

SUBJECT: **TRANSFERS TO TRAUMA CENTERS**

APPROVED BY:

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**I. PURPOSE**

To outline the criteria and process for transfer of patients needing trauma center care from non-trauma centers to appropriate trauma centers.

**II. POLICY**

Under field trauma triage protocols, most critical trauma patients will be triaged directly to a Trauma Center from the field. Trauma patients, who present at other facilities via EMS or other arrival mode, should be considered for transfer to trauma centers for definitive care when medically appropriate.

**III. PATIENT SELECTION**

A. Patients appropriate for trauma center transfer may include:

1. Patients who, as a result of trauma, have need for:
  - a. Timely surgical or diagnostic imaging intervention to prevent mortality or morbidity; or
  - b. Evaluation by trauma surgeon or advanced diagnostic modality to address potential critical injuries; or
  - c. Monitoring of a traumatic injury that may require intervention or complex care not readily available otherwise.
2. Patients who have sustained injuries with mechanisms likely to need trauma center evaluation or intervention, including:
  - a. Penetrating injury to head, neck, torso, groin, pelvis or buttocks; or
  - b. Penetrating injury to extremity with fracture (excluding hands/feet) or with compromised circulation;
  - c. Other traumatic mechanisms that have resulted in symptoms, signs, or diagnostic evidence of serious injury.

B. Patients in need of **emergent intervention** are of the highest priority, and should be transferred in a timely fashion by the fastest available and appropriate transport method. These patients include:

1. Patients with need for immediate neurosurgical intervention;
2. Patients with penetrating gunshot wounds to head or torso;
3. Patients with penetrating wounds by any mechanism who present with or develop shock;
4. Patients with blunt injury and shock;
5. Patients with vascular injuries that cannot be stabilized and are at risk of hemorrhagic shock or loss of limb acutely (excluding fingers/toes).

**IV. TRAUMA CENTERS**

- A. John Muir Medical Center – Walnut Creek (JMMC-WC) is the designated trauma center for adults (age 14 and older) in Contra Costa County.
- B. Children’s Hospital in Oakland is the closest designated trauma center for pediatric patients (patients under 14 years of age).
- C. When JMMC-WC is on trauma bypass status, it is unable to accept patients with emergent need for transfer or field triages because critical hospital resources (surgeons, operating

rooms) are not available. Location and helipad availability are items to consider in choice of other trauma centers. Other local adult trauma centers include:

1. Oakland - Alameda County Medical Center (formerly Highland) (no helipad on site);
2. Castro Valley – Sutter Eden Medical Center (helipad on site);
3. Sacramento - UC Davis Medical Center (helipad on site);
4. San Jose – Santa Clara Valley Medical Center (helipad on site);
5. San Francisco General Hospital (no helipad on site).

D. When not on trauma bypass status, JMMC-WC may also be impacted by bed availability issues and may not be able to accept non-emergent transfers.

E. Alternate pediatric trauma centers include UC Davis Medical Center and Santa Clara Valley Medical Center in San Jose.

**V. PROCESS**

A. Contact the trauma center to discuss patient status and request transfer. See attachment 1 for list of hospitals and phone numbers.

B. If transfer is accepted, arrange for transport, appropriate to patient condition or potential.

**VI. TRANSPORT OPTIONS**

Timeliness of availability and level of care needed should be considered in all transports.

	<b>Emergency Ambulance</b>	<b>Critical Care Transport Paramedic (CCT-P)</b>	<b>Critical Care Nurse (CCT-RN)</b>
<b>Availability</b>	Within 10 minutes in most cases	Variable (service not designed for emergency response)	<b>Air Ambulance:</b> Within 30-45 minutes in most cases <b>Ground Ambulance:</b> Variable (service not designed for emergency response)

<b>Skill</b>	<b>911 Paramedic Ambulance Scope of Practice (Includes Basic scope)</b>	<b>Interfacility Transfer Paramedic Scope of Practice (CCT-P)</b>	<b>Critical Care Nurse Scope of Practice (CCT-RN)</b>
<b>Monitoring</b>	Continuous ECG monitoring Chest tube monitoring Pulse oximetry End-tidal CO2 monitoring IV line monitoring, (no arterial lines)	Same as 911 paramedic ambulance	Paramedic scope plus Arterial line monitoring
<b>Invasive procedures</b>	Needle thoracostomy Needle cricothyrotomy	Same as 911 paramedic ambulance	Surgical cricothyrotomy
<b>Medications</b>	Morphine	Morphine	Wide range of medications, wider array of narcotic/sedative agents.
	Midazolam for seizures	Midazolam for seizures or sedation while intubated	Paralytic agents
		Blood transfusions	Blood transfusions

C. Ambulance transport capability can also be potentially enhanced with utilization of hospital-based RN or physician staff to address scope issues if necessary in order to facilitate the fastest transports with highest levels of care.

**ATTACHMENT 1****LOCAL TRAUMA CENTER CONTACT PERSONS/PHONE NUMBERS**

<b>Adult Trauma Centers</b>	<b>Contact Person</b>	<b>Phone Number</b>
*Alameda County Med Center– Oakland (Highland)	On-Call Trauma Surgeon	(510) 437-4800
*San Francisco General Hospital	Attending Physician	(415) 206-8111
John Muir Medical Center – Walnut Creek	Nursing Administrative Coordinator	(925) 941-5005
Santa Clara Valley Medical Center – San Jose	ED Physician	(408) 885-6912
Sutter Eden Medical Center – Castro Valley	On-Call Trauma Surgeon	(510) 784-9287
UC Davis Medical Center – Sacramento	ED Physician	(916) 734-3624
Stanford University	ED Physician	(650) 723-7337

\* Indicates no helipad on site

<b>Pediatric Trauma Centers</b>	<b>Contact Person</b>	<b>Phone Number</b>
Children's Hospital Oakland	ED Physician	(510) 428-3240
UC Davis Medical Center – Sacramento	ED Physician	(916) 734-3624
Santa Clara Valley Medical Center – San Jose	ED Physician	(408) 885-6912

Note: This list is subject to change. Last update 07/01/2007  
Revised: