San Mateo County Emergency Medical Services

Trauma Triage
Scene time goal is 10 minutes

ACTIVATION

1. Measure vital signs and level of consciousness
   - GCS ≤ 13
   - Systolic blood pressure < 90 mmHg
   - ≤ 6 years old: SBP < 60 mmHg
   - Adult respiratory rate < 10 or > 29 or need for ventilatory support
   - Infant (< 1 year of age): respiratory rate < 20

2. Assess anatomy of injury
   - All gunshot wounds
   - Chest wall instability or deformity (e.g., flail chest)
   - Two or more proximal long bone fractures
   - Crushed, degloved, mangled, or pulseless extremity
   - Amputation above the wrist or ankle
   - Penetrating injuries to head, neck, torso, groin and extremities proximal to elbow and knee
   - Pelvic fractures

3. Assess mechanism of injury and evidence of high-energy impact
   - Adult fall > 20 feet
   - Pediatric fall > 10 feet or 2 times height of child
   - High risk auto crash:
     - Death in same vehicle
     - Ejection (partial or complete)
     - Extrication > 20 minutes'
     - Vehicle telemetry data confer high risk
     - Intrusion on patient side or roof > 12 inches or > 18 inches at any site
   - Auto-pedestrian/auto-bicycle/motorcycle
   - Separated from, thrown or run over
   - Obvious injury
   - Complaint of pain or injury
   - Significant blunt trauma to head/torso from large animal (i.e. kick/fall from horse)

Trauma Center transport with early notification

Yes

No

Transport to closest facility to secure airway

Yes

Traumatic Arrest

Yes

Unmanageable airway?

No

Trauma Center transport with early notification

San Mateo County Emergency Medical Services

Treatment Protocol T01
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Effective April 2020
For other situations not described below, consider Trauma Base Hospital contact if paramedic has concern that a serious injury may exist

<table>
<thead>
<tr>
<th>Risk Factor Advisory</th>
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<tbody>
<tr>
<td>Patients who do not meet Box 1-3 criteria may still be prone to serious injury, specifically if they have one or more of the following risk factors:</td>
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<tr>
<td>• Pregnancy over 20 weeks</td>
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<td>• Communication barrier (e.g., age, language, psychiatric, or developmental issues)</td>
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<td>• Age 55 or older</td>
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<td>• Patient taking anticoagulants or with known bleeding disorder</td>
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<td>• Patient with co-morbidity factors</td>
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<td>• Central nervous system changes</td>
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<td>• Time sensitive injuries</td>
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Motor vehicle crash
• Estimated impact speed of > 40mph
• Mechanical extrication required by fire department personnel
• Rollover with unrestrained occupant

Person struck by a vehicle at < 20mph

Person ejected/fell from other object (e.g., motorcycle, horse, or ATV)

Blunt assault with weapon (e.g., pipe, bat, or golf club)

Falls > 10 but < 20 feet

This list is not all-inclusive and other high energy mechanisms encountered also merit Trauma Base Hospital contact

Yes
Trauma Center transport with early notification

No
Transport to hospital of patient choice
Pearls

- Do not let alcohol confuse the clinical picture. Persons using alcohol may have unrecognized injuries, particularly head bleeds.
- A complete hands on head-to-toe assessment is required for all trauma patients.
- Transport should be initiated within 10 minutes of ambulance arrival unless patient requires extrication.

Age Categories

- Adult Patient – Trauma patients 15 years of age and older.
- Pediatric Patients – Trauma patients under the age of 15 years.

Trauma Receiving Facilities

**Adult Trauma Center catchment areas:**

- Stanford Hospital – Any area south of and including Devil’s Slide; City of Millbrae south of Trousdale Drive between I-280 and El Camino Real; and south of Millbrae Avenue between El Camino Real and the San Francisco Bay.
- Zuckerberg San Francisco General Hospital – Any area north of Devil’s Slide; City of Millbrae north of Trousdale Drive between I-280 and El Camino Real; and north of Millbrae Avenue between El Camino Real and the San Francisco Bay. Include San Francisco International Airport.
- Eden Medical Center – Eastbound on the San Mateo or Dumbarton Bridges.

**Pediatric Trauma Center catchment areas:**

- Stanford Hospital – **All patients < 6 years** or any area south of and including Devil’s Slide; City of Millbrae south of Trousdale Drive between I-280 and El Camino Real; and south of Millbrae Avenue between El Camino Real and the San Francisco Bay.
- Zuckerberg San Francisco General Hospital – All patients > 6 years and any area north of Devil’s Slide; City of Millbrae north of Trousdale Drive between I-280 and El Camino Real; and north of Millbrae Avenue between El Camino Real and the San Francisco Bay. Include San Francisco International Airport.

Receiving Facilities – Local hospitals that are not trauma receiving facilities are destinations for patients who are triaged by the Base Hospital at the time of report as not requiring trauma center care. A trauma receiving facility may also serve as the receiving facility when it is the patient’s facility of choice.

Low Energy Mechanism Trauma

Low energy mechanism trauma may not obviously reveal significant trauma. Examples include, but are not limited to ground level or short falls, blunt assault without a weapon (e.g., closed fist), low speed motor vehicle crash, or other blunt trauma (e.g., sports injury). Symptoms or concern may include:

- Symptoms in the presence of head injury such as headache, vomiting, loss of consciousness, repetitive questioning, abnormal, or combative behavior or new onset of confusion
- Pain level greater than 5/10 related to head, neck, or torso injury
- Any concerns due to hypotension, tachycardia, or tachypnea
- Systolic BP < 110mmHg in patients 65 years of age or older
- Torso injury with tenderness of abdomen, chest/ribs or back/flank
- Suspected hip dislocation or pelvis injury

Other Definitions

Unmanageable Airway – A patient whose airway is unable to be adequately maintained with BLS or ALS maneuvers. All trauma patients are candidates for immediate redirection to the trauma center following airway stabilization at a non-trauma receiving facility.