Kern County
Emergency Medical Services Program
Trauma Policies, Procedures, and Protocols
September 15th, 2023

Contents

Revision Log:

07/01/2015 Consolidation of Pre-hospital, Trauma Center and Trauma Receiving Center policies.

Revision Log: Pre-hospital Trauma Policies

11/15/2001 Original adoption/implementation
07/01/2008 Updated in accordance with new ACS guidelines
09/07/2012 Removed various paper reporting requirements because data is captured electronically through ePCRs, as follows: Changed trauma patient AMA documentation requirement, Removed Appendix A, EMT-1/Paramedic First Responder Trauma Care Activation Form, Removed Appendix B, Against Medical Advice (AMA) Documentation form, Removed Appendix C, PCR Transport Data Form, Replaced Appendix D, Receiving Hospital Catchment Area maps with hyperlinks to catchment area maps and added to Table of Contents page, Removed Section XII. Prehospital Data Collection, changed description of TEC Committee and reduced the minimal list of the TEC Committee, Added Revision Log
09/01/2014: Removed Closure Language. Revised TEC Committee Duties. Changed "Trauma Consult" to "Step 3 Criteria Met - Trauma Consult Mandatory" and "Step 4 Criteria Met – Consider Trauma Consult" respectively. "Department" changed to "Division". Trauma consults will be done with Level II Base Station Trauma Centers. Inclusive trauma system language changed to "Level II Trauma Center(s), Level III Trauma Center(s), Level IV Trauma Center(s) and Trauma Receiving Hospital(s)". Pediatric age "birth through 14 years of age. Adult age changed to "over 14 years of age." Removed "Extrication >20 min", "Separation from bike" and "Major auto deformity > 20 inches" from Step 3 Criteria. Added "Vehicle Telemetry data consistent with a high risk of injury to "Step 3 Criteria

Revision Log: Trauma Center Policies

11/15/2001 Original adoption/implementation
08/08/2014 "Level II" removed from General Provisions. "Department" changed to "Division." Pediatric age "birth through 14 years of age." Adult age changed to "over 14 years of age." ACS verification is encouraged instead or required. Section VI.d added. Section VIII.1.c & d added. All time definitions removed from individual sections of Level II Trauma Center Requirements. Level II Trauma Center Requirements added. Level III Trauma Center Requirements added. Level IV Trauma Center Requirements added. Revised TEC Committee Duties. Removed closure language. Removed "Extrication >20 min", "Separation from bike" and "Major auto deformity > 20 inches" from Step 3 Criteria

Revision Log: Receiving Hospital Trauma Policies and Procedures

07/01/2008 Revised. No revision log kept.

Revision Log: Changed all "Step 1", "Step 2" to "Red Tier". Changed "Step 3" and "Step 4" to "Yellow Tier". Updated Trauma Triage to updated ACS Guidelines. Changed "Division" to "Program". Updated Receiving hospital data form to reflect new ACS guidelines.

I. INTENT

A. The intent of these policies and procedures is to standardize trauma care in Kern County to include:
   1. Delineate Trauma Center facility and personnel standards for trauma care.

   2. Define standards for Trauma Center designation and retention.

   3. Define standards for Receiving Hospital trauma care.

B. The ultimate goal of these policies is to reduce death and disability related to trauma.

II. AUTHORITY

A. California Health and Safety Code (sections 1798.165 ,1798.170 and 1798.161)

B. California Code of Regulations, Title 22, Division 9, Chapter 7.

III. GENERAL PROVISIONS

A. This policy shall be used to manage trauma care within the County of Kern (County).

B. This policy shall be used by and is applicable to first responders, ambulance services, and hospital emergency departments regarding trauma care in this County and is applicable to the management of patients that meet the County Trauma Triage Criteria.

C. The Emergency Medical Services Program shall be responsible for maintaining policy compliance within the EMS system, and reserves the right to revise or modify this policy when necessary to protect public health and safety.

D. The Kern County Trauma Care System is defined as an “inclusive” system, with designated Level II Trauma Center(s), Level III Trauma Center(s), Level IV Trauma Center(s) and Trauma Receiving Hospital(s).

E. The designated Trauma Center must meet all requirements for its level of designation as listed by the California Code of Regulations (CCR), Title 22, Division 9, Chapter 7. Where applicable, and as described by this policy, the Division reserves the right to define policy above the requirements listed by the CCR. The Program may charge for regulatory costs incurred as a result of Trauma Center application review, designation, and re-designation.

   1. The specific fees are based upon Program costs.
   2. Fee amounts shall be specified in the County Fee Ordinance Chapter 8.13, if applicable.

F. The Kern County Trauma Care System will only be activated for patients meeting the “Kern County Trauma Triage Criteria.” These patients shall hereafter be referred to as patients that meet the “Trauma Triage Criteria”.

G. For the purposes of this policy, a pediatric patient is defined as being age birth through fourteen (14) years of age, and an adult patient is defined as being over fourteen (14) years of age.

H. Direct transportation to the Trauma Center shall refer to transport from the field to the Trauma Center, without stopping at a Receiving Hospital.

I. The Trauma Center will accept all trauma patients that meet “Trauma Triage Criteria” while on open status as outlined in the *Ambulance Destination Decision Policy and Procedures.*

J. Dispatch and response shall follow current *Emergency Medical Services Dispatch Policies and Procedures* and established response configurations.

IV. CRITERIA FOR TRAUMA SYSTEM ACTIVATION

A. Trauma patients must meet the “Kern County Trauma Triage Criteria” to warrant activation of the Kern County Trauma Care System.

B. Upon patient contact in the field, or arrival in the emergency department, all trauma patients shall be triaged using the “Kern County Trauma Triage Criteria.”

C. If Kern County Trauma Care System was activated in the field, prior to patient’s arrival at the Trauma Center, the Trauma Center’s emergency department attending physician, in consultation with the trauma surgeon if present or available, shall re-triage the patient on arrival to their facility, utilizing the “Trauma Triage Criteria”.

D. If the Kern County Trauma Care System was activated in the field, prior to patient’s arrival at the Receiving Hospital, the Receiving Hospital’s emergency department shall re-triage the patient on arrival to their facility, utilizing the “Trauma Triage Criteria”. If the patient continues to meet “Trauma Triage Criteria”, the activation continues. If the patient no longer meets “Trauma Triage Criteria”, the Trauma Care System may be deactivated (See Trauma System Deactivation**)**

E. A Receiving Hospital may only activate or deactivate when in direct patient contact.

F. Kern County Trauma Triage Criteria is as follows:

KERN COUNTY TRAUMA TRIAGE CRITERIA

Red Tier
High Risk for Serious Injury

Mental Status & Vital Signs

All Patients
- Unable to follow commands (motor GCS < 6)
- RR < 10 or > 29 breaths/min
- Respiratory distress or need for respiratory support
- Room-air pulse oximetry < 90%

Age 0–9 years
- SBP < 70mm Hg + (2 x age years)

Age 10–64 years
- SBP < 90 mmHg or
- HR > SBP

Age ≥ 65 years
- SBP < 110 mmHg or
- HR > SBP

Injury Patterns

- Penetrating injuries to head, neck, torso, and proximal extremities
- Skull deformity, suspected skull fracture
- Suspected spinal injury with new motor or sensory loss
- Chest wall instability, deformity, or suspected flail chest
- Suspected pelvic fracture
- Suspected fracture of two or more proximal long bones
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Active bleeding requiring a tourniquet or wound packing with continuous pressure

Patients meeting any one of the above Red Tier criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system.

Yellow Tier
Moderate Risk for Serious Injury

Mechanism of Injury

- High-Risk Auto Crash
  - Partial or complete ejection
  - Significant intrusion (including roof)
    - >12 inches occupant site OR
    - >18 inches any site OR
    - Need for extrication for entrapped patient
  - Death in passenger compartment
  - Child (Age 0–9) unrestrained or in unsecured child safety seat
  - Vehicle telemetry data consistent with severe injury
- Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.)
- Pedestrian/bicycle rider thrown, run over, or with significant impact
- Fall from height > 10 feet (all ages)

EMS Judgement

Consider risk factors, including:

- Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy > 20 weeks
- Burns in conjunction with trauma
- Children should be triaged preferentially to pediatric capable centers

If concerned, take to a trauma center.

Patients meeting any one of the Yellow Tier Criteria DO NOT need to be transported to a trauma receiving facility. Although base contact with a trauma receiving facility is recommended.

V. PREHOSPITAL TRAUMA SYSTEM ACTIVATION

A. If a trauma patient meets the “Trauma Triage Criteria”, the Kern County Trauma Care System shall be activated as follows:

1. The following personnel are authorized to triage and then activate the Trauma Care System as follows:

a. Public Safety EMT or Public Safety Paramedic First Responders:

i. Public Safety EMT or Public Safety Paramedic First Responder’s shall activate the Trauma Care System:

a) If Public Safety EMT or Public Safety Paramedic First Responder’s arrive first on scene; and

b) If the trauma patient meets Red Tier criteria as defined by the “Trauma Triage Criteria”.

ii. Public Safety EMT or Public Safety Paramedic First Responder’s will notify ECC.

iii. ECC will notify the Trauma Center and the responding ambulance service.

b. The Trauma Care System is formally activated upon Trauma Center receipt of notification from ECC.

c. BLS Transport Personnel

i. “Trauma Triage Criteria” Red Tier - BLS transport personnel shall activate the Trauma Care System:

a) If BLS Transport Personnel arrive first on scene; or

b) If the Trauma Care System has not been previously activated as a Red Tier; and

c) If the trauma patient meets Red Tier criteria as defined by the “Trauma Triage Criteria”.

ii. “Trauma Triage Criteria” Yellow Tier “Mechanism of Injury”

a) BLS transport personnel shall consult a Level II Trauma Center Base Station emergency department attending physician to determine if activation of the Trauma Care System is warranted (as defined in the Trauma System Destination section of this policy) if:

1. BLS transport personnel arrive on scene and the Trauma Care System was not previously activated as a Step 1 or 2; and

2. The trauma patient meets Yellow Tier "Mechanism of Injury" criteria as defined by the "Trauma Triage Criteria".

b) After consultation, a Level II Trauma Center Base Station emergency department attending physician may activate the Trauma Care System.

iii. "Trauma Triage Criteria" Yellow Tier "EMS Judgement"

a) BLS transport personnel may consider consulting a Level II Trauma Center Base Station emergency department attending physician to determine if activation of the Trauma Care System is warranted (as defined in the Trauma System Destination section of this policy) if:

1. BLS transport personnel arrive on scene and the Trauma Care System was not previously activated as a Red Tier; and

2. The trauma patient meets Yellow Tier "EMS Judgement" criteria as defined by the "Trauma Triage Criteria".

b) After consultation, a Level II Trauma Center Base Station emergency department's attending physician may activate the Trauma Care System.

iv. BLS transport personnel will activate the Trauma Care System by communicating directly with a Level II Trauma Center Base Station.

a) If BLS transport personnel are unable to communicate directly with a Level II Trauma Center Base Station, they may relay the notification through their ambulance dispatch.

b) The Trauma Care System is formally activated upon Trauma Center receipt of notification.

c) BLS transport personnel shall update their destination facility (Trauma Center or Trauma Receiving Hospital) of the patient's status and ETA as soon as possible after leaving the scene, or while on scene, if notification will not delay transport.

d. ALS Transport Personnel

i. "Trauma Triage Criteria" Red Tier- ALS transport personnel shall activate the Trauma Care System:

a) If ALS transport personnel arrive first on scene; or

b) If the Trauma Care System has not been previously activated as a Red Tier; and

c) If the trauma patient meets Red Tier criteria as defined by the "Trauma Triage Criteria".

ii. "Trauma Triage Criteria" Yellow Tier "Mechanism Injury"

a) ALS transport personnel may consult a Level II Trauma Center Base Station emergency department attending physician to determine if activation of the Trauma Care System is warranted (as defined in the Trauma System Destination section of this policy) if:

1. ALS transport personnel arrive on scene and the Trauma Care System was not previously activated as a Red Tier; and

2. The trauma patient meets Yellow Tier "Mechanism of Injury" criteria as defined by the "Trauma Triage Criteria".

b) After consultation, a Level II Trauma Center Base Station emergency department's attending physician may activate the Trauma Care System.

iii. "Trauma Triage Criteria" Yellow Tier "EMS Judgement"

a) ALS transport personnel may consider consulting a Level II Trauma Center Base Station emergency department attending physician to determine if activation of the Trauma Care System is warranted (as defined in the Trauma System Destination section of this policy) if:

1. ALS transport personnel arrive on scene and the Trauma Care System was not previously activated as a Red Tier; and

2. The trauma patient meets Yellow Tier "EMS Judgement" criteria as defined by the "Trauma Triage Criteria".

b) After consultation, a Level II Trauma Center Base Station emergency department's attending physician may activate the Trauma Care System.

iv. ALS transport personnel will activate the Trauma Care System by communicating directly with a Level II Trauma Center Base Station.

a) If ALS transport personnel are unable to communicate directly with a Level II Trauma Center Base Station, they may relay the notification through their ambulance dispatch.

b) The Trauma Care System is formally activated upon Trauma Center receipt of notification.

c) ALS transport personnel shall update their destination facility (Trauma Center or Trauma Receiving Hospital) of the patient's status and ETA as soon as possible after leaving the scene, or while on scene, if notification will not delay transport.

v. Documenting the Activation

a) If Red Tier criteria are met the PCR should indicate "Red Tier Activation" and the narrative section should explain any deviation from a trauma center destination.

b) If Yellow Tier criteria are met the PCR should indicate "Trauma Consult, Activation" or " Trauma Consult, No Activation" and the narrative section should explain any deviation from a trauma center destination. If no consult made, document "Yellow Tier Activation".

B. All prehospital personnel shall include the following information when activating the Trauma Care System.

1. General location & number of victims.

2. Individual patient:

a. Age

b. Sex

c. Brief description of injuries

d. Criteria for activation

VI. TRAUMA SYSTEM DEACTIVATION

A. When the Trauma Care System has been previously activated and the patient no longer meets "Trauma Triage Criteria", prehospital ambulance personnel may request deactivation in accordance with the following:

1. BLS Transport Personnel Deactivations:

a. BLS Transport Personnel may deactivate the Trauma Care System if the following conditions are met:

i. BLS Transport Personnel shall be in direct patient contact and must have patient healthcare authority; and

ii. In communication with a Level II Trauma Center Base Station emergency department's attending physician, the physician gives the order to deactivate the Trauma Care System. Order to deactivate can be relayed through the MICN.

b. In the event BLS Transport Personnel consult a Level II Trauma Center Base Station for deactivation, the final decision and responsibility for Trauma Care System deactivation or continued activation lies with the Level II Trauma Center Base Station emergency department's attending physician.

c. If the BLS Transport Personnel are unable to communicate directly with a Level II Trauma Center Base Station, the Trauma Care System shall remain activated.

2. ALS Transport Personnel Deactivations:

a. ALS Transport Personnel may deactivate the Trauma Care System if the following conditions are met:

i. ALS Transport Personnel shall be in direct patient contact and must have patient healthcare authority; and

ii. In communication with a Level II Trauma Center Base Station emergency department's attending physician, the physician gives the order to deactivate the Trauma Care System. Order to deactivate can be relayed through the MICN; or

iii. If ALS Transport Personnel is unable to establish communications with a Level II Trauma Center Base Station, they may unilaterally deactivate the Trauma Care System, and notify the Trauma Center of the deactivation as soon as communications are possible. This may be done via the ambulance provider's dispatch; or

iv. If it is a multiple casualty incident, ALS Transport Personnel may unilaterally deactivate the Trauma Care System and notify the Trauma Center of the deactivation via the ambulance provider's dispatch.

b. In the event ALS Transport Personnel consult a Level II Trauma Center Base Station for deactivation, the final decision and responsibility for Trauma Care System deactivation or continued activation is the Level II Trauma Center Base Station emergency department's attending physician.

3. Public Safety EMT or Public Safety Paramedic First Responders may not unilaterally deactivate the Trauma Care System

4. If the Trauma Care System was activated by a Level II Trauma Center Base Station attending physician order, the Trauma Care System shall remain activated unless deactivated by a Level II Trauma Center Base Station emergency department's attending physician order.

5. The Kern County EMS Program may activate or deactivate the Trauma Care System during Med-Alert operations.

B. A Trauma Center emergency department attending physician may dismiss some or all members of the trauma response team if the patient, on arrival to the Trauma Center, no longer requires services from some or all members of the team based on a comprehensive patient assessment.

C. If the Receiving Hospital emergency department physician, in consult with the Trauma Center emergency department attending physician, determines that the trauma patient no longer meets "Trauma Triage Criteria", or that activation is no longer necessary based on a comprehensive assessment, the Kern County Trauma Care System activation may be deactivated. The final decision and responsibility for deactivation lies with the Receiving Hospital's emergency department physician if the patient is in the Receiving Hospital's emergency department. The Trauma Care System is formally deactivated upon Trauma Center receipt of notification.

VII. TRAUMA SYSTEM DESTINATIONS

A. Advanced Life Support (ALS) Transport

1. Trauma – Extremis

a. If in Trauma Center Catchment Area:

i. Traumatic arrest ⇒ Trauma Center
(See termination of resuscitation policy)

ii. Unmanageable airway or inability to ventilate ⇒ Closest Base Hospital (Receiving Hospital or Trauma Center)

b. If in Receiving Hospital Catchment Area ⇒ Transport to closest Receiving Hospital

i. Traumatic arrest
(See termination of resuscitation policy)

ii. Unmanageable airway or inability to ventilate

2. Trauma - Red Tier ⇒ Transport to the closest appropriate Level II Trauma Center.

   a. Trauma Triage Criteria Red Tier

   b. A Level II Trauma Center Base Station may be contacted for destination advice in unusual circumstances (i.e. Weather or roadway obstructions).

3. Trauma – Yellow Tier ⇒ Consider Trauma Consult

   a. Trauma Triage Criteria Yellow Tier Met

   b. Consult = Discretionary (ALS Transport Personnel discretion).

   c. Contact a Level II Trauma Center Base Station for activation and destination advice

B. Basic Life Support (BLS) Transport

1. Trauma – Extremis

   a. If in Trauma Center Catchment Area:

      i. Traumatic arrest ⇒ Trauma Center
      (See termination of resuscitation policy)

      ii. Unmanageable airway or inability to ventilate ⇒ Closest Base Hospital (Receiving Hospital or Trauma Center)

   b. If in Receiving Hospital Catchment Area ⇒ Transport to closest Receiving Hospital

      i. Traumatic arrest
      (See termination of resuscitation policy)

      iii. Unmanageable airway or inability to ventilate

2. Trauma – Red Tier

   a. If in Trauma Center Catchment Area ⇒ Trauma Center

      i. Red Tier

   b. If Receiving Hospital Catchment Area ⇒ Closest Hospital

      i. Red Tier

3. Trauma – Yellow Tier ⇒ Mandatory Trauma Consult

a. Trauma Triage Criteria Yellow Tier Met

b. Consult = Discretionary (BLS Transport Personnel discretion)

a. If a consultation is decided by BLS Transport Personnel, contact a Level II Trauma Center Base Station for activation and destination advice.

VIII. TRANSPORT DESTINATION EXCEPTIONS

A. Trauma patients which do not meet the criteria for Trauma Care System activation, or for which the Trauma Care System has been deactivated, will be transported to the closest, most appropriate hospital, in accordance with the applicable EMS system and Program operational procedures.

B. If a trauma patient meeting the criteria for Trauma Care System activation refuses patient transport to the Trauma Center the Trauma Center shall be notified.

C. Prehospital personnel shall complete an EMS "Against Medical Advice" (AMA) form provided by the prehospital provider and attempt to have the "AMA" form signed by the refusing party.

1. A copy of the EMS "AMA" form shall be maintained by the prehospital provider company.

2. A copy of the EMS "AMA" will be made available upon request by the EMS Division with the Patient Care Record (PCR).

D. In cases where weather or roadway obstructions will significantly extend transport time to the Trauma Center, ambulance transport personnel may transport to the closest, most appropriate hospital emergency department.

1. The Level II Trauma Center Base Station should be consulted in unusual circumstances, if possible.

2. Any deviation from the Trauma Center shall be clearly documented in the patient care report.

E. If the Trauma Center is on hospital disaster closure status, the patient shall be transported to the closest, most appropriate hospital emergency department.

F. In cases where the Kern County Med-Alert System is activated, all patients will be transported in accordance with EMS Division MCI policy. In the case of non-communication with EMS staff, all patients will be transported in accordance with EMS policy.

IX. PRE-HOSPITAL TIME STANDARDS

A. Prehospital resource response time standards are detailed in the Kern County Ambulance Ordinance, Chapter 8.12. and associated regulations, policies and procedures.

B. EMS Aircraft: The use of EMS aircraft transport for Trauma Care System activations shall be in accordance with the *EMS Aircraft Dispatch-Response-Utilization Policies & Procedures.*

C. "Golden Hour" goal: A maximum of one (1) hour from time of injury to arrival time at a Trauma Center.

D. On –scene time goal:

1. Maximum of ten (10) minutes from scene arrival to scene departure time, for patients that meet "Trauma Triage Criteria".

2. If the on-scene time goal is not met, EMS field personnel are expected to document the reasons for delay on the patient care record (PCR).

3. The following exceptions to the on-scene time goal requirement will be taken into consideration:

   a. Complicated extrication;

   b. Multiple casualties; or

   c. Remote scene location.

X. EMERGENCY TRANSFER CRITERIA

A. If the patient has been transported to a Trauma Receiving Hospital, Level III or IV Trauma Center activated as a Red Tier and during re-triage the patient meets the following "*Emergency Transfer*" criteria the patient should be transferred to a higher-level Trauma Center within an hour.

B. "Emergency Transfer" Criteria:

1. Blood pressure less than 90 systolic

2. 2 liters of fluid or any amount of blood product

3. GCS less than 8 or a drop of 2 points during the visit

4. Mydriasis (Blown Pupil)

5. Open skull fracture

6. Penetrating injury to head, neck, chest or abdomen

7. Extremity injury with ischemia evident or loss of pulses

8. Pelvic ring disruption or unstable pelvic fracture

9. Vascular injuries with active arterial bleed

10. Patients who need life limb surgery within 2 hours

C. After identifying one of the above criteria, the higher-level Trauma Center should be notified of a trauma activation and a transport agency should be contacted for immediate transfer.

XI. TRAUMA SYSTEM INTERFACILITY TRANSFER

A. As an inclusive trauma system, all hospitals will have a role in providing trauma care to injured patients.

1. The Trauma Center(s) will be required to establish and maintain a transfer agreement with the Receiving Hospitals for the transfer of patients that meet "Trauma Triage Criteria".

2. The Trauma Center is obligated to immediately accept all patients that meet trauma triage criteria from the Receiving Hospitals in Kern County unless hospital disaster closure or Med-Alert Routing status is in effect.

3. Once the Trauma Center returns to open status, they are once again obligated to receive all trauma patient transfers that meet "Trauma Triage Criteria".

B. Initial management of patients the meet "Trauma Triage Criteria" should continue while efforts are made to transfer the patient.

C. To initiate a transfer, a call shall be placed by the Receiving Hospital emergency physician or emergency department R.N., to the Trauma Center emergency department attending physician.

1. This phone call shall be answered by the Trauma Center emergency department attending physician immediately.

2. The verbal report for transfer shall be physician to physician.

D. Transferring facilities, in conjunction with the Trauma Center(s), will be responsible for obtaining the appropriate level of transportation when transferring trauma patients within the time standard.

1. Consideration of transport modality (ground vs air) should be a collaborative decision between transferring hospital and the Trauma Center, and should be based upon total time to the Trauma Center, not just shorter transport times.

    a. Mode of transport decisions should be made as soon as possible.

    b. The goal is to get any Red Tier trauma activation to the highest-level trauma center in the shortest amount of time, while still providing lifesaving stabilization as the patient transitions from scene to a Level I/II Trauma Center.

    c. If the patient is triaged as a Red Tier activation and is transported to a Trauma Receiving Hospital, level III or IV Trauma Center, rapid transfer should be initiated if appropriate as determined by the receiving trauma center.

2. All patient transfers must meet the criteria listed in the California Code of Regulations – Title 22 – Article 5, COBRA requirements, and the California Health and Safety Code.

3. Patients that meet “Trauma Triage Criteria” may be transferred between and from Trauma Centers providing that any transfer shall be, as determined by the Trauma Center surgeon of record medically prudent.

E. If a trauma patient meeting “Trauma Triage Criteria” or responsible party refuses patient transfer to the Trauma Center, the Trauma Center will be notified, and the Receiving Hospital should attempt to have an “Against Medical Advice” (AMA) form signed. A copy of the EMS AMA form will be submitted to the EMS Program in these cases. (See Appendix B).

XII. TRAUMA CENTER TIME STANDARDS

A. Staff response times shall be documented in the hospital patient care record for EMS review.

B. For the purposes of these time standards, the trauma patient that meets “Trauma Triage Criteria” shall be referred to as the “patient”.

C. The following time standards shall apply to a trauma center as outlined by Title 22, Division 9, Chapter 7.

1. “In-house” is defined as being physically present in the trauma center and available as follows for trauma team activation:

    a. Goal: Initiate a response within 2 (two) minutes; and

b. Mandatory Standard: Arrive to the patient treatment area within ten (10) minutes of call time with a minimum documented compliance rate of 80%, and in no case greater than fifteen (15) minutes, from staff call time; or

c. Mandatory Standard: If the trauma center is notified of an incoming "trauma code" with an ETA of greater than five (5) minutes, the trauma team member shall be physically present in the patient treatment area upon patient arrival.

2. "Immediately available" requires the specified healthcare professional to:

a. Goal: Initiate a response within 5 minutes; and

b. Mandatory Standard: Arrive to the patient treatment area within twenty (20) minutes of call time with a minimum documented compliance rate of 80%, and in no case greater than twenty-five (25) minutes, from staff call time.

3. "Promptly available" requires the specified healthcare professional to:

a. Goal: Initiate a response within five (5) minutes; and

b. Mandatory Standard: Arrive to the patient treatment area within thirty (30) minutes with a minimum documented compliance rate of 80%, and in no case greater than thirty-five (35) minutes, from staff call time.

4. "On-site" is defined as physical coverage within the treatment area at all times.

5. "On-call" requires the specified healthcare professional to be available to respond for trauma care in a defined manner and time period (i.e. "immediately available", "promptly available", "in-house", and "on-site").

XIII. RECEIVING HOSPITAL TIME GOAL AND STANDARDS

A. Golden Hour Goal: A maximum of one (1) hour from time of injury to patient arrival at a Trauma Center.

B. Receiving Hospital Time Standard: A patient that meets "Trauma Triage Criteria" shall be transferred, within one hour, to the Trauma Center. This standard will be measured from patient's emergency department arrival time, or after arrival time when "Trauma Triage Criteria" is met, to emergency department exit time.

XIV. LEVEL II TRAUMA CENTER REQUIREMENTS

A. Level II trauma centers shall have appropriate pediatric equipment and supplies and be capable of initial evaluation and treatment of pediatric trauma patients. Level II trauma centers without a pediatric intensive care unit (PICU) shall

establish and use written criteria for consultation and transfer of pediatric patients needing intensive care.

B. A Level II trauma center shall have at least the following:

1. A trauma program medical director who is a board-certified surgeon, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care such as:

   a. Recommending trauma team physician privileges;

   b. Working with nursing and administration to support the needs of trauma patients;

   c. Developing trauma treatment protocols;

   d. Determining appropriate equipment and supplies for trauma care;

   e. Ensuring the development of policies and procedures to manage domestic violence, elder and child abuse and neglect;

   f. Having authority and accountability for the quality improvement peer review process;

   g. Correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet standards;

   h. Coordinating pediatric trauma care with other hospital and professional services;

   i. Coordinating with the Division and State EMS agencies;

   j. Assisting in the coordination of the budgetary process for the trauma program; and

   k. Identifying representatives from neurosurgery, orthopedic surgery, emergency medicine, pediatrics and other appropriate disciplines to assist in identifying physicians from their disciplines who are qualified to be members of the trauma program.

2. A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of the adult and/or pediatric trauma patient, administrative ability, and responsibilities that include but are not limited to:

   a. Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

b. Coordinating day-to-day clinical process and performance improvement as it pertains to nursing and ancillary personnel; and

c. Collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

3. A trauma service which can provide for the implementation of the requirements specified in this Section and provide for coordination with the Division.

4. A trauma team, which is a multidisciplinary team responsible for the initial resuscitation and management of the trauma patient.

5. For the purposes of this policy, a Qualified Specialist means a physician licensed in California who is board certified in a specialty by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, a Canadian board or other appropriate foreign specialty board as determined by the American Board of Medical Specialties for that specialty. A non-board certified physician may be recognized as a qualified specialist by the Division upon substantiation of need by a trauma center if:

a. The physician can demonstrate to the appropriate hospital body and the hospital is able to document that he/she has met the requirements which are equivalent to those of the Accreditation Council for Graduate Medical Education (ACGME) or the Royal College of Physicians and Surgeons of Canada;

b. The physician can clearly demonstrate to the appropriate hospital body that he/she has substantial education, training, and experience in treating and managing trauma patients which shall be tracked by the trauma quality improvement program; and

c. The physician has successfully completed a residency program.

6. Department(s), division(s), service(s) or section(s) that include at least the following surgical specialties, which are staffed by qualified specialists:

a. General;

b. Neurologic;

c. Obstetric/gynecologic;

d. Ophthalmologic;

e. Oral or maxillofacial or head and neck;

f. Orthopaedic;

g. Plastic; and

h. Urologic .

7. Department(s), division(s), service(s) or section(s) that include at least the following non-surgical specialties, which are staffed by qualified specialists:

a. Anesthesiology;

b. Internal medicine;

c. Pathology;

d. Psychiatry; and

e. Radiology.

8. An emergency department, division, service or section staffed with qualified specialists in emergency medicine who are immediately available.

9. Qualified surgical specialist(s) or specialty availability, which shall be available as follows:

a. General surgeon capable of evaluating and treating adult and pediatric trauma patients shall be immediately available for trauma team activation and promptly available for consultation;

b. On-call and promptly available:

i. Neurologic;

ii. Obstetric/gynecologic;

iii. Ophthalmologic;

iv. Oral or maxillofacial or head and neck;

v. Orthopaedic;

vi. Plastic;

vii. Reimplantation/microsurgery capability - This surgical service may be provided through a written transfer agreement; and

viii. Urologic.

c. Requirements may be fulfilled by supervised senior residents as defined in Section 100245 of Title 22 Division 9 Chapter 7 who are capable of assessing emergent situations in their respective specialties.

i. When a senior resident is the responsible surgeon:

ii. The senior resident shall be able to provide the overall control and surgical leadership necessary for the care of the patient, including initiating surgical care;

iii. A staff trauma surgeon or a staff surgeon with experience in trauma care shall be on-call and promptly available;

iv. A staff trauma surgeon or a staff surgeon with experience in trauma care shall be advised of all trauma patient admissions, participate in major therapeutic decisions, and be present in the emergency department for major resuscitations and in the operating room for all trauma operative procedures.

d. Available for consultation or consultation and transfer agreements for adult and pediatric trauma patients requiring the following surgical services;

i. Burns;

ii. Cardiothoracic;

iii. Pediatric;

iv. Reimplantation/microsurgery; and

v. Spinal cord injury.

10. Qualified non-surgical specialist(s) or specialty availability, which shall be available as follows:

a. Emergency medicine, in-house and immediately available at all times.

i. This requirement may be fulfilled by supervised senior residents, as defined in Section 100245 of Title 22, Division 9, Chapter 7, in emergency medicine, who are assigned to the emergency department and are serving in the same capacity.

ii. In such cases, the senior resident(s) shall be capable of assessing emergency situations in trauma patients and of providing for initial resuscitation.

iii. Emergency medicine physicians who are qualified specialists in emergency medicine and are board certified in emergency medicine shall not be required by the Division to complete an advanced trauma life support (ATLS) course.

iv. Current ATLS verification is required for all emergency medicine physicians who provide emergency trauma care and are qualified specialists in a specialty other than emergency medicine.

b. Anesthesiology shall be promptly available with a mechanism established to ensure that the anesthesiologist is in the operating room when the patient arrives.

i. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing any indicated treatment and are supervised by the staff anesthesiologist.

ii. In such cases, the staff anesthesiologist on-call shall be advised about the patient, be promptly available at all times, and be present for all operations.

c. Radiology, promptly available; and

d. Available for consultation:

i. Cardiology;

ii. Gastroenterology;

iii. Hematology;

iv. Infectious diseases;

v. Internal medicine;

vi. Nephrology;

vii. Neurology;

viii. Pathology; and

ix. Pulmonary medicine.

C. In addition to licensure requirements, trauma centers shall have the following service capabilities:

1. Radiological service - The radiological service shall have immediately available a radiological technician capable of performing plain film and computed tomography imaging.

2. A radiological service shall have the following additional services promptly available:

    a. Angiography

    b. Ultrasound

3. Clinical laboratory service - A clinical laboratory service shall have:

    a. A comprehensive blood bank or access to a community central blood bank; and

    b. Clinical laboratory services immediately available.

4. Surgical service - A surgical service shall have an operating suite that is available or being utilized for trauma patients and that has:

    a. Operating staff who are promptly available unless operating on trauma patients and back-up personnel who are promptly available; and

    b. Appropriate surgical equipment and supplies as determined by the trauma program medical director.

5. A Level II trauma center shall have a basic or comprehensive emergency service which has special permits issued pursuant to Chapter 1, Division 5 of Title 22.

6. The emergency service shall:

    a. Designate an emergency physician to be a member of the trauma team;

    b. Provide emergency medical services to adult and pediatric patients; and

    c. Have appropriate adult and pediatric equipment and supplies as approved by the director of emergency medicine in collaboration with the trauma program medical director.

D. In addition to the special permit licensing services, a trauma center shall have, pursuant to Section 70301 of Chapter 1, Division 5 of Title 22 of the California Code of Regulations, the following approved supplemental services:

1. Intensive Care Service:

a. The ICU shall have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and the trauma program medical director;

b. The ICU shall have a qualified specialist promptly available to care for trauma patients in the intensive care unit. The qualified specialist may be a resident with two (2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decision making; and

c. The qualified specialist in (b) above shall be a member of the trauma team.

2. Burn Center - This service may be provided through a written transfer agreement with a Burn Center

3. Physical Therapy Service - Physical therapy services to include personnel trained in physical therapy and equipped for acute care of the critically injured patient.

4. Rehabilitation Center - Rehabilitation services to include personnel trained in rehabilitation care and equipped for acute care of the critically injured patient. These services may be provided through a written transfer agreement with a rehabilitation center.

5. Respiratory Care Service - Respiratory care services to include personnel trained in respiratory therapy and equipped for acute care of the critically injured patient

6. Acute hemodialysis capability

7. Occupational therapy service - Occupational therapy services to include personnel trained in occupational therapy and equipped for acute care of the critically injured patient

8. Speech therapy service - Speech therapy services to include personnel trained in speech therapy and equipped for acute care of the critically injured patient

9. Social Service

E. A trauma center shall have the following services or programs that do not require a license or special permit.

1. Pediatric Service. In addition to the requirements in Division 5 of Title 22 of the California Code of Regulations, the pediatric service providing in-house pediatric trauma care shall have:

a. A pediatric intensive care unit approved by the California State Department of Health Services' California Children Services (CCS); or a written transfer agreement with an approved pediatric intensive care unit. Hospitals without pediatric intensive care units shall establish and utilize written criteria for consultation and transfer of pediatric patients needing intensive care; and

b. A multidisciplinary team to manage child abuse and neglect.

2. Acute spinal cord injury management capability. This service may be provided through a written transfer agreement with a Rehabilitation Center;

3. Protocol to identify potential organ donors as described in Chapter 3.5, Division 7 of the California Health and Safety Code;

4. An outreach program, to include:

   a. Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas

   b. Trauma prevention for the general public

5. Written interfacility transfer agreements with referring and specialty hospitals

6. Continuing education in trauma care shall be provided for:

   a. Staff physicians

   b. Staff nurses

   c. Staff allied health personnel

   d. EMS personnel

   e. Other community physicians and health care personnel

7. Telecommunications

   a. The Level II Trauma Center shall be an approved Base Station by the Division.

   b. Level II Trauma Center Base Station shall have access to Med 9, a dedicated MED channel assigned by the Division, and a dedicated pre-hospital telephone line for patient information. MED 9, the assigned MED channel and the dedicated phone line must be recorded.

XV. LEVEL III TRAUMA CENTER REQUIREMENTS

A. A Level III trauma center shall include equipment and resources necessary for initial stabilization and personnel knowledgeable in the treatment of adult and pediatric trauma.

B. A Level III trauma center shall have at least the following:

1. A trauma program medical director who is a qualified surgical specialist, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care such as:

   a. Recommending trauma team physician privileges;

   b. Working with nursing administration to support the nursing needs of trauma patients;

   c. Developing trauma treatment protocols;

   d. Having authority and accountability for the quality improvement peer review process;

   e. Correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet the standards of the quality improvement program; and

   f. Assisting in the coordination of budgetary process for the trauma program.

2. A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of adult and/or pediatric trauma patients, administrative ability, and responsibilities that include, but are not limited to:

   a. Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

   b. Coordinating day-to-day clinical process and performance improvement as pertains to nursing and ancillary personnel, and

   c. Collaborating with the trauma program medical director in carrying out the educational, clinical research, administrative and outreach activities of the trauma program.

3. A trauma service which can provide for the implementation of the requirements specified in this Section and provide for coordination with the Division.

4. The capability of providing prompt assessment, resuscitation and stabilization to trauma patients.

5. The ability to provide treatment or arrange for transportation to a higher-level trauma center as appropriate.

6. A basic or comprehensive emergency department, division, service, or section staffed so that trauma patients are assured of immediate and appropriate initial care.

7. Intensive Care Service:

    a. The ICU shall have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and the trauma program medical director;

    b. The ICU shall have a qualified specialist promptly available to care for trauma patients in the intensive care unit.

    c. The qualified specialist may be a resident with two (2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decision making; and the qualified specialist shall be a member of the trauma team;

8. A trauma team, which will be a multidisciplinary team responsible for the initial resuscitation and management of the trauma patient.

9. Qualified surgical specialist(s) who shall be promptly available:

    a. General;

    b. Orthopedic; and

    c. Neurosurgery (can be provided through a transfer agreement).

10. Qualified non-surgical specialist(s) or specialty availability, which shall be available as follows:

    a. Emergency medicine, “in-house” and “immediately available”; and

    b. Anesthesiology, “on-call” and “promptly available” with a mechanism established to ensure that the anesthesiologist is in the operating room when the patient arrives.

        i. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing any indicated emergent anesthesia treatment and are supervised by the staff anesthesiologist.

ii. In such cases, the staff anesthesiologist on-call shall be advised about the patient, be “promptly available” at all times, and be present for all operations.

11. The following services shall be “in-house” or may be provided through a written transfer agreement:

    a. Burn care

    b. Pediatric care

    c. Rehabilitation services

12. The following service capabilities:

    a. Radiological service - The radiological service shall have a radiological technician “promptly available”.

    b. Clinical laboratory service - A clinical laboratory service shall have:

        i. A comprehensive blood bank or access to a community central blood bank; and

        ii. Clinical laboratory services “promptly available”.

    c. Surgical service - A surgical service shall have an operating suite that is available or being utilized for trauma patients and that has:

        i. Operating staff who are “promptly available”; and

        ii. Appropriate surgical equipment and supplies requirements which have been approved by the trauma program medical director.

13. Written transfer agreements with Level I or II trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for the immediate transfer of those patients for whom the most appropriate medical care requires additional resources

14. An outreach program, to include:

    a. Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas

    b. Trauma prevention for the general public

15. Continuing education in trauma care, shall be provided for:

a. Staff physicians

b. Staff nurses

c. Staff allied health personnel

d. EMS personnel

e. Other community physicians and health care personnel

16. Telecommunications

a. The Level III Trauma Center shall be an approved Base Station by the Division.

b. The Level III Trauma Center Base Station shall have access to Med 9 at a minimum a dedicated MED channel assigned by the Division, and a dedicated pre-hospital telephone line for patient information. MED 9, the assigned MED channel and the dedicated phone line must be recorded.

XVI. LEVEL IV TRAUMA CENTER REQUIREMENTS

A. A Level IV trauma center shall include equipment and resources necessary for initial stabilization and personnel knowledgeable in the treatment of adult and pediatric trauma.

B. A Level IV trauma center shall have at least the following:

1. A trauma program medical director who is a qualified specialist whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care, including pediatric trauma care, such as:

a. Recommending trauma team physician privileges;

b. Working with nursing administration to support the nursing needs of trauma patients;

c. Developing treatment protocols;

d. Having authority and accountability for the quality improvement peer review process;

e. Correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet the standards of the quality improvement program; and

f. Assisting in the coordination of the budgetary process for the trauma program.

2. A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of adult and/or pediatric trauma patients, administrative ability, and responsibilities that include, but are not limited to:

   a. Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient.

   b. Coordinating day-to-day clinical process and performance improvement as it pertains to nursing and ancillary personnel.

   c. Collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

3. A trauma service which can provide for the implementation of the requirements specified in this policy and provide for coordination with the Division.

4. The capability of providing immediate assessment, resuscitation and stabilization to trauma patients.

5. The ability to provide treatment or arrange transportation to higher level trauma center as appropriate.

6. A standby, basic or comprehensive emergency department staffed so that trauma patients are assured of immediate and appropriate initial care

7. A trauma team, which will be a multidisciplinary team responsible for the initial resuscitation and management of the trauma patient.

8. The following service capabilities must be available at all times.

   a. Radiologist - The radiologist shall be “on-call” and “promptly available”.

   b. Clinical Laboratory Service - A clinical laboratory service shall have:

      i. A comprehensive blood bank or access to a community central blood bank

      ii. Clinical laboratory services

9. Telecommunications

   a. A Level IV Trauma Center shall have radio communication capabilities.

b. A Level IV Trauma Center shall have access to Med 9 at a minimum and be recorded.

10. If the facility is a licensed general acute care hospital with a special permit for basic or comprehensive emergency service they shall be a Division approved Base Station.

11. Written transfer agreements with Level I, II or III trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for the immediate transfer of those patients for whom the most appropriate medical care requires additional resources.

    a. Must have a written transfer agreement with a Level I or II trauma center located in Kern County at a minimum.

12. An outreach program, to include:

    a. Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas

    b. Trauma prevention for the general public

13. Continuing education in trauma care, shall be provided for:

    a. Staff physicians

    b. Staff nurses

    c. Staff allied health personnel

    d. EMS personnel

    e. Other community physicians and health care personnel

XVII. TRAUMA CENTER DESIGNATION/REDESIGNATION

A. A hospital wishing to seek designation as a trauma center shall apply to the Program for designation as a Trauma Center.

B. Designation Prerequisites

1. Hospitals seeking formal designation as a trauma center shall meet the following requirements:

    a. Possess current California licensure as an acute care hospital and have a Standby, Basic or Comprehensive Permit

b. Possess a current contract with the County as a Paramedic Base Hospital, as part of the EMS System.

c. Possess a transfer agreement between applicant trauma center and each trauma receiving hospital and higher and lower level trauma center in the County whereby applicant trauma center agrees to immediately and rapidly accept the transfer of a Trauma Patient from the transferring hospital upon notification of TRAUMA ACTIVATION.

d. Execute an agreement between the Trauma Center and the County of Kern to formally designate the hospital as a Trauma Center.

e. All requirements as outlined in Title 22, Division 9, Chapter 7.

2. Any designated Trauma Center which is unable to meet the following requirements shall be subject to termination or un-designation as Trauma Center:

a. Inability to maintain Designation criteria, listed in B.1., above, or

b. Failure to meet the Trauma Center Requirements, listed in section IX-XII and as may be amended from time to time, or

c. Failure to comply with any policy, procedure, or regulation mandated by the Local, State, or Federal Government.

C. If the Program finds a Trauma Center to be deficient in meeting the above criteria, the Program will give the Trauma Center written notice, return receipt requested, setting forth with reasonable specificity the nature of the apparent deficiency.

1. Within ten (10) calendar days of receipt of such notice, the Trauma Center must deliver to the Program, in writing, a plan to cure the deficiency, or a statement of reasons why it disagrees with the Program's notice.

2. The Trauma Center shall cure the deficiency within thirty (30) calendar days of receipt of notice of violation.

3. If the Hospital fails to cure the deficiency within the allowed period or disputes the validity of the alleged deficiency, the issue will be brought to the Emergency Medical Care Advisory Board (EMCAB) for adjudication.

4. EMCAB may make a recommendation to the Program for resolving the issue.

D. Re-designation

1. The designated trauma center shall apply for re-designation six (6) months prior to the anniversary of their designation.

2. The re-designation process will be completed as outlined in this policy.

3. The requirements outlined in this section will be maintained to be considered for re-designation.

XVIII. APPLICATION PROCESS FOR TRAUMA CENTER DESIGNATION

A. The following milestones outline the application process for a hospital to become designated or re-designated as a Trauma Center.

1. Review list of requirements as outlined in sections IX-XII and be prepared to provide copies of any documentation verifying the appropriate requirements as determined by the level of trauma center designation being requested.

2. Submit letter of application to the Program. The letter will contain:

   a. Specify intent to obtain Trauma Center designation and what level (I, II, III, IV);

   b. Identify the names and contact information, including email addresses for the Trauma Program Medical Director, RN Program Manager, and Administrative contact;

   c. Identify the anticipated target date for Trauma Center designation; and

   d. List of supporting documents being submitted with the letter to fulfill the designation requirements.

   e. Compile and submit to the Program all information and documents the requirements for designation as outlined in Title 22, Division 9, Chapter 7 and this policy. Reference self-evaluation tool in Appendix.

3. All application materials will be reviewed for completeness.

   a. Additional information will be requested, if needed.

4. Upon determination that the application is complete, the applicant and EMS Program will work towards execution of the designation agreement.

5. Prior to designation the Program may make a site visit to verify requirements as outlined in Sections IX-XII (as appropriate to level of trauma center).

6. Trauma Center Designation agreement will be presented to the Board of Supervisors for approval and formal designation.

7. Appropriate fees must be paid as identified by Kern County Ordinance Chapter 8.13

XIX. EMS OVERSIGHT AND QUALITY IMPROVEMENT

A. As previously noted, the Program shall be responsible to maintain policy compliance within the EMS system, and reserves the right to revise or modify this policy when necessary to protect public health and safety.

B. Trauma Evaluation Committee (TEC) is an ad hoc subcommittee of the EMS System Collaborative.

C. Trauma Evaluation Committee (TEC) shall be established to review certain potential problem cases and system trends identified through the system registry (as described in the Kern County Trauma Care System Plan).

1. The Committee shall be composed of the:

   a. Trauma Nurse Coordinator

   b. EMS Program Coordinator

   c. Trauma Program Director

   d. Emergency Dept. MICN

   e. EMS Dept. Medical Director

   f. Coroner Representative

   g. Three (3) non-Trauma Surgeons (with a special interest in trauma)

   h. Metro Hospital Emergency Department Representative

   i. Rural Hospital Emergency Department Representative

   j. Rural Paramedic Representative

   k. Metro Paramedic Representative

   l. Air Ambulance Representative

   m. Communications Center Representative

   n. Public Safety EMT/Paramedic First Responder

2. This Committee shall respond to the Program Director, EMS Medical Director and EMCAB's inquiries and requests.

3. The Committee shall consider and monitor the following issues and advise the Director on policy level recommendations and systemic or process issues as follows:

    a. Create and monitor quality core measures

    b. Conduct evidence based studies relevant to the unique geographic locations in the county

        i. The Committee will be responsible for establishing the criteria for cases to be brought to the committee.

        ii. Each case reviewed by the committee will have a finding of appropriateness of care rendered and will, where appropriate, make recommendations for change.

    c. Recommend revisions to policies and procedures based on study findings

    d. Additional review of transfers or major complicated trauma patients as requested by a trauma center multi-disciplinary review committee.

    e. Field deactivations of the Trauma System.

4. Meetings will be conducted in accordance with §1040, §1157.5, and 1157.7 of the California Evidence Code, and the California Business and Professions Code 805, 809 and be compliant with HIPAA and HCFA requirements.

5. All members and invitees of the Committee will be required to sign an agreement to maintain confidentiality of patient specific information.

D. All Trauma Care System organizational providers will submit to the Program the required documentation, as specified by the Program, to verify ongoing compliance with trauma triage, treatment, and transport protocols.

E. The Program, in conjunction with Trauma Care System providers, will collect Trauma Care System data on a regular basis for system evaluation and continued quality improvement.

F. Any deviations, specific problems, or deficiencies from these triage and transport protocols shall be documented.

1. This information will be subject to review by the Program and/or the Trauma Evaluation Committee (TEC).

2. The Program shall be responsible for periodic performance evaluation of the Kern County Trauma Care System.

3. This evaluation shall be conducted at least every two (2) years as described in the Kern County Trauma Care System Plan.

XX. DATA COLLECTION AND MANAGEMENT

A. All hospitals in the Kern County Trauma Care System will be required to participate in the data collection for patients that meet “Trauma Triage Criteria”.

B. The Trauma Center shall, in accordance with the Health Insurance Portability and Accountability Act, submit a completed data set which meets the required State Minimum Inclusion Criteria for local trauma registries, or other data sets, as specified by the Program.

C. The Program reserves the right to request an immediate case review if needed.

D. The Program reserves the right to amend the data collection elements, time standards, and collection method as deemed necessary.

E. Data Collection shall be used to review, evaluate, and improve the delivery of trauma care in the prehospital, and hospital settings.

F. Patient outcome and appropriateness of care will be reviewed by the Program and the Trauma Evaluation Committee (TEC).

1. The scope of the review shall include, but is not limited to:

    a. All trauma deaths

    b. Pre-hospital trauma care

    c. Hospital trauma care

    d. Patient outcomes

    e. Appropriateness of trauma triage criteria

    f. Appropriateness of trauma policies and procedures

2. All TEC reviews, discussions, findings, and recommendations considered confidential, and are covered by the State of California Evidence Code under Sections 1040 and 1157.7.

G. The Program will provide ongoing feedback through regular reporting of trauma system activities and outcomes to the hospitals.

H. Data elements to be submitted via “Receiving Hospital Trauma Care System Data Form” upon patient transfer to a Trauma Center (See Appendix A – Receiving Hospital Trauma Care System Data Form):

1. “Trauma Triage Criteria” – Criteria for activation
2. Institution name
3. Trauma number
4. Date and time of patient arrival to Receiving Hospital
5. Mode of patient arrival to Receiving Hospital E.D.
6. Race
7. Sex
8. Date of birth
9. Age
10. Date of injury
11. Time of injury
12. Place of injury
13. Date and time Trauma Center notified
14. Date and time of transportation notification
15. Transfer destination
16. Date and time of patient departure
17. Time of transportation arrival
18. Accepting M.D.
19. Transfer Mode
20. Ambulance provider
21. Audit request?
22. Form completed by?

23. Fax date, time, location

I. Data elements that may be obtained by chart review:

1. Blunt or penetrating?
2. Patient's initial Receiving Hospital vital signs (B/P, pulse, and resp. rate)
3. Emergency medical treatment rendered in Receiving Hospital's E.D.
4. Patient's response to treatment
5. Date of initial CT scan (month, day, and year)
6. Time of initial CT scan (hours and minutes)
7. Diagnosis(s) on transfer to Trauma Center
8. Vital signs on transfer to Trauma Center (B/P, pulse, resp.)
9. Mode of transport for patient transfer to the Trauma Center
10. Transport orders
11. Transferring Receiving Hospital physician identifier
12. If patient is not transferred, days in Receiving Hospital
13. If patient is not transferred, complications
14. If patient is not transferred, discharge diagnosis
15. If patient is not transferred, operative procedures
16. If patient is not transferred, Injury Severity Score (ISS)
17. If patient is not transferred, date of death or discharge
18. If patient is not transferred, time of death or discharge
19. If patient is not transferred, discharge disposition
20. If patient is not transferred, condition on discharge
21. If patient is not transferred, diagnosis on discharge (to include ICD-9/10)
22. Hospital charges billed

23. Insurance class

J. The Receiving Hospital shall fax the “Receiving Hospital Trauma Data Form” within 24 hours to KMC and to the EMS Department.

K. The EMS Program reserves the right to amend the data collection elements, time standards, and collection method as deemed necessary.

Receiving Hospital Trauma Care System Data Form

Complete for each Trauma Care System activation case by receiving hospital, even if deactivated by prehospital or receiving hospital.

Patient Information

Patient Name:		Date of Birth:		Age:
Date of Injury:	Time of Injury:	Place of Injury:	Race:	Sex: ☐ Male ☐ Female

Hospital Demographics

Hospital Name	Trauma Number	Date/Time of Patient Arrival	Mode of Arrival: ☐ ALS ☐ BLS Agency:

Receiving Hospital's "Trauma Triage Criteria" Assessment

Red Tier "Mental Status & Vital Signs"	Red Tier "Injury Patterns"	Yellow Tier "Mechanism of Injury"	Yellow Tier "EMS Judgement"
• **All Patients** ❑ Unable to follow commands (motor GCS < 6) ❑ RR < 10 or > 29 breaths/min ❑ Respiratory distress or need for respiratory support ❑ Room-air pulse oximetry < 90% • **Age 0–9 years** ❑ SBP < 70mm Hg + (2 x age years) Age 10–64 years ❑ SBP < 90 mmHg or ❑ HR > SBP • **Age ≥ 65 years** ❑ SBP < 110 mmHg or HR > SBP	❑ Penetrating injuries to head, neck, torso, and proximal extremities ❑ Skull deformity, suspected skull fracture ❑ Suspected spinal injury with new motor or sensory loss ❑ Chest wall instability, deformity, or suspected flail chest ❑ Suspected pelvic fracture ❑ Suspected fracture of two or more proximal long bones ❑ Crushed, degloved, mangled, or pulseless extremity ❑ Amputation proximal to wrist or ankle ❑ Active bleeding requiring a tourniquet or wound packing with continuous pressure	❑ High-Risk Auto Crash ❑ Partial or complete ejection ❑ Significant intrusion (including roof) ❑ >12 inches occupant site OR ❑ >18 inches any site OR ❑ Need for extrication for entrapped patient ❑ Death in passenger compartment ❑ Child (Age 0–9) unrestrained or in unsecured child safety seat ❑ Vehicle telemetry data consistent with severe injury ❑ Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) ❑ Pedestrian/bicycle rider thrown, run over, or with significant impact ❑ Fall from height > 10 feet (all ages)	❑ Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact ❑ Anticoagulant use ❑ Suspicion of child abuse ❑ Special, high-resource healthcare needs ❑ Pregnancy > 20 weeks ❑ Burns in conjunction with trauma

Transfer Information

Date/Time of Trauma Center notification	Date/Time of Transportation notification	Transfer Destination
Date/Time of Patient Departure	Time of Transportation Arrival	Accepting MD

Transfer Mode □ ALS □ BLS	Ambulance Provider:	Focused Audit Request: □ YES □ NO
Form Completed by:	Faxed to:	Date/Time:

* Fax form within 24 hours to Trauma Services@ KMC fax # (661) 862-7628 and to the EMS Division fax # (661) 868-1204

Self-Evaluation Tool for Trauma Center Designation

Standard	Objective Measurement	TC Level	Comments
Pediatrics			
Pediatric Equipment & Supplies	Verification of equipment	II III IV	Designated PedRC meets requirement
Written criteria for consultation and transfer of pediatric patients needing IC	PICU or policy/procedure and transfer agreement	II	
Multi-disciplinary team to manage child abuse and neglect	Policy/Procedure for review	II	
Personnel			
Trauma Program Medical Director (Surgeon Level II and III)	Copy of Board certification Identification and contact information	II III IV	
Trauma Program Medical Director Duties: ☐ Recommend Trauma team physician privileges ☐ Work with RN and Admin to support needs of trauma pt ☐ Develop trauma treatment protocols ☐ Determine equipment and supplies for trauma care (II only) ☐ Development of policies and procedures for: domestic violence, elder and child abuse and neglect (II only) ☐ Authority for QI peer review process ☐ Correct deficiencies in trauma ☐ Exclude from call trauma members who do not meet standard (II and III) ☐ Coordination of pediatric care (II only) ☐ Coordinate with Division and EMSA (II only)	Job description to include all duties	II III IV	

□ Assist in trauma budget □ Identify reps from other disciplines to assist with trauma program (II only)			
Trauma Nurse Coordinator/ Manager □ RN License □ Evidence of educational preparation □ Clinical experience in the care of a trauma pt □ Administrative ability	Copy of RN License Resume	II III IV	
Trauma Nurse Coordinator/ Manager responsibilities: □ Organize service and systems for multidisciplinary approach □ Coordinate day-to-day clinical process and PI for RN and ancillary personnel □ Collaborate with Trauma Program Medical Director for: education, clinical, research, administrative, and outreach activities of trauma program	Job Description	II III IV	
Trauma Service: □ Capability of providing prompt assessment, resuscitation ad stabilization □ Ability to provide treatment and arrange for transport to a higher level trauma center	Verification of services Policies/ procedures	II III IV	
Trauma Team □ Multidisciplinary □ Responsible for initial resuscitation and management	Policy/Procedure Schedule for next three months Job description	II III IV	
Non-Surgical Specialists: □ Anesthesiology □ Internal Medicine (II only)	Verification of Qualified Specialists	II III IV	

□ Pathology (II only) □ Psychiatry (II only) □ Radiology	Schedule for next three months Verification of anesthesiology and radiology are on-call and promptly available		
Emergency Department, staffed and immediately available □ Basic or Comprehensive □ Standby (IV only) □ Physician designated as member of trauma team (II only) □ Appropriate supplies and equipment (adult and pediatric) (II only)	Verification of ED permits Verification of Qualified Specialists Copies of Board Certifications in Emergency Medicine or ATLS Schedule for next three months Job description Verification of equipment and supplies from Director of Emergency Medicine and Trauma Program Medical Director	II III IV	
General Surgeon □ Immediately available for Trauma Team Activation (II only) □ Promptly Available for consultation □ Qualified Specialist	Verification of Qualified Specialist Schedules for next three months Job Description	II III	
Neurologic Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description Transfer agreement (III)	II III	

Obstetric/ Gynecologic Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description	II	
Ophthalmologic Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description	II	
Oral or Maxillofacial or Head and Neck Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description	II	
Orthopaedic Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description	II III	
Plastic Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description	II	
Reimplantation/Microsurgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months Job Description	II	May be fulfilled with transfer agreement
Urologic Surgery □ Qualified Specialist □ On-Call and Promptly Available	Verification of Qualified Specialist Schedules for next three months	II	

	Job Description		
Consultation or consultation and transfer: - Burns - Cardiothoracic (II only) - Pediatric - Reimplantation/ Microsurgery (II only) - Spinal Cord Injury (II only) - Cardiology (II only) - Gastroenterology (II only) - Hematology (II only) - Infectious Disease (II only) - Internal Medicine (II only) - Nephrology (II only) - Neurology - Pathology (II only) - Pulmonary Medicine (II only)	Transfer Agreements Verification of services	II III	
Services			

Radiological Service:
Immediately available (II only)
- Radiological Tech
  - Plain Film
  - CT
Promptly available
- Angiography (II only)
- Ultrasound (II only)
- Radiological Tech (III)
	Verification of Services
	
	Schedule for next three months
	
	Job Description
		II
		III
		IV	

Clinical Laboratory Service - Comprehensive Blood Bank or access to community blood bank - Immediately available (II only) - Promptly Available (III)	Verification of services and availability Schedule for next three months Policy/Procedures for obtaining Blood products	II III IV	
Surgical Services: - Operating Suite available for used for Trauma - Operating staff promptly available	Verification of services Verification of availability of operating staff	II III	

□ Back-up operating staff promptly available □ Appropriate surgical equipment and supplies	Verification from Trauma Program Medical Director of equipment and supplies		
Intensive Care Services: □ Appropriate equipment and supplies □ Qualified Specialist promptly available □ Member of trauma team	Verification of services Verification of Qualified Specialist Schedule for next three months Job description Verification from ICU Physician and Trauma Program Medical Director of equipment and supplies	II III	
Physical Therapy Services □ Personnel trained in physical therapy □ Equipped for acute care of trauma pt	Verification of services Job Description	II	
Rehabilitation Center □ Personnel trained in rehabilitation care □ Equipped for acute care of trauma pt	Verification of services or transfer agreements Job description	II III	
Respiratory Care Service □ Personnel trained in rehabilitation care □ Equipped for acute care of trauma pt	Verification of services Job description	II	
Acute Hemodialysis Capability	Verification of services	II	
Occupational Therapy Service □ Personnel trained in rehabilitation care □ Equipped for acute care of trauma pt	Verification of services Job description	II	
Speech Therapy Service □ Personnel trained in rehabilitation care	Verification of services Job description	II	

□ Equipped for acute care of trauma pt			
Social Service	Verification of services	II	
Acute Spinal Cord Injury Management Capability	Verification of services or transfer agreement	II	
Organ Donation Identification	Protocol	II	
Trauma Support			
Outreach Program: □ Telephone and on-site consultations with community physicians □ Trauma prevention for general public	Verification of outreach programs	II III IV	
Interfacility transfer agreements □ Referring hospitals □ Specialty hospitals □ Higher level trauma centers □ Pediatric trauma centers	Transfer agreements	II III IV	
Continuing Education: □ Staff Physicians □ Staff nurses □ Staff allied health professionals □ EMS personnel □ Community physicians and health care personnel	Verification of education programs/ courses	II III IV	
Telecommunications: □ Base Station □ MED 9 □ COR MED Channel □ COR phone line □ Recorded	Verification of base hospital contract Verification of telecommunication capability and recording	II III IV	