POLICY: 553.25
TITLE: Trauma/Burn Triage & Patient Destination

EFFECTIVE: 4/13/17
REVIEW: 4/2022
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

Trauma/Burn Triage & Patient Destination

I. AUTHORITY

Division 2.5, California Health and Safety Code, Sections 1797.222, 1798.162, 1798.163
California Code of Regulations Section 100255.

II. DEFINITIONS

A. **"Pediatric" or "pediatric patient"** means an individual age 14 and under.

B. **"Pediatric Trauma Center"** means a designated facility identified by the Mountain-Valley EMS Agency (MVEMSA) to receive pediatric trauma patients directly from the field, including:

1. UC Davis Medical Center (Level I)
2. Children's Hospital, Oakland (Level I)
3. Renown Regional Medical Center, Reno Nevada (Level II)
4. Valley Children's Hospital, Madera (Level II)

C. **"Trauma Center"** means a designated facility identified by the Mountain-Valley EMS Agency (MVEMSA) to receive trauma patients directly from the field, including:

1. Doctors Medical Center (Level II)
2. Memorial Medical Center, Modesto (Level II)
3. "Trauma Centers" may be designated by other Local EMS Agencies and in some cases, may be the closer facility. If this is the case, trauma patients may be transported directly from the field, these include:

   i. UC Davis Medical Center (Level I)
   ii. Mercy San Juan (Level II)
   iii. Sutter Roseville (Level II)
   iv. Kaiser South Sacramento (Level II)
   v. Renown Regional Medical Center (Level II)
   vi. San Joaquin General (Level III)

D. **"Trauma"** means physical injury or wound caused by significant external force, high-energy exchange, a rapid deceleration, or violence.

E. **"Trauma Triage criteria"** means a guideline for assessing the severity of a person's potential injuries that is used to direct transportation of trauma patients to the appropriate Trauma Center.

III. PURPOSE

A. To establish guidelines for identifying trauma patients and for determining their destination.

B. To ensure appropriate utilization of resources within the Mountain-Valley EMS system.

IV. POLICY

This policy shall serve to identify patients who are at risk for severe injury and determines the most appropriate destination for transport.

V. PROCEDURE

A. Prehospital EMS Personnel SHALL notify the DCF **IMMEDIATELY** when it is determined that the patient meets trauma triage criteria to establish destination. This notification does not have to originate from the person actually caring for the patient, but may come from another member of the patient care team.

1. DCF notification SHALL include:
    a. age
    b. mechanism
    c. trauma triage criteria
    d. ETA

2. The DCF will immediately assign Trauma Center destination and will inform both pre-hospital EMS personnel and the receiving Trauma Center.

3. A full Base Hospital report to the destination Trauma Center from the pre-hospital provider must follow the DCF notification as soon as possible.

B. Triage Upgrade

A patient's triage status may always be upgraded if the patient's condition deteriorates during assessment or transport. A patient's triage status shall not be downgraded by a Nurse or Paramedic.

C. Destination Decisions

1. All injured patients (Adult & Pediatric) meeting trauma triage criteria shall be transported by the quickest, most appropriate means, ground or air.

    a. If a trauma patient meeting criteria is to be transported by air and environmental conditions do not allow for an air transport, a ground ambulance shall transport to the closest Level I or Level II Trauma Center unless the patient has a life-threatening condition

that overrides the need for expedient surgery. In these cases, trauma patients should be transported to the closest facility. This includes, but is not limited to, conditions such as:

i. Obstructed airways

ii. Tension pneumothorax which has not been relieved or stabilized in the prehospital setting, or

iii. Situations where the patient meets criteria as outlined in policy 570.20 "Determination of Death". Such patients should be transported to the closest appropriate receiving facility or pronounced dead in the field if they meet the criteria outlined in policy 570.20.

b. Pediatric patients meeting criteria to be transported to a Pediatric Trauma Center shall be transported by air ambulance if the environmental conditions allow. If air resources are unavailable and/or patient is not stable for transport to a Pediatric Trauma Center, transport to the closest adult Level I or II Trauma Center is acceptable.

2. If a Trauma Center is on Trauma Bypass, trauma patients will be transported to the next closest available Level I or Level II Trauma Center as directed by the DCF.

3. Patient Destination for Stanislaus County Trauma Centers:

The distribution of patients destined for a Stanislaus County Trauma Center shall be guided by the following:

a. **All** trauma patients requiring transport by air or ground ambulance to a Level II Trauma Center in Stanislaus County will follow an alternating rotation of Trauma Centers. The Stanislaus County DCF will be contacted and will identify the Trauma Center destination. The DCF will contact the Trauma Center with the initial trauma notification. If a trauma patient requires a code three transport by ground ambulance the patient will be taken to the closest Level II Trauma Center in Stanislaus County (DCF contact must still occur).

b. In the event a Level II Trauma Center located within the MVEMSA region meets Trauma Bypass criteria as indicated in Policy 546.10, the facility will immediately notify the Stanislaus County DCF and update its facility status on EMResource to Advisory. When the Trauma Center goes off Trauma Bypass, the facility will immediately notify the DCF and update its status on EMResource.

c. Where response and transportation times permit, two patients requiring trauma activation should not be delivered to the same Trauma Center in the same ambulance (ground or air).

4. Any disputes regarding distribution of patients should be documented on

an Unusual Occurrence Report and faxed to MVEMSA within 72 hours for review.

D. 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:

      i. Greater than 60 years of age

      ii. Associated trauma meeting Trauma Triage Criteria (and if transport can be completed within 60 minutes)

      iii. 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.

TRAUMA TRIAGE CRITERIA

Measure Vital Signs and Level of Consciousness

1

• Glasgow Coma Scale	<= 13
• Systolic Blood Pressure (mmHg)	<90 mmHg
• Respiratory Rate	<10 or >29 breaths per minute or need for ventilatory support. (<20 in infant aged <1 year)

YES → **Transport to a Level I or II Trauma Center.** Steps 1 and 2 attempt to identify the most seriously injured patients.

No

Assess Anatomy of Injury

2

- All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee
- Chest wall instability or deformity (e.g. flail chest)
- Two or more proximal long-bone fractures
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Pelvic fractures
- Open or depressed skull fracture
- Paralysis

YES → **Transport to a Level I or II Trauma Center.** Steps 1 and 2 attempt to identify the most seriously injured patients.

No

Assess Mechanism of Injury and Evidence of High-Energy Impact

3

- **Falls**
  - -Adults: >20 feet (one story is equal to 10 feet)
  - -Children: >10 feet or two or three times the height of the child
- **High-risk auto crash**
  - -Intrusion, including roof: >12 inches occupant site; >18 inches any site
  - -Ejection (partial or complete) from automobile
  - -Death in same passenger compartment
  - -Vehicle telemetry data consistent with a high risk of injury
- **Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact**
- **Motorcycle crash >20 mph**

Yes → **Transport to a trauma center**, which, depending upon the defined trauma system, need not be the highest level trauma center.

No

Assess Special Patient of System Considerations

4

- **Older Adults**
  - -Risk of injury/death increases after age 55 years
  - -SBP <110 may represent shock after age 65
  - -Low impact mechanisms (e.g. ground level falls) may result in severe injury
- **Children**
  - -Should be triaged preferentially to a Pediatric Trauma Center
- **Anticoagulants and bleeding disorders**
  - -Patients with head injury are at high risk for rapid deterioration
- **Bums**
  - -Without other trauma mechanism: triage to burn facility
  - -With trauma mechanism: triage to trauma center
- **Pregnancy >20 weeks**
- **EMS provider judgment**

Yes → **Transport to a trauma center** or hospital capable of timely and thorough evaluation and initial management of potentially serious injuries.

No

Transport According to Protocol

When In Doubt, Transport To a Trauma Center