EMS Plan-Trauma System Status Report

I. Trauma System Summary:

The Santa Clara County Trauma System is an inclusive system, allowing all medical resources available in the County to work together to provide the best possible outcome for the trauma patient. Acute Care hospitals not designated as trauma centers do not receive patients that are identified by the field trauma triage criteria as "Major Trauma Victim". They do however work closely with the Trauma Centers to stabilize and transfer walk-in patients and those who have a delayed presentation of traumatic injury. The identified catchment areas for trauma patients are based on geographic considerations as well as other factors affecting access (i.e. traffic conditions, diversion). By system design, trauma patients with major injuries are transported from the field directly to the trauma center that affords them the shortest time to definitive care.

Santa Clara County’s geography varies from sea level areas to rugged mountainous terrain. Many areas of the county are undeveloped while the northern portion is largely developed and heavily populated. The county contains recreational areas, national forests and monuments, lakes and rugged mountain ranges. The County has designed the Trauma System so that there is continuous dialogue with providers of pre-hospital care and hospitals in the rural areas, to assure that residents receive the appropriate level of services for trauma and other emergency care.

The trauma system is one component of the Emergency Medical Services System of Santa Clara County. The various individuals and committees listed in the organizational structure of the trauma plan serve vital roles in facilitating the effective operation of the Santa Clara County Trauma Care System. In operation since 1986, it is a three Trauma Center system that serves a primary SCC population of approximately 1.8 million, and a regional population of an estimated 1 million residents in adjoining counties: San Mateo, Santa Cruz, San Benito and
Monterey. 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.

The Trauma System functions through collaboration with countywide and regional care providers in the pre-hospital, hospital and rehabilitation phases of care. The Emergency Medical Services (EMS) Agency of the Department of Public Health, County of Santa Clara, is the “Local EMS Agency (LEMSA)” referenced in California Code of Regulations, Title 22, Division 9, Chapter 7, and vested with authority for planning, implementing, managing and evaluating the Santa Clara County Trauma System. The Santa Clara County EMS Medical Director is responsible for medical control of the trauma system. The EMS Director is responsible for oversight and all administrative issues relative to the trauma system. The Specialty Programs Nurse Manager is responsible for the day-to-day oversight and monitoring of the trauma system.

The Trauma Care System Quality Improvement Committee (TCSQIC), a collaborative group of regional medical providers and EMS Agency staff, is advisory to the EMS Medical Director for the administration of the system-wide quality improvement program and monitoring of the trauma centers performance improvement activities. The Trauma System is integrated into the EMS system and benefits from its networks of providers and committees that assure system coordination and accountability.

Each designated trauma center appoints a trauma medical director and a trauma program manager who oversee the function of their respective trauma services. The Trauma Director must be a Board certified surgeon with experience in trauma care and trained in Advanced Trauma Life support (ATLS). The Trauma Program Manager is a registered nurse who has specialized trauma/critical care training. These individuals provide the daily administrative and clinical oversight for their trauma center. The director and program manager serve as liaisons between the trauma center and the regional trauma care system. Each trauma
center must have an internal structure capable of addressing the needs of the trauma program, while recognizing the multidisciplinary nature of trauma care.

Two of the three trauma centers (VMC and RMC) are located in the metropolitan area of San Jose and receive the majority of their trauma patients from the central area and the southern portions of Santa Clara County, and transfers from Santa Cruz, San Benito and Monterey counties. Persons injured in the northern segment of the County are generally transferred to the trauma center (Stanford) located in the northwestern sector of the County. This trauma center also serves as a trauma resource for San Mateo County and northern Santa Cruz County.

II. Changes in the Trauma System

A. Change in leadership of the LEMSA-new Agency Director

B. New EOA transport provider (07/2011)

C. Implementation of a new PCR program (Image Trend)

III. Number and designation Level of trauma centers

<table>
<thead>
<tr>
<th>Trauma Center</th>
<th>Level</th>
<th>Patient population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Clara Valley Medical Center</td>
<td>I</td>
<td>Adult</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>Pediatric</td>
</tr>
<tr>
<td>Regional Medical Center of San Jose</td>
<td>II</td>
<td>Adult</td>
</tr>
<tr>
<td>Stanford University Hospital</td>
<td>I</td>
<td>Adult</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>Pediatric</td>
</tr>
</tbody>
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IV. Trauma System Goals and Objectives

Update on previous goals and objectives:

Conversion of the data from Collector to Trauma One-The EMS Agency posted an RFP to obtain the services of a contractor to enable this process. There were no responses to the RFP. The EMS Agency elected to use the services of the Health and Hospital System Information Technology Department (HHS IT) to complete the project. The process was defined by a collaboration of HHS IT personnel assigned to the project, Lancet, and the three Trauma Program Managers. Discussions were held in the last quarter of the year, with project implementation set for January of 2012. Expected completion date is April of 2012.

The project began in March of 2012. Initial efforts were to determine the actual data points that exist in the Collector Registry at each Trauma Center and which were uploaded to the central registry. Following that the Trauma Centers will begin to validate the fields that they wish to maintain in the Trauma One location, and identify the mapping process to move the data to Trauma One. The HHS IS representative will work with each program manager and develop a mapping document which Lancet will use to move the data. There will be a pilot data run placed in the test environment to validate the uploaded data and test the query abilities. The final process will be to upload all the data in Collector to Trauma One. Expected completion date: December 2012

Continued participation in the Bay Area Regional Trauma Coordination Committee (BARTCC) – Santa Clara County Trauma System is well represented on this committee. The Trauma Program Managers and the Trauma Program Directors from each of the centers attend all meetings and participate in the data collection process. Additionally the Specialty Program Nurse Manager from the LEMSA attends. Participation on various projects continues. The Transfer process implemented in Santa Clara County has been adopted by the BARTCC as a model for the area. Current steps to assess the transfer process through area data are ongoing.
Develop an ongoing report process to adjacent counties- The trauma centers send this information.

Upload data to CEMSIS Trauma-process is ongoing. Information is sent when requested

Identify under triage rates- Assess the number and care of patients who meet major trauma triage criteria who inadvertently are delivered to non-trauma centers and or self present. Identify numbers and develop data regarding care, mortality and morbidity, and outcomes. In October, 2011 all local receiving hospitals in Santa Clara County have signed 9-1-1 Receiving Center Memorandums of Understanding with the Santa Clara County EMS Agency. One clause in this MOU calls out the type of data and specifies the patients who meet major trauma triage criteria. Implementation of this reporting process is planned for October 2012.

The pathologist who is the representative to the Trauma Care System Quality Improvement Committee (TCSQIC) from the Medical Examiner’s office was tasked with developing a “Death Report” to be presented at the TCSQIC meeting each six months. The first report was presented at the November 2011 meeting.

There were approximately 60 patients who expired, that were transported due to traumatic complaints who expired in non-trauma centers. The Trauma Program Managers, with the LEMSA Specialty Programs Nurse Manager have requested access to the records from the Medical Examiner’s office, to analyze the information. Anticipated completion of this data study is mid-year 2012. Status update: The Trauma Program Managers and the Specialty Programs Nurse Coordinator from the LEMSA reviewed 60 charts. 25% of the patients who died of trauma related deaths in community hospitals met Santa Clara County EMS Major Trauma Criteria. This information was presented at the Trauma Care System QI meeting in July. This will be an ongoing report.

Monitor the quality of inpatient and outpatient rehabilitation services- Working with Lancet, the FIMS score screen was revised. Two of the three trauma centers actively use this screen. Data will be developed and information presented at the TCSQIC meetings. Ongoing.
Promote public awareness and information regarding trauma services and injury prevention-

- **Ongoing** process in which each trauma center has an injury prevention contact. The BARTCC is developing a list of injury prevention programs available in the 10 counties.

- The EMS Agency in conjunction with Public Health Nursing laid the groundwork for the development of an elderly fall prevention program. The project was taken to Public Health Leadership for discussion. Since it was not on the current work plan (2011) it was tabled for further study. This project may be resurrected for 2012.

- The EMS Agency was unable to present a conference in 2011 related to the County’s fiscal issues. There is a 2 day conference scheduled for May 2012, the plan is for the EMS agency to provide a two day conference annually.

V. LEMSA Agency Changes

- In March of 2011, Michael Petrie was appointed as the Director of the Santa Clara County EMS Agency. There were some minor revisions of reporting relationships related to the new director. (See attached organizational chart).

- Beginning July of 2011, the 9-1-1 transport provider changed from American Medical Response to Rural Metro based on an RFP. There were many technological advances which came with the change in providers. The provider has an electronic data collection system which produces a Patient Care Record. This product will be supplied to the first responder agencies as well as to the BLS transport agencies. It is anticipated that this process will be fully implemented by July of 2012, thus providing the Santa Clara County EMS System a PCR that is universally employed by all provider agencies.

- Additional technology has been provided to County Communications through the RFP which allows data mining (First Watch) and automates the ambulance tracking system.

- The EMS Agency has developed a formal review process for all policies and protocols.
The following policies have been reviewed and revised for public review in 2012.

- Policy 102 – Trauma System Organization and Management
- Policy 103- Multidisciplinary Nature of Trauma – this policy was separated into two policies: 103- Trauma System Providers and 104- Trauma Center Designation Standards.

The following policies were created:

- Policy 112 – Trauma Center Designation Process
- Policy 113- Trauma Care System Quality Improvement Committee

VI. Progress on Addressing EMS Authority Trauma System Plan Comments:

- SCC EMS Agency Trauma Plan update from 2012 was accepted by the EMS Authority. There was additional documentation needed concerning several areas.

  - **Section V Inter County Trauma Center Agreements: (CCR100256(5))**
    We are providing policies from Monterey, San Benito, San Mateo and Santa Cruz, co-signed by the EMS Medical Director and EMS Agency Director of those counties and Santa Clara County. It is our intent to begin discussions with the abovementioned counties in September of this year to formalize agreements.

  - **Section IX Policy and Plan Development (CCR 100255(h))**- We are providing page 3 of 14 of the “Agreement between the County of Santa Clara and _____Hospital for designation as a Trauma Center” which references transfers from trauma centers to other facilities including those requested for repatriation. **Completed**

  - **Section X Written Local Approval (CCR 100256(10))** we are providing the September 9, 2008 Board of Supervisors action approving the Trauma Plan Update. Subsequent to this approval, there was no separate Trauma Plan update sent to the board for approval. The Trauma Plan update was attached as a chapter to the EMS Plan update all of which was approved by the board. We have included a copy of the EMS Plan approval dated June 21, 2011. **Completed**