

Trauma Triage

Adult and Pediatric Trauma/Environmental Treatment Guidelines

ACTIVATION

**Unmanageable airway or
Traumatic arrest not meeting field determination**

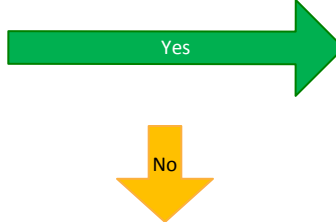


Closest facility

Measure vital signs and level of consciousness

1

GCS \leq 13
Systolic blood pressure $<$ 90mmHg
Adult respiratory rate $<$ 10 or $>$ 29 <i>or</i> need for ventilatory support
Infant ($<$ 1 year of age) respiratory rate $<$ 20

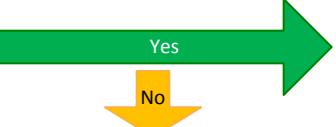


Trauma Center transport with early notification

Assess anatomy of injury

2

All penetrating injuries to head, neck, torso, groin, pelvis, buttocks, and extremities above the elbow or knee	Open or depressed skull deformity
Chest wall instability or deformity (e.g. flail chest)	Traumatic paralysis
Two or more proximal long bone fractures	Major burn associated with trauma
Crushed, degloved, mangled, or pulseless extremity	Uncontrolled bleeding with tourniquet applied and tightened
Amputation above the wrist or ankle	
Pelvic instability	

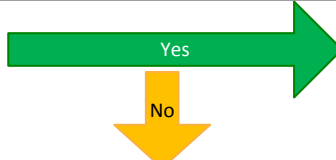


Trauma Center transport with early notification

Assess mechanism of injury and evidence of high-energy impact

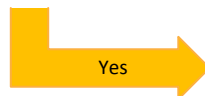
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Adult fall $>$ 20 feet	Auto vs. pedestrian/bicyclist thrown, run over <i>or</i> with significant impact $>$ 20mph
Pediatric fall $>$ 10 feet <i>or</i> 2-3 times height of child	Any unenclosed vehicle crash $>$ 20mph (e.g. motorcycle, bicycle, ATV, etc.)
High risk auto crash with $>$ 12 inches intrusion on patient side <i>or</i> $>$ 18 inches at any site of passenger compartment	
Ejection (partial or complete)	
Death in same passenger compartment	



Trauma Center transport with early notification

Meets Destination / Call-in Criteria?



Call for destination decision



Trauma Triage

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Risk Factor Advisory

Patients with either high energy or low energy mechanisms are more prone to serious injury if they have one or more of the following risk factors:

- Pregnancy over 20 weeks
- Communication barrier (e.g., age, language, psychiatric, or developmental issues)
- Age 55 or older
- Patient taking anticoagulants or with known bleeding disorder

High energy mechanism
Motor vehicle crash <ul style="list-style-type: none"> • 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
<i>This list is not all-inclusive and other high energy mechanisms encountered also merit Base Hospital contact</i>

Low energy mechanism
Low energy mechanisms should merit Base Hospital contact if symptoms, physical findings, or concern are encountered
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)



For situations not described above, consider Base Hospital contact if paramedic has concern that a serious injury may exist



Trauma Triage

Pearls

- **Do not let alcohol confuse the clinical picture. Alcoholics 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 Centers – John Muir Medical Center – Walnut Creek is the designated trauma center for adults in Contra Costa County. In some circumstances, patients may be transported to other trauma receiving facilities. Alameda County Medical Center (Highland) and Eden Medical Center are trauma receiving facilities that, when they are the closest trauma receiving facility, may be appropriate for ground transport of trauma patients.

Pediatric Trauma Centers – UCSF Benioff Children’s Hospital of Oakland (CHO) is the most appropriate destination for the majority of pediatric trauma patients.

- **John Muir Medical Center – Walnut Creek may be an appropriate trauma receiving facility for critically injured pediatric trauma patients who are near arrest or have a very prolonged transport time.** UC Davis Medical Center is also a pediatric trauma receiving facility and may be utilized when helicopter transport is involved.

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 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. Adult trauma patients are candidates for immediate redirection to the trauma center following airway stabilization at a non-trauma receiving facility.

Traumatic Arrest – Patients who do not qualify for field determination of death but have or develop cardiopulmonary arrest should be transported to the closest Basic ED by ground ambulance.

Exceptions:

- Patients with penetrating trauma who arrest (pulseless, apneic, or pulseless with agonal respirations) after the arrival of transport personnel should be immediately transported to a trauma center if transport time is 20 minutes or less to that facility. If no Trauma Center is available within 20 minutes, patients should be transported to the closest basic emergency department.
- If a helicopter crew is present at the time of arrest (blunt or penetrating) and the air transport can be initiated immediately, use of helicopter to transport to a trauma center is appropriate.

