



Trauma

Critical Care System Plan

Prepared By:

Sacramento County Department of Health Services
Emergency Medical Services Agency
2020 Annual Update

**SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021**

In accordance with State of California Code of Regulations, Title 22, - Division 9, Chapter 7, Sacramento County submits this Trauma Care System Plan update.

Trauma System Summary

The Sacramento County Trauma Care System is a network of three in county and one out-of-county trauma centers. Sacramento County Emergency Medical Services Agency (SCEMSA) designates trauma centers to provide emergency medical care to any patient evaluated by prehospital emergency medical service personnel and requiring transportation to a trauma center.

The system undergoes review on a continuous basis. Reviews include quarterly meetings of the Trauma Review Committee (TRC). Trauma surgeons and other professionals within Sacramento County and nearby counties conduct the meetings.

Changes in Trauma System

SCEMSA amended the Trauma Triage Criteria Policy #5053 to remove vehicle speed greater than 40MPH from the Trauma Triage Criteria. The TTC policy revision took place in November 2019 and the change in policy was effective July 1, 2020. The Spinal Mobile Restriction (SMR) Policy #8044 underwent review via email communication due to COVID-19. Amendment to the SMR policy removed SMR for combative patients as a safety precaution to the patient.

Number and Designation Level of Trauma Centers

No potential problems or pending changes in designation currently exist for any of the trauma centers listed:

In County:

University of California Davis
Medical Center
2315 Stockton Boulevard
Sacramento, CA 95817
(916) 734-2011
Level I Trauma Center (Adult
and Pediatric)

Kaiser Permanente Medical Center -
South Sacramento
6600 Bruceville Road
Sacramento, CA 95823
(916) 688-2000
Level II Trauma Center

Mercy San Juan Medical Center
6501 Coyle Avenue
Carmichael, CA 95608
(916) 537-5000
Level II Trauma Center

Out-of-County:

Sutter Roseville Medical Center
One Medical Plaza
Roseville, CA 95661
(916) 781-1200
Level II Trauma Center

**SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021**

Trauma System Goals and Objectives

The Trauma System is a network of dedicated professionals in the prehospital and hospital settings tasked with maintaining or expanding our region-wide Trauma Review Committee (TRC) forum through ongoing communication and teamwork. The focus is to enable detailed review and analysis of filtered, unexpected surgical outcomes and comprehensive data collaboration.

- 1. Improve mechanisms to ensure continuing compliance with trauma care system standards through continuous quality improvement (CQI) activities and data collection from both designated trauma centers and non-trauma centers.*

The TRC reviews local trauma protocols and policies, making suggestions for ongoing trauma care improvement in the prehospital setting. The TRC provides unique educational opportunities to physicians and administrators throughout the region and has been in place for nearly two decades. Contributing participants include trauma managers and surgeons from Sacramento, El Dorado, Placer, San Joaquin, and Yolo counties, as well as regional forensic pathologists.

- 2. Improve integration and coordination of trauma services within the emergency medical services system through continued data collection, analysis and trauma system policy development through advisory committees.*

Inland Counties Emergency Medical Agency (ICEMA) functions as the repository of the Sacramento County trauma and EMS data. Under this system, trauma centers and EMS providers submit data directly to ICEMA, which hosts the California Emergency Medical Services Information System (CEMSIS). This allows SCEMSA to review data as it is submitted, decreasing the time between submission, analysis, and review at advisory meetings.

SCEMSA works closely with the three Sacramento County trauma centers to identify and correct any software issues associated with the direct submission of data to CEMSIS. Staff works to develop reports incorporating the data fields requested from the TRC.

Figures 1, 2 & 3 illustrate incidents for EMS originating patients per hospital. Red indicates number of patients that met Trauma Triage Criteria transported to each hospital. In the majority of cases involving patients taken to non-trauma hospitals, paramedics identified and documented paramedic judgement or high-speed motorized vehicle accidents.

**SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021**

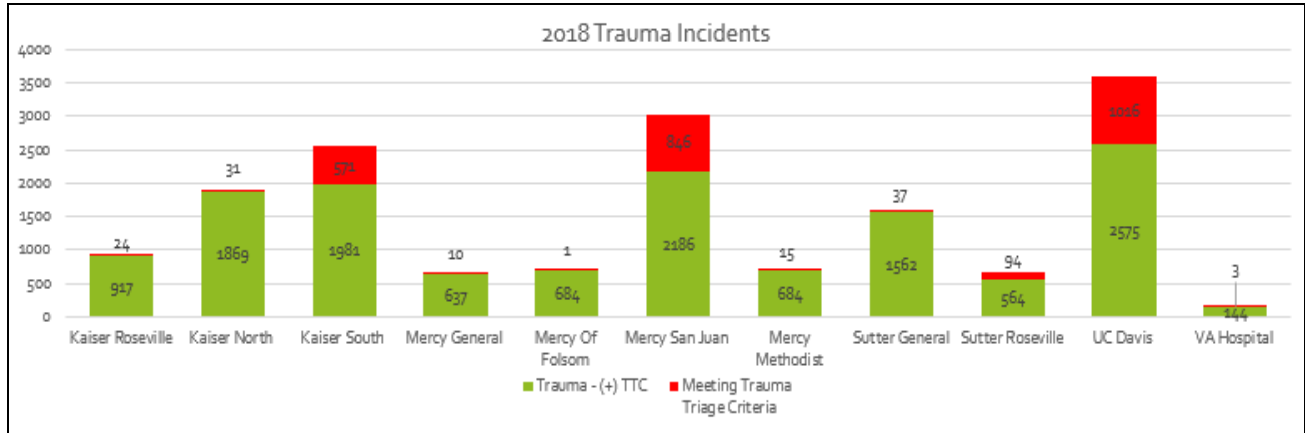


Figure 1

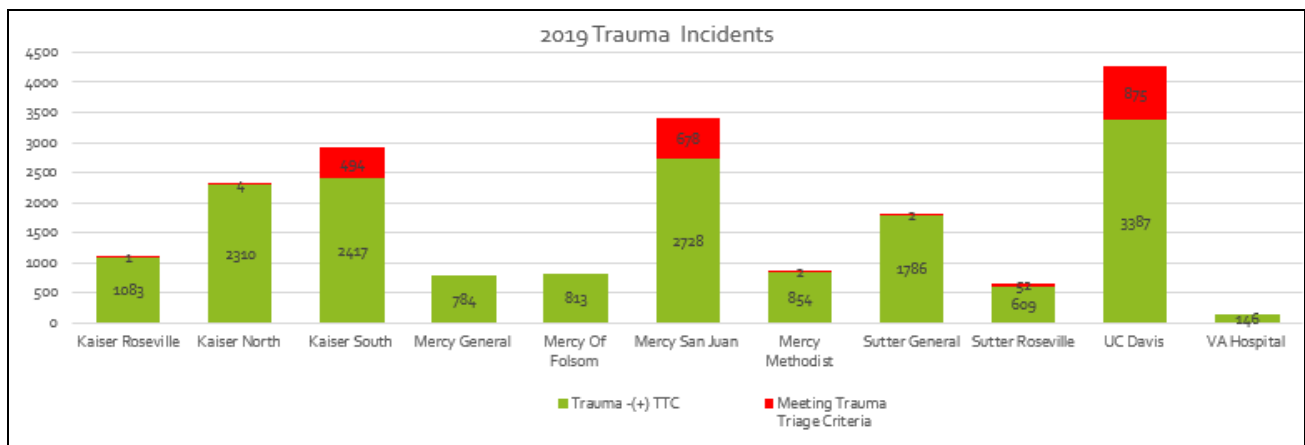


Figure 2

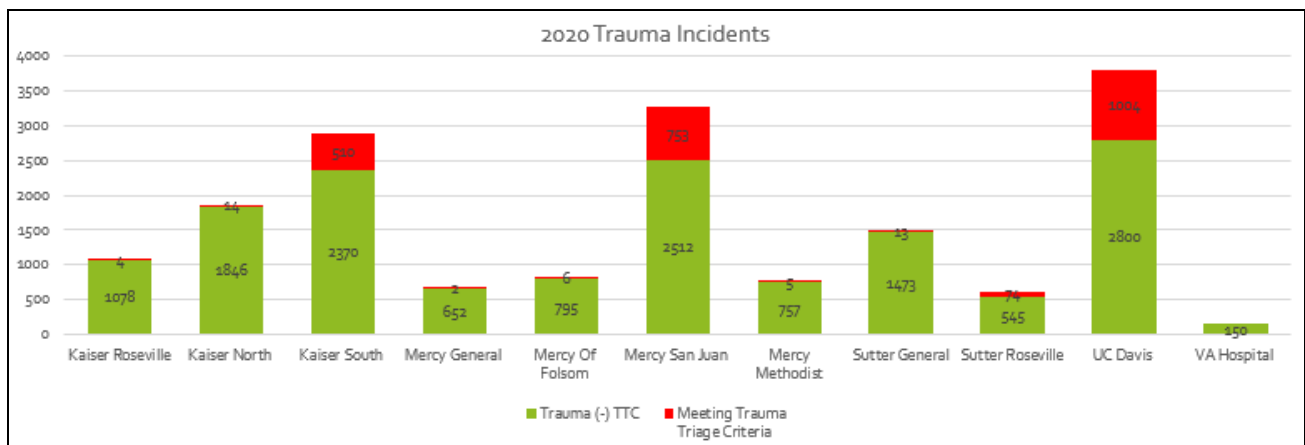


Figure 3

3. *Improve coordination of local trauma activities with trauma services, in adjacent counties, through involvement in CQI activities with out-of-county trauma centers and trauma systems.*

SCEMSA supports and participates in the North Regional Trauma Coordinating Committee (RTCC), resulting in improved communication

**SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021**

among the North RTCC, out-of-county trauma centers, and the EMS Agency.

- 4. Improve accountability and objective evaluation of the trauma care system through data collection and analysis, utilizing a trauma registry and an audit and review process.*

In addition to ongoing local and regional trauma data review and analysis, each Sacramento County designated trauma center data registry undergoes inspection every three (3) years. An independent, nationally recognized team of trauma surgeon experts from American College of Surgeons, Committee on Trauma (ACSCOT) conducts the inspections. Members of the inspection team review a sampling of patient charts. Data records undergo review for appropriateness and inform improvement to practice when indicated.

Due to COVID-19 State of Emergency, inspections by the American College of Surgeons (ACS) for calendar year 2020 did not occur. The ACS issued the following Letters of Extension:

- University of California, Davis Medical Center (Adult and Pediatric) – Current Verification Cycle: April 21, 2021. Verification COVID-19 Extension: April 21, 2022.
- Mercy San Juan Medical Center – Current Verification Cycle: September 22, 2021. Verification COVID-19 Extension: September 22, 2022.
- Kaiser Permanente Medical Center - South Sacramento – Current Verification Cycle: March 16, 2022. Verification COVID-19 Extension: March 16, 2023.

Changes to Implementation Schedule

No changes in the current implementation schedule.

System Performance Improvement

- 1. Objectives, goals and RTCC meetings enable improvement achievements. The trauma system review process is evolving as a tool to provide system wide improvement by:*

In 2020, due to COVID-19, the TRC elected to suspend meetings scheduled for May, August and November. The meetings changed to a Zoom setting in January 2021. Policy reviews conducted via email communication with the TRC members.

Policy #:

7508 - **Simple Triage and Rapid Treatment** - Policy review completed with no changes.

8044 - **Spinal Motion Restriction** - SMR removed for combative patients as a safety precaution to the patient.

**SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021**

Data submission and presentation: EMS Specialist oversees the Continuous Quality Improvement (CQI) Program and conducts data collection and presentation. The specialist works with trauma hospitals and surgeons to identify relevant indicators to improve the trauma system. Indicators include:

- | | |
|---|---|
| <ul style="list-style-type: none"> • Mechanism of injury • Mode of Arrival • Inter Facility Transports Data • Patient Age | <ul style="list-style-type: none"> • Injury Severity Score Range • Emergency Department Disposition • Hospital Discharge Disposition |
|---|---|

Additional reports as part of ongoing Trauma CQI

Following the changes in the Spinal Motion Restriction (SMR) policy #8044, SCEMSA monitored its use and compared 2019 to 2020. Figure 4 illustrates a marked decrease in unnecessary SMR in the prehospital care setting.

Documented SMR 's Mode of Injury			
Mode of Injury	Jan-Mar 2019	Jul-Sep 2019	Jan-Mar 2020
Mode of Injury Not Recorded	1050	212	164
Blunt	3878	840	691
Blunt, Burn	7	2	1
Blunt, Other	360	86	57
Blunt, Other, Penetrating	43	9	10
Blunt, Penetrating	257	58	39
Burn	9	2	1
Other	1295	291	197
Other, Penetrating	71	15	14
Penetrating	263	60	25
Totals	7233	1575	1199

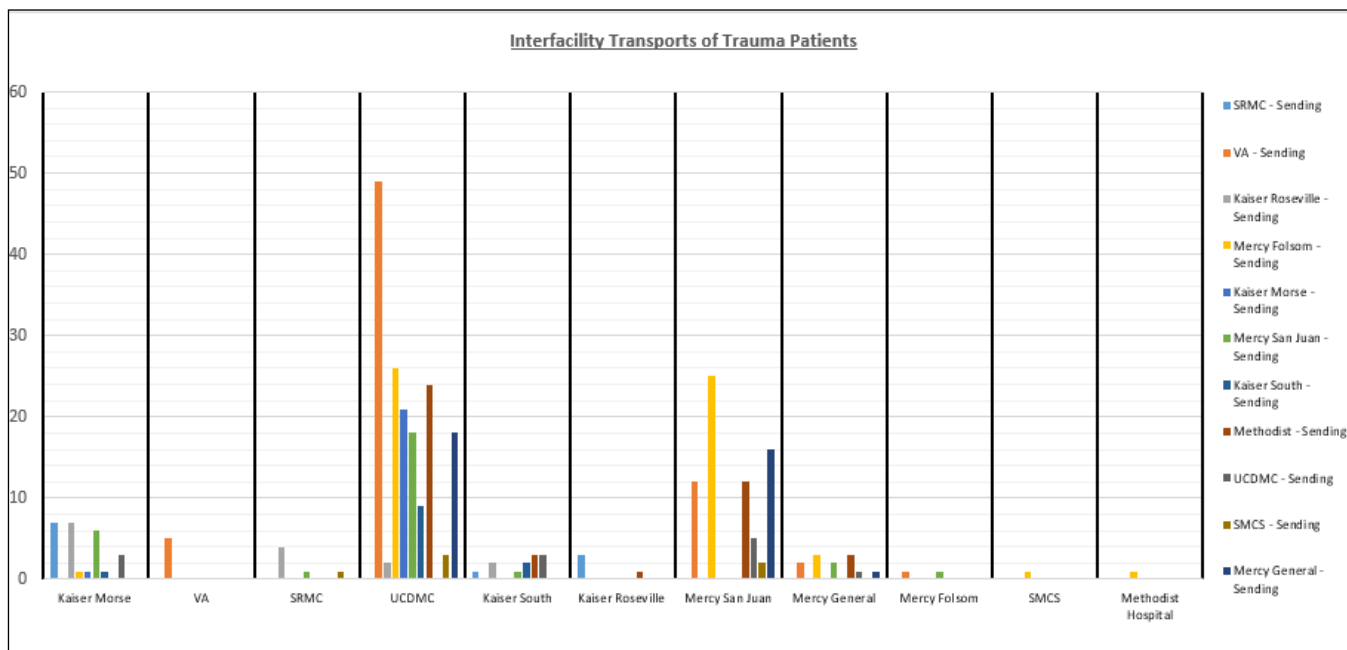
Figure 4

**SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021**

Prehospital Documentation

SCEMSA looked at transfers between hospitals of “Patients with Primary Impressions of Trauma” during 2020. The data in Figure 5 shows UC Davis Medical Center received the majority of cases. Hospitals are transferring within their hospital group. Incidents recorded for non-trauma hospitals (Kaiser - Morse, VA, Kaiser Roseville, Mercy General, Mercy Folsom, SMCS and Methodist) indicate patients are repatriated to their own health care system for further follow-up care.

Figure 5



2. Consider adding outcome measures so that some benchmarking can be done not only within the county and its Trauma Centers but also through your multicounty PI process.

San Joaquin General Hospital’s trauma program has a continuous invitation to attend quarterly TRC and North RTCC meetings.

Trauma System participants regularly review outcome data to improve system performance. Data elements include:

- Prehospital scene times
- Wait time for inpatient rehabilitation beds for traumatic brain injury and spinal cord injury patients
- Secondary transfers of pediatric traumas
- Under-triage for trauma patients

SACRAMENTO COUNTY
2020 TRAUMA SYSTEM ANNUAL UPDATE
July 2, 2021

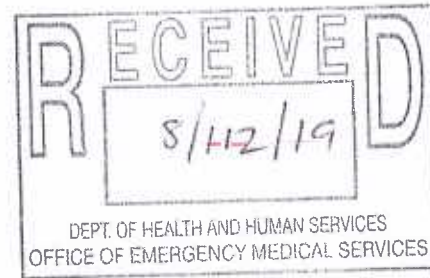
SCEMSA participates in the State's Re-Triage study to assist in data collection. The focus for this study is to improve time to definitive care in the trauma center. SCEMSA will continue its participation.

Annex 1

**2018 TRAUMA PLAN
UPDATE:
APPROVAL LETTERS**

EMERGENCY MEDICAL SERVICES AUTHORITY

10901 GOLD CENTER DR., SUITE 400
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 324-2875



August 2, 2019

Dave Magnino
EMS Chief
Sacramento County EMS Agency
9616 Micron Avenue, Suite 960
Sacramento, CA 95827

Dear Mr. Magnino:

The EMS Authority (EMSA) has approved Sacramento EMS Agency's 2018 Trauma System Status Report. Sacramento EMS Agency's trauma system information provided in the report and subsequent correspondence is in compliance with California Code of Regulations, Title 22 Trauma Care Systems.

In accordance with the regulations, Section 100253, the local EMS agency shall submit to the EMS Authority an annual trauma system status report. Your next Trauma System Status Report will be due by July 9, 2020. If you have any questions, please contact Elizabeth Winward at (916) 431-3649 or elizabeth.winward@emsa.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tom McGinnis', enclosed in a blue oval.

Tom McGinnis, EMT-P
Chief, EMS Systems Division

Annex 2

2019 EMS PLAN UPDATE: APPROVAL LETTERS

EMERGENCY MEDICAL SERVICES AUTHORITY

10901 GOLD CENTER DR., SUITE 400
RANCHO CORDOVA, CA 95670
(916) 322-4336 FAX (916) 322-1441



May 14, 2021

Mr. Dave Magnino, EMS Administrator
Sacramento County Emergency Medical Services Agency
9616 Micron Avenue, Suite 960
Sacramento, CA 95827

Dear Mr. Magnino:

This letter is in response to Sacramento County's 2019 emergency medical services (EMS) plan, and the St-Elevation Myocardial Infarction (STEMI), Stroke, Trauma, and Quality Improvement (QI) plan submissions to the EMS Authority on October 13, 2020.

The EMS Authority has reviewed the EMS plan, based on compliance with statutes, regulations, and case law. It has been determined 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 transportation documentation provided, the EMS Authority has noted your Emergency Ambulance Zone as Non-Exclusive and has enclosed for reference.

The EMS Authority has also reviewed the STEMI, Stroke, Trauma, and QI plans, based on compliance with HSC §§ 1797.257 and 1797.258, and Chapters 7, 7.1, 7.2, 12, and 14 of California Code of Regulations, Title 22, Division 9, and has approved for implementation.

In accordance with HSC § 1797.254, please submit an annual EMS plan to the EMS Authority on or before May 14, 2022. Please also submit an annual STEMI, Stroke, Trauma, and QI plan concurrently as part of your EMS plan. If you have any questions regarding the EMS Plan review, please contact Ms. Lisa Galindo, EMS Plans Coordinator, at (916) 431-3688.

Sincerely,

A handwritten signature in blue ink that reads "Tom McGinnis - EMT-P".

Tom McGinnis, EMT-P
Chief, EMS Systems Division

Enclosure

tm:lg

Sacramento County 2019 EMS Plan Ground Exclusive Operating Areas	Non-Exclusive		Exclusive		Method to Achieve Exclusivity		Emergency Ambulance		ALS		LALS		All Emergency Ambulance Services		9-1-1 Emergency Response		7-digit Emergency Response		ALS Ambulance		All CCT Ambulance Services		IFT		Standby Service with Transport Auth.																																																																																																																																																																																																						
ZONE	EXCLUSIVITY				TYPE				LEVEL												NOTES																																																																																																																																																																																																										
Sacramento County	X																																																																																																																																																																																																																														