### 2013 ADULT OOH TDDP

|---|---|
| Glasgow Coma Score ≤13  
Respiratory rate <10 or >29 breaths per minute, or need for ventilatory support  
Systolic B/P (mmHg) less than <90 mmHg | Glasgow Coma Score ≤14  
Respiratory diff./rate <10 or >29  
Systolic B/P <90  
Heart Rate >120 (removed) |

<table>
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<th>Step 2 - Assess for Anatomy of an Injury:</th>
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| All penetrating injuries to head, neck, torso and extremities proximal to elbow and knee  
Chest wall instability or deformity (e.g., flail chest)  
Suspected two or more proximal long-bone fractures  
Crushed, degloved, mangled, or pulseless extremity  
Amputation proximal to wrist or ankle  
Suspected pelvic fractures  
Open or depressed skull fracture  
Paralysis or Parasthesia  
Partial or full thickness Burns > 10% TBSA or involving face/airway | All Penetrating injury to head, neck, torso, and extremities proximal to elbow and knee  
Flail chest  
Any open long bone fracture  
Suspected two or more long bone fractures  
Crushed, degloved, or mangled extremity  
Amputation proximal to wrist or ankle  
Suspected pelvic fracture  
Open or depressed skull fracture  
Paralysis or Parasthesia  
Partial or full thickness Burns > 10% TBSA or involving face/airway  
EMS provider judgment for possible abdominal or thoracic injuries (removed) |

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| Falls – Adult: > 20 ft. (one story is equal to 10 feet)  
Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact  
High-risk auto crash  
— Interior compartment 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 high risk of injury  
Motorcycle crash >20 mph | Falls – Adult: > 20 ft. (1 story = 10 ft)  
High-risk auto crash:  
Intrusion: > 12 in, occupant site; > 18 in, any site,  
Ejection (partial or complete) from automobile  
Death in same passenger compartment,  
Vehicle telemetry data consistent with high risk of injury  
Auto vs. pedestrian/bicyclist thrown, run over, or with significant (>20 mph) impact  
Motorcycle crash > 20 mph Rollover (unrestrained occupant)  
Bicyclist into handlebars |
### Step 4 - Consider risk factors:

**Older adults**
Risk of injury/death increases after age 55 years  
SBP<110 might represent shock after age 65 years  
Low impact mechanisms (e.g. ground level falls) might result in severe injury  
Pregnancy > 20 weeks  
EMS provider judgment  
ETOH/Drug use  
Anticoagulants and bleeding disorders  
Patients with head injury are at high risk for rapid deterioration

**Age > 55 yrs. (Risk of injury/death increases)**  
Anticoagulation and bleeding disorders  
Time-sensitive extremity injury  
Pregnancy > 20 weeks  
EMS provider judgment

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### 2013 PEDIATRIC OOHTDDP

#### Revision 2013

|---|---|
| Abnormal Responsiveness: abnormal or absent cry or speech. Decreased response to parents or environmental stimuli. Floppy or rigid muscle tone or not moving. Verbal, Pain, or Unresponsive on AVPU scale.  
OR  
Airway/Breathing Compromise: obstruction to airflow, gurgling, stridor or noisy breathing. Increased/excessive retractions or abdominal muscle use, nasal flaring, stridor, wheezes, grunting, gasping, or gurgling. Decreased/absent respiratory effort or noisy breathing. Respiratory rate outside normal range.  
OR  
Circulatory Compromise: cyanosis, mottling, paleness/pallor or obvious significant bleeding. Absent or weak peripheral or central pulses; pulse or systolic BP outside normal range. Capillary refill > 2 seconds with other abnormal findings.  
Glasgow Coma Score ≤13 | Abnormal Responsiveness: abnormal or absent cry or speech. Decreased response to parents or environmental stimuli. Floppy or rigid muscle tone or not moving. Verbal, Pain, or Unresponsive on AVPU scale.  
OR  
Airway/Breathing Compromise: obstruction to airflow, gurgling, stridor or noisy breathing. Increased/excessive retractions or abdominal muscle use, nasal flaring, stridor, wheezes, grunting, gasping, or gurgling. Decreased/absent respiratory effort or noisy breathing. Respiratory rate outside normal range.  
OR  
Circulatory Compromise: cyanosis, mottling, paleness/pallor or obvious significant bleeding. Absent or weak peripheral or central pulses; pulse or systolic BP outside normal range. Capillary refill > 2 seconds with other abnormal findings. |

#### Step 2 - Assess for Anatomy of an Injury

| All penetrating injuries to head, neck, torso and extremities proximal to elbow or knee  
Chest wall instability or deformity (e.g., flail chest)  
Suspected two or more proximal long-bone fractures  
Suspected pelvic fractures  
Crushed, degloved, mangled, or pulseless extremity | All Penetrating injury to head, neck, torso, and extremities proximal to elbow and knee  
Partial or full thickness burns > 10% TBSA or involving face/airway  
Amputation proximal to wrist or ankle Crushed, degloved, or mangled extremity  
Paralysis or Parasthesia Flail chest  
Suspected two or more long bone fractures Any |
Partial or full thickness burns > 10% TBSA or involving face/airway
Open or depressed skull fracture
Amputation proximal to wrist or ankle
Paralysis or Parasthesia

open long bone fracture
Suspected pelvic fracture Open or depressed skull fracture
EMS provider judgment for possible abdominal or thoracic injuries.

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<td>Pregnancy &gt; 20 weeks EMS provider judgment ETOH/Drug use Anticoagulants and bleeding disorders Patients with head injury are at high risk for rapid deterioration</td>
<td>Age &lt;5 yrs (Risk of injury/death increases) ETOH/drugs Time-sensitive extremity injury</td>
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</tbody>
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**Modifications to the Out of Hospital Trauma Triage Destination Decision Protocol**

**ADULT**

Step 1. Physiologic Criteria

MODIFIED:

**Glasgow Coma Scale (GCS) from <14 to GCS ≤ 13**

According to Centers for Disease Control and Prevention (2012), “Experience with the 2006 Guidelines has indicated that many readers and end-users perceived that the criterion of GCS <14 recommended taking patients with a GCS of ≤14 to trauma centers. To reduce any future confusion, the Panel voted unanimously to rewrite the criterion as GCS ≤13” (p. 8).

ADDED:

**Need for ventilator support**

After reviewing the literature, the Panel added “or need for ventilator support” to the respiratory rate criterion, recognizing that adults and children requiring ventilator support represent a very high-risk group.
Step 2. Anatomic Criteria
MODIFIED:
Crushed, degloved, mangled, or pulseless extremity
“Pulseless” was added to the criteria for crushed, degloved, or mangled extremity since vascular injuries of the extremity may lead to significant morbidity and mortality.

Chest wall instability or deformity (e.g., flail chest)
“Flail chest” was changed to “chest wall instability or deformity (e.g., flail chest): because this broader terminology ensures that additional blunt trauma to the chest will be identified.

Suspected two or more proximal long-bone fractures
Wording changed from “suspected two or more long bone fractures” to “suspected two or more proximal long-bone fractures.”

All penetrating injuries to head, neck, torso and extremities proximal to elbow or knee
The wording of this criterion was modified from “elbow and knee” to “elbow or knee” to recognize that these types of injuries generally occur separately and that each can represent a severe injury.

Amputation proximal to wrist or ankle
Changed “amputation proximal to wrist and ankle” to “amputation proximal to wrist or ankle” recognizing that these types of injuries most commonly occur separately and that each can represent a severe injury.

REMOVED:
EMS provider judgment for possible abdominal or thoracic injuries

Step 3 Mechanism of Injury Criteria
ADDED/MODIFIED:
High-risk automobile crash
“Intrusion: > 12 in, occupant site; > 18 in, any site,” ” changed to “High-risk auto crash–Interior compartment intrusion, including roof: >12 inches occupant site; >18 inches any site.”
“Including roof” was added to the intrusion category since this is an important predictor of trauma center need.

Step 4. Special Patient or System Considerations
MODIFIED:
Older adults
In order to strengthen this criterion, and address the problem of undertriage in older adults, the Panel added “SBP <110 may represent shock after age 65 years” and “low impact mechanisms (e.g., ground level falls) may result in severe injury” to older adults.

Anticoagulation and bleeding disorders
In order to highlight the potential for rapid deterioration in anticoagulated patients with head injuries, the Panel modified this criterion to highlight the fact that anticoagulated patients with head injuries need to be evaluated at a hospital capable of rapid evaluation and imaging of these patients and initiation of reversal of anticoagulation if necessary.
PEDIATRIC

Step 1. Physiologic Criteria
MODIFIED:
Glasgow Coma Scale (GCS) from <14 to GCS ≤ 13
According to Centers for Disease Control and Prevention (2012), “Experience with the 2006 Guidelines has indicated that many readers and end-users perceived that the criterion of GCS <14 recommended taking patients with a GCS of ≤14 to trauma centers. To reduce any future confusion, the Panel voted unanimously to rewrite the criterion as GCS ≤13” (p. 8).

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REMOVED:
EMS provider judgment for possible abdominal or thoracic injuries

Step 3 Mechanism of Injury Criteria
ADDED/MODIFIED:
Falls: 10 feet or two times the height of the child
“Falls >10 feet or Pediatric: >2-3 times the victims height” was changed to “Falls: 10 feet or two times the height of the child.”
**High-risk automobile crash**
“intrusion: > 12 in, occupant site; > 18 in, any site,” changed to “High-risk auto crash--Interior compartment intrusion, including roof: >12 inches occupant site; >18 inches any site.”
“Including roof” was added to the intrusion category since this is an important predictor of trauma center need.

**Step 4 Consider risk factors**
**ADDED**
**Pregnancy >20 weeks**
**EMS provider judgment**

**Anticoagulation and bleeding disorders**
In order to highlight the potential for rapid deterioration in anticoagulated patients with head injuries, the Panel modified this criterion to highlight the fact that anticoagulated patients with head injuries need to be evaluated at a hospital capable of rapid evaluation and imaging of these patients and initiation of reversal of anticoagulation if necessary.

**REMOVED:**
Time-sensitive extremity injury
Age <5 yrs (Risk of injury/death increases)

**References:**

Iowa Department of Public Health: Bureau of EMS (2013). Out of Hospital Trauma Triage Destination Decision Protocols (Pediatric and Adult).