



**RICHARD SANCHEZ**  
DIRECTOR

**STEVE THRONSON**  
DEPUTY AGENCY DIRECTOR  
REGULATORY/MEDICAL SERVICES

**DENISE FENNESSY**  
CHIEF OF OPERATIONS  
REGULATORY/MEDICAL SERVICES

**TAMMI McCONNELL MSN, RN**  
EMS DIVISION MANAGER

405 W FIFTH STREET, SUITE 301A  
SANTA ANA, CALIFORNIA 92701  
TELEPHONE: 714- 834-3500  
FAX: 714- 834-3125

## **REGULATORY/ MEDICAL HEALTH SERVICES**

### **EMERGENCY MEDICAL SERVICES**

**DATE:** October 26, 2018

**TO:** Emergency Medical Care Committee

**FROM:** David Johnson, RN  
EMS Coordinator

**SUBJECT:** Trauma System Background & American College of Surgeons Consultation

#### **RECOMMENDED ACTION:**

Receive information on Orange County Trauma System and American College of Surgeons (ACS) consult.

#### **BACKGROUND:**

The Orange County Health Care Agency Emergency Medical Services (OCEMS) division is charged with the oversight and regulation of the delivery of emergency medical services within the county (H&S 1797.94) and serves as the local emergency medical services agency (LEMSA).

OCEMS is responsible for developing and coordinating an integrated emergency medical care delivery system, which is composed of hospitals, specialty care centers (Trauma, Cardiac, Stroke, Pediatrics ), fire departments and ambulance providers. Responsibilities include but are not limited to system planning, training program approval, provider and hospital designation, the establishment of appropriate medical, operations and quality standards, disaster medical-health planning and response, monitoring and facilitating compliance and the certification, authorization and accreditation of personnel. This includes mass casualty management, emergency public first responders and medical-health mutual aid coordination.

The EMS system in the State of California is structured as a two-tiered system of governance. The primary responsibility for system structure and operation is at the LEMSAs level. The California EMS Authority has limited centralized authority and statewide oversight. The Health and Safety Code provides broad authority to the LEMSAs under the direction of the California EMS Authority. On an annual basis, LEMSAs are required to submit EMS and Trauma System Plan updates to the California EMS Authority for review and approval to ensure system compliance with Health & Safety Code Division 2.5 and associated California Code of Regulations. These plans contain the framework for the planning, implementation and evaluation of EMS/Trauma in Orange County.

The Orange County EMS/Trauma system was designed in the late 1970's and implemented in 1980. Initially, five hospitals were designated as Trauma Centers. Between 1984-2014, three Trauma Centers served Orange County until a fourth hospital was designated in 2015.

#### **INFORMATION**

Trauma centers are a fundamental component of the integrated EMS system and remain a vital public resource. The trauma system ensures the management of severely injured patients at designated trauma centers, with the less severely injured patients cared for in emergency departments. The OC Trauma System has been functioning at a high level for over thirty years as evidenced by a reduction of morbidity and mortality rates due to traumatic injury. Currently, four designated hospitals are committed to providing trauma care:

- Children's Hospital Orange County (since 2015)
- Mission Hospital, Mission Viejo (since 1980 )
- Orange County Global Medical Center (since 1980 )
- UCI Medical Center (since 1980)

In January, 2018, OCEMS published a White Paper to evaluate the structure of the OC Trauma System. The data elements evaluated included:

- Population of Orange County (overall and distribution);
- Emergency (911-dispatched call) Transport Time from Scene to Trauma Center
- Trauma Patient Volume/Injury Acuity (overall and distribution)
- EMS Ambulance Diversion and Patient Offload times
- Available cost data for trauma center operations

The White Paper concluded:

- The current population is served by the existing trauma system and projected population growth is low.
- Orange County EMS data does not show current problems with transport time from scene to trauma center.
- Adults and children have appropriate access to EMS transport and trauma center services throughout the County.
- One trauma center with excessive emergency department diversion time may partly be the result of trauma volume.
- Ambulance patient offload times for trauma centers in the County are within an acceptable range.

The OC trauma system as a whole has not been objectively reviewed by an external entity nor been updated to reflect more current public-health based models intended to address the broader spectrum of injury. **The County will benefit from an evaluation of the underlying structure of the trauma system to validate current system design and to determine the adequacy of current trauma services or necessity for additional trauma centers in the future.**

Over the past six months, OCEMS has received inquiries from multiple hospital systems requesting information on trauma volume and how to apply as a trauma center. In addition, one hospital submitted a formal letter of intent to apply as a trauma center. Due to the interest in providing trauma services, OCEMS has initiated an external trauma system review by the American College of Surgeons to address the underlying structure of the trauma system design and determine the adequacy of current trauma services or necessity for additional trauma centers. The OCEMS Trauma Advisory Committee supports this initiative.

The American College of Surgeons (ACS) will assemble and provide a team of national trauma system experts to perform an on-site trauma system evaluation. The team will follow the Health Resources and Services Administration (HRSA) *Model Trauma System Planning and Evaluation* guide published in 2006 and the template described in *Regional Trauma Systems: Optimal Elements, Integration and Assessment, Systems Consultation Guide*, 2008. This process is estimated to take ten months as ACS will assess key areas including but not limited to the following:

- Injury epidemiology, indicators as a tool for system assessment
- Statutory authority and administrative rules
- System leadership
- Coalition building and community support
- Lead agency and human resources within the lead agency
- Trauma system plan
- System integration
- Financing
- Emergency medical services
- Definitive care facilities
- System coordination and patient flow
- Rehabilitation
- Disaster preparedness
- System-wide evaluation and quality assurance
- Trauma management information systems
- Research
- Prevention and outreach