patient Care Report Forms and Templates"
  The purpose of this policy is to identify the various County approved forms and templates for Patient Care Reports.

- "Accepted Methods of Payment"
  The purpose of this policy is to identify the methods of payment that are accepted by the Santa Clara County Emergency Medical Services Agency.

- "EMS Life Safety Procedures"
  The purpose of this policy is to identify and implement procedures to ensure the safety and protection of emergency medical services responders.

SYSTEM ASSESSMENT FORMS

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

NEED(S):

OBJECTIVE:

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:

The EMS Agency has a well qualified .5 FTE medical director on contract. During 2015, the EMS Agency wants to increase EMS Medical Director coverage to 1.0 FTE and support the medical director by instituting a specialty-physician based medical advisory committee, as identified in the 2013 EMS System Strategic Plan. The EMS Medical Director is supported by a series of advisory groups that include EMT's, paramedics, physicians, and specialists in the area of trauma, stroke, and cardiac care; pediatrics, disaster medicine, and public health.

NEED(S):

OBJECTIVE:

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:

Santa Clara County EMS Agency has a system wide QI program that is approved by the EMS Authority. The agencies uses several benchmarks to provide assurance in the quality of care provided and system indicators identified for improvement strategies. In addition, the provider agencies have internal QI programs which have been approved by the EMS Agency. Included in the QA/QI process is the Unusual Occurrence Report (UOR), which enables the providers and other EMS System participants to report incidents to the EMS Agency directly. The EMS Agency has developed a process for review and follow-up on reported incidents and works collaboratively with the identified provider agency to investigate these cases. The EMS Agency Medical Director, Specialty Programs Nurse Manager and QI manager review the QI documents submitted by the provider agency and work collaboratively with system participants to develop an action plan focused on improving the system. The QA/QI process drives the development of the policies and protocols for the EMS System.

NEED(S):

SCC EMS Agency EQIP program is currently being reviewed an updated to match current processes with our new data system.

OBJECTIVE:

1. Follow the QA/QI plan for SCC based on the EQIP requirements
2. Assess the current prehospital practice modalities to develop QI Indicators which will measure current practice and identify opportunities for improvement in prehospital care or EMS System design.
3. Continue to work with the Prehospital Audit Committee (PAC) to include multi-disciplinary representation from the EMS System participants, to review prehospital care and establish "best practices" for the SCC prehospital system.
4. Identify and implement educational opportunities for prehospital personnel based on the outcome of the QA/QI process.

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:

None.

CURRENT STATUS:

Santa Clara County (SCC) has a mature trauma system that has been in place since 1986. The SCC trauma system plan has been approved by the EMS Authority and updates continue on an annual basis. The system has three designated trauma centers:

- Stanford Health Care
  Level I adult and pediatric trauma center
- Santa Clara Valley Medical Center
  Level I adult and a level II pediatric trauma/burn center
- Regional Medical Center
  Level II adult trauma center

NEED(S):

Continue the development of a regional trauma system plan which is based on an optimal utilization of resources. Maintain participation in quality improvement committees by the adjacent counties.

OBJECTIVE:

1. Identify the optimal design of the trauma system based on local and regional needs.
2. Identify opportunities for improvement through local and regional collaboration.
3. Maintain a safe and effective regional trauma system, with a focus on appropriate utilization of resources.
4. Continue active participation on the Bay Area Regional Trauma Care Committee.

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:

The hospitals maintain a requirement that all physicians and registered nurses who provide direct emergency patient care are trained in advanced life support. The majority of the emergency department physicians are board certified in emergency medicine.

NEED(S):

Ensure training in ALS for emergency department physicians and nurses who provide emergency patient care. Review and evaluate hospital requirements for education/certification standards as they pertain to ED personnel. Board certification of all practicing ED physicians is not an identified regulatory requirement unless the facility is a designated specialty care center. Therefore, the requirements of this standard are interpreted as "should" and there is no need to ensure board certification of ED physicians outside of the designated specialty care facilities. The recommendation for board certification needs to be included in all receiving facility agreements, but will not be a measure that precludes any facility.

OBJECTIVE:

Continue to adhere with agreements as written with receiving facilities.

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:

Prehospital triage criteria policies have been developed and a trauma triage protocol is currently in use. These polices closely match the CDC and ACS recommendations. Current transfer agreements are in place at the designated trauma centers with specialty centers (burn, spinal cord, pediatrics, rehab and cardiopulmonary bypass).

COORDINATION WITH OTHER EMS AGENCIES:

SCC Trauma Centers currently accept patients transferred from outlying counties. Coordinating with EMS Agencies outside of the surrounding counties is a challenge when trauma patients are being transferred long distances due to lack of available resources in closer proximity. The development of inter county transfer agreements has been identified and letters of agreements with adjacent counties are currently in place.

NEED(S):

Work with CA EMSA to identify the statewide needs for increased resources for trauma patients being transferred long distances to SCC trauma centers. Regional needs assessments should occur on a statewide level to ensure optimal trauma patient care and decrease the potential negative impacts to trauma systems, centers and patients when care is not available locally.

OBJECTIVE:

1. Review and implement changes to the existing prehospital trauma triage and transfer protocols as appropriate.
2. Identify and assist in the revision of trauma triage criteria currently used in the surrounding counties, for determination of transport to the SCC trauma centers.
3. Participate in the development and implementation of a statewide trauma system utilizing the regional approach.

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:

None.

CURRENT STATUS:

Transfer agreements are in place at the designated trauma centers with specialty centers (burn, spinal cord, pediatrics, rehab and cardiopulmonary bypass).
The SCC EMS Agency staff continues to evaluate the need for transfer agreements based on the identification of facilities that have been designated as specialty care centers (i.e. comprehensive stroke centers). The stroke system is evaluating and identifying different levels of care that can be provided at individual stroke centers and will base the need and criteria through the Stroke Advisory Committee process.

COORDINATION WITH OTHER EMS AGENCIES:

The trauma center monthly activity report includes the County of origin for the trauma population that utilized the resources of the SCC trauma centers. This report is provided to the TCSQIC representatives from the regional LEMSA's. Santa Cruz, Monterey and San Benito Counties have been very proactive in evaluating the inter-facility trauma transfer population, in collaboration with SCC.

NEED(S):

Develop formal agreements with all hospitals, identifying and detailing level of care capabilities. Facilitate in the development of transfer guidelines for trauma and other specialty care patient populations, which could be used as decision making tools by the emergency department physician in determining an appropriate disposition for EMS patients requiring specialty care.

OBJECTIVE:

1. Develop transfer criteria, protocols and guidelines for trauma and other specialty patient populations.
2. Continue to evaluate inter-facility transfers through established quality improvement committees.

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:

None.

CURRENT STATUS:

Santa Clara County's diverse population base has increased by 20% since the original Trauma Plan was ratified twenty years ago. Greater than ninety-five percent (95%) of the 1.8 million residents live in the San Jose metropolitan area at the north end of the Santa Clara Valley, which includes San Jose and eleven other incorporated cities. Two incorporated cities in the southern portion of the county are home to most of the remaining residents. Economic conditions vary widely throughout the county according to trends in technology industries, time of year and the transient population. Primary employers are technology, agriculture, manufacturing and service-related companies. Most of the major industry is located in the northern metropolitan area of the county.

The trauma system secondary catchment area extends beyond the borders of Santa Clara County into the neighboring counties of San Mateo, Santa Cruz, Monterey, and San Benito. This secondary catchment area population totals 1 million, which brings the extended regional catchment area population base to 2.8 million. The San Mateo County Trauma System Plan includes Stanford Medical Center as a receiving trauma center. Trauma patient ground and air transports in the southern portion of San Mateo County are directed by San Mateo County field triage criteria to Stanford's Level I Trauma Center in north Santa Clara County. Additionally, all trauma air transports from Northern San Mateo County are directed to Stanford. The ability of the SCC trauma system to provide trauma services to adjoining counties has been successful due to the regional trauma system approach and the collaboration of all LEMSA's involved. Santa Clara County developed and implemented trauma center catchment areas in 2005, with no identified changes required since that time. Two trauma centers (Level I & II) are located in the metropolitan area of San Jose and receive the majority of trauma patients from the central and the southern portion of Santa Clara County, as well as receiving transfers from surrounding counties. Injured patients in the northern area of the County are transported to the Level I trauma center located in the northwestern portion of the County, which also treats major trauma victims from the southern portion of San Mateo County, northern portion of Santa Cruz and counties throughout CA.

NEED(S):

Ensure the availability of specialized trauma services to the critically injured patient.
Work with CA EMSA to identify regional trauma system issues. Currently this would include long transports of trauma patients from trauma systems within CA that are unable to consistently serve their identified trauma system patient population.

OBJECTIVE:

1. Maintain and refine a regional trauma system that safely and effectively serves patients with critical injuries.
2. Actively participate in the CA EMSA Trauma System Regionalization process.

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:

The planning process for Santa Clara County's EMSC system included a multi-disciplinary task force with members from hospitals, trauma centers, PICN, National EMSC Resource Alliance, consumers, pre-hospital and interfacility transport agencies. Currently, this is not an active task force but will be reinstated as the new regulation come into effect. Pediatric quality indicators and benchmarks are evaluated through the various QI committees.

NEED(S):

Continue EMS stakeholder input and evaluation of the pediatric emergency medical and critical care system development and implementation.

OBJECTIVE:

Ensure continued stakeholder input and evaluation of the pediatric emergency medical and critical care system development and implementation.

TIME FRAME FOR MEETING OBJECTIVE:

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