

# **San Mateo County Health System - EMS Agency 2016/2017 Trauma System Status Report**

## **Trauma System Summary**

San Mateo has a stable EMS system supported by two level 1 trauma centers Zuckerberg San Francisco General Hospital(ZSFGH) and Stanford Health Care (SHC), and level 1 pediatric trauma center. Both of these trauma centers are located outside of San Mateo County sitting on or near the county boundary to the north and south. Because of this close proximity and willingness of two established trauma center to receive San Mateo trauma patients this remains a strong functioning structure for San Mateo County's EMS System. The original pre-determined catchment areas were identified based on the average driving time to trauma centers. The catchment areas get reviewed periodically to ensure they are meeting trauma patient transport destination response time requirements.

## **Number and Designation of Level of Trauma Centers**

San Mateo County has established policies recognizing Stanford Health Care as a level 1 trauma center and level 1 pediatric trauma center designated by Santa Clara County and Zuckerberg San Francisco General Hospital as a level I trauma center designated by the City and County of San Francisco, as trauma centers serving the San Mateo County. Written agreements are in place with SHC, ZSFGH, as well as, the City and County of San Francisco. A letter dated 7/9/12 from Santa Clara's EMS administration recognizing San Mateo County's use of the afore mentioned designated Santa Clara County trauma centers was approved by EMSA in 2013 lieu of a formal written agreement.

In early 2016, San Francisco General Hospital was renamed Zuckerberg San Francisco General (ZSFG) Hospital and several years prior; Stanford University Medical Center also change and is now known as Stanford Health Care (SHC). Both trauma centers underwent reviews by the American College of Surgeons (ACS) for re-verification of their trauma center status in 2016 and were successfully re-verified as Level 1 trauma centers. SHC also was re-verified as a Level 1 pediatric trauma center. ZSFGH and SHC were re-designated as Level I trauma centers by their respective EMS agencies. Santa Clara County also re-designated SHC as a Level 1 pediatric trauma center. San Mateo County was invited to participate in the San Francisco EMS Agency's re-designation review process.

San Mateo County's trauma volume remains stable. In 2016, there were 1,635 MTVs, who received care at the two-trauma center. This number represents direct transports, walk-ins and inter-facility transfers and represents a 1.4% increase from the last submitted report. SHC is the only trauma center that receives patients via helicopter –

they reported 21 helicopter transports from San Mateo County during the year. SHC also receives 67% of overall trauma transports. Blunt trauma continues to be the main type of injury seen. Table 1 (below) summarizes 2016 San Mateo County Trauma System data as reported by the two trauma centers.

Table 1. 2016 SMC Trauma System Data

	<b>Stanford Health Care</b>	<b>Zuckerberg SFG</b>	<b>Total</b>	<b>Percentage</b>
<b>Population</b>				
Adult	1003	504	1507	92.2%
Pediatric	94	34	128	7.8%
Total	1097	538	1635	100%
<b>Type of Injury</b>				
Blunt	1064	503	1567	95.8%
Penetrating	33	35	68	4.2%
Total	1097	538	1635	100%
<b>Re-Triaged</b>	not reported	22	22*	4%*
<b>Helicopter</b>	21	-	21	1.3%
<b>ED Disposition</b>				
Admitted	647	297	944	58.0%
Expired	3	5	8	0.5%
Discharged	431	219	650	39.5%
Transferred	11	6	17	1.0%
Other	5	11	16	1.0%
Total	1097	538	1635	100%

**Pediatric Patients – No changes**

Both trauma centers continue to receive pediatric trauma patients. Initial pediatric trauma assessment and resuscitation occurs within the pediatric emergency department of SHC and if admission is necessary, the patient is admitted to Lucille Packard Children's Hospital (LPCH). Pediatric patient transports currently follow the same pre-determined catchment areas as previously mentioned and as outline in the San Mateo County Trauma Plan. All pediatric trauma patients requiring aeromedical transport are flown to SHC given that ZSFG does not have a helipad. Pediatric patients from the northern portion of San Mateo County are transported to ZSFG for initial resuscitation and stabilization. An agreement is in place with UCSF Benioff Children's Hospital Oakland (ACS verified Level 1 pediatric trauma center located in Alameda County) for the transfer of critically injured pediatric patients. Children are still admitted on occasion to the adult ICU of ZSFG; however once stabilized they are transferred. This agreement also provides for a pediatric intensivist from UCSF Benioff Children's Hospital San Francisco to be included in the case management of a child as long as the need for intensive care hospitalization exists at ZSFG. The ZSFG Trauma Program's quality improvement process includes close monitoring of all pediatric cases and includes the hospital's Pediatric Program participation in all trauma quality improvement activities and committees.

**Prehospital Data – No significant changes**

Prehospital data collection is accomplished primarily through the AMR MEDS system. The Fire MEDS program was revised in late 2016 with an anticipated system -wide rollout scheduled for the first quarter of 2017. The South San Francisco Fire Department continues to use a Zoll product for collection of prehospital data. Trauma Scene times are measured and report as part of EMSA's Core Measure Project. The 2016 average trauma scene time was 29:52. This reporting value is noted to be high because it includes acute and minor trauma calls.

Santa Clara County EMS and San Francisco City and County EMS agencies collect data using their established trauma registries. Both trauma centers send San Mateo County data to the CEMSI Trauma Data Base.

**Quality Improvement Activities – No significant changes**

A Trauma Quality Improvement Plan has been developed and the EMS Agency is in the process of implementation. We are updating trauma policies, working closely with both trauma centers and our EMS provider organizations. The EMS Agency does not have a trauma registry or its own trauma QI committee. The EMS trauma program coordinator actively participates with each neighboring LEMSA's trauma oversight process. Both counties include San Mateo County patients in their internal quality improvement activities and there is excellent on-going communication to identify issues. Both trauma centers provide San Mateo County EMS Agency with minimum

data on quarterly basis. Annually, the trauma program managers provide a comprehensive report to the EMS Agency's Medical Advisory Committee.

San Mateo County EMS continues to be active in the Bay Area Regional Trauma Care Committee (RTCC) and has representation at the scheduled bi-monthly meetings.

### **Agreements – No changes**

Written agreements are in place with ZSFGH and SHC.

### **Changes in the Trauma System – No significant changes**

There were no significant changes in the San Mateo County trauma system other than the name changes of the trauma centers that have previously been described.

### **Goals and Objectives**

The goal of the San Mateo County Trauma System is to facilitate excellent trauma care for all residents and visitors to San Mateo County.

### **Update on Proposed 2014 Trauma System Objectives**

1. Develop and post information on the web about the San Mateo County Trauma System

Status – Agency published a 2015-16 System Overview report which provided Trauma System information. Report is posted on the EMS website.

[http://www.smchealth.org/sites/main/files/fileattachments/ems\\_annual\\_final.pdf](http://www.smchealth.org/sites/main/files/fileattachments/ems_annual_final.pdf)

2. Continue to evaluate scene time for the acute trauma for accuracy and identify any opportunities for improvement with the Quality Leadership Committee.

Status – This issue has incorporated into monthly Trauma Case Reviews presented to the QLC. The focus of the 2016 reviews was trauma under-triage and transport to non-trauma center.

3. Incorporate language in policy that identifies the utilization of regional trauma centers and the role of the MHOAC and RDMHS in determining patient destination in trauma region.

Status – The role of the MHOAC/RDMHS in determining patient destination in trauma region is clearly defined in the San Mateo County Multi-Casualty Incident Plan.

4. Develop a standard report for San Mateo County patients received by our trauma centers

Status – A standardized trauma center reporting format was developed and implemented in 2016. Additionally, all MTV ring downs are now provided by the paramedic attending to the patient versus the EMT driver. The rationale for this change was twofold: 1) diving safety and 2) accuracy/scope to provide more detailed information as needed.

#### **2017/2018 Proposed Objectives**

1. Continue to implement a comprehensive Trauma QI Plan.
2. Review and update all trauma-related written agreements.
3. Implement Trauma re-triage guidelines for San Mateo County receiving facilities