POLICY O-07
TRAUMA AND BURN PATIENT DESTINATION

Effective Date : November 18, 2018

Last Review: July 2011

Next Review: November 2020

Authority: Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9

Purpose: To identify those patients whose injuries would most benefit from the services of a trauma or burn center and provide destinations for such patients.

Definitions:

1. Burn Center - means a designation signifying a hospital is commitment to meet and/or exceed the standards established by the State of California for a Burn Center and capable of managing the medical care needs of major burn patients.
2. GCS - means Glasgow Coma Scale
3. MHLB - means Memorial Hospital of Los Banos
4. Trauma Center or TC ñ means a designation signifying a hospital is commitment to meet and/or exceed the standards established by the State of California for a Trauma Center and capable of managing the medical care needs of major trauma patients.
5. MMC - means Mercy Medical Center
6. Trauma - means a physical injury or wound caused by an external force, a high energy exchange, a rapid deceleration or violence.

Policy:

1. The distribution of trauma and burn patients shall be in accordance with the procedures delineated herein.
2. Destination Decisions:
   A. All injured patients meeting trauma or burn triage criteria shall be transported by the quickest, most appropriate means, ground or air.
      1. If environmental conditions or other conditions do not allow air transport, a ground ambulance shall transport to the closest:
         i) Trauma Center - if the patient meets trauma triage criteria and transportation can be done safely and within 60 minutes.
         ii) Burn Center - if burns meet burn criteria and do not meet trauma criteria, a ground ambulance shall transport to the burn center if transportation can be done safely and within two hours (Please note exceptions under Section 2, Burn Triage Criteria Procedure, page 4). Contact the base hospital for fluid resuscitation instructions with long transports.
         Otherwise, transport to the closest facility for stabilization and transfer.
      2. Patients not meeting Trauma or Burn criteria shall be transported to either MHLB, MMC or Emanuel in Turlock, per patient preference or closest facility.
      3. If the trauma patient has a life threatening condition that overrides the need for expedient surgery, they shall be transported to the closest facility for stabilization and transfer arrangements, as appropriate. This includes the following conditions:
         i. All trauma patients with unmanageable airways shall be transported to the nearest receiving facility.

ii. All traumatic arrest patients (not determined dead in the field) shall be transported to the nearest receiving facility via ground ambulance.

B. For trauma patients meeting trauma triage criteria the patient shall be sent to the TC on rotation. TC rotation schedules are maintained by Stanislaus County and shall be assigned at the time of confirmation of patient transport. Air Ambulances will contact Stanislaus Control enroute to confirm their destination. Ground transports of patients meeting triage criteria are required to make base contact for report and destination confirmation.

C. For burn patients meeting triage criteria the patient shall be sent to the burn center located at Community Regional Medical Center in Fresno. Air Ambulances will contact Regional Medical Center enroute to provide a patient report. Ground transports of patients meeting triage criteria are required to make base contact for patient report and destination confirmation. Air transport is not usually indicated in the transfer of a burn patient with a stable airway and vital signs.

Procedure - Adult Trauma Patients (Age > 14)

1. To determine the appropriate destination for adult trauma patients, paramedics shall perform the following:
   - A. Conduct the primary survey; and
   - B. Assess vital signs, level of consciousness, determine the anatomy of the injury and determine the GCS.
2. For transportation of inmates at United States Penitentiary, Atwater, personnel shall refer to **Policy 403.00, Patient Management for Inmates - United States Penitentiary, Atwater**; due to the unique security issues associated with this population.
3. The following trauma patients should be triaged to a TC directly from the field:
   - A. GCS < 14
   - B. Systolic Blood Pressure
     1. < 90mmHg (adult)
     2. <85mmHg (child age 7-14)
     3. <70mmHg (child age 0-6)
   - C. Respiratory Rate <10 or >30 breaths/minute;
   - D. Penetrating injury to head, neck, torso, and extremities proximal to elbow and knee
   - E. Flail Chest
   - F. Two or more proximal long bone fractures
   - G. Crushed, degloved, or mangled extremity
   - H. Amputation proximal to the wrist or ankle
   - I. Suspected Pelvic Fracture;
   - J. Open or depressed skull fracture
   - K. Paralysis

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4. The following patients may be transported to a TC based on the clinical judgment in each case. The follow criteria should raise the index of suspicion but transport to a TC should be based on tangible signs and symptoms of injury. Decisions should not be based on mechanism of injury or special considerations alone.

   Mechanism of Injury:

   A. Falls
      1. >20 feet (one story = 10 feet) (adult)
      2. >10 feet or 2-3 times the height of child (age 0-14)

   B. High Risk Automobile Crash
      1. Intrusion >12 inches at occupant site
      2. Ejection (partial or complete) from automobile
      3. Unrestrained rollover
      4. Vehicle telemetry data consistent with high risk of injury (if available)

   C. Automobile vs. Pedestrian/Bicyclist
      1. Pedestrian/bicyclist thrown or run over
      2. Significant (>20 mph) impact

   D. Motorcycle Crash >20 mph

   Special Considerations

   A. Age:
      1. Older adults: Risk of injury/death increases after age 55
      2. Children: Should be triaged preferentially to a pediatric-capable TC (refer to Pediatric Trauma Triage criteria)

   B. Anticoagulation and bleeding disorders

   C. Burns (refer to Burn Center criteria)

   D. Death in the same passenger compartment

   E. End stage renal disease requiring dialysis

   F. Pregnancy >20 weeks with complaint of injury

   G. EMS provider judgment

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Procedure - Pediatric Trauma Patients (Age < 15)

1. To determine the appropriate destination for Pediatric trauma patients, paramedics shall perform the following:
   - A. Conduct the primary survey
   - B. Assess vital signs, level of consciousness, determine the anatomy of the injury and determine the GCS.
2. Based on the above assessment, the following pediatric patients should be triaged to a trauma center directly from the field:
   - A. GCS < 13 or a decrease of 2 or more from baseline;
   - B. Age appropriate hypotension (see table, Appendix A)
   - C. Respiratory rate outside of normal limits (see table, Appendix A)
   - D. Penetrating injury to the head, neck or trunk
   - E. Patient < 1 year of age with any visible fractures
   - F. Open and depressed skull fractures
   - G. Flail Chest
   - H. Traumatic Paralysis
   - I. Unstable pelvic fracture
   - J. Two or more proximal long bone fractures
   - K. Paramedic judgement
     1. Paramedic judgment should include a consideration of the mechanism of injury and be based on tangible signs and/or symptoms indicating possible internal injury or compensated blood loss, such as:
        - a) anxiety, nervousness, restlessness, confusion
        - b) tachycardia
        - c) pallor, cool skin, diaphoresis, trembling
        - d) chest or abdominal pain following an acute traumatic event

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Procedure - Burn Triage Criteria

1. A patient (adult or pediatric) whose primary injuries are burns may be transported directly to a Burn Center from the field. These injuries include:
   A. Partial/full thickness (2nd or 3rd degree) burns involving greater than 15% TBSA without airway compromise
   B. Patients with partial/full thickness (2nd or 3rd degree) burns greater than 10% TBSA without airway compromise with the following:
      1. Greater than 60 years of age
      2. Associated trauma meeting Trauma Triage Criteria (and if transport can be completed within 60 minutes)
      3. Significant co-morbidities (e.g. COPD, major medical disorder, bleeding disorder or anticoagulant therapy, dialysis patients)
   C. Partial/full thickness (2nd or 3rd degree) burns of face, perineum or circumferential burn to any body part
   D. Significant electrical injuries with loss of consciousness, voltage in excess of 220, and/or open wounds
   E. Electrical injuries resulting in a loss of distal pulses
   F. Significant inhalation injury with successful intubation
   G. Chemical burns with wounds >5% TBSA

2. All burns with airway compromise, wheezing, stridor, carbonaceous sputum, nasal singeing or significant facial edema must have an evaluation for intubation either by air ambulance personnel or by the emergency physician at the closest appropriate receiving facility prior to transport to the Burn Center, if the ground ambulance is unable to intubate the patient after 1 attempt

3. For pediatric burns with airway compromise, wheezing, stridor, carbonaceous sputum, nasal singeing or significant facial edema **AND THE PATIENT CANNOT BE EFFECTIVELY VENTILATED, MUST BE TRANSPORTED TO CLOSEST RECEIVING FACILITY.**