Triage, Stabilization and Transfer Process for Individuals with Trauma

Note: For emergencies occurring on MD Anderson campus locations not supported by the Code Blue Team, contact 911 (Code Blue Team vs. 911 Response Map)

**PRESENTATION AND ASSESSMENT**

- Patient, visitor, or employee with blunt or penetrating trauma
- Acute Cancer Care Center (ACCC)
- Inpatient
- Ambulatory/MD Anderson public spaces

**Hemodynamic or respiratory compromise** or altered mental status?

- Yes
- No

**Evidence of anatomical injury**?

- Yes
- No

**Evidence of high-energy event**?

- Yes
- No

**DISPOSITION**

- Transfer to outside hospital for higher level of care (see Page 4)
- Stabilized?
- Yes
- No
- Manage individual as clinically indicated

**Note:** Comorbid factors may increase the severity of injury

- Age ≤ 5 or > 70 years
- Significant cardiac or respiratory disease
- Diabetes, cirrhosis, end-stage renal disease, morbid obesity
- Bleeding disorders or currently taking anticoagulants

1. Hemodynamic or respiratory compromise is defined as: SBP < 90 mmHg, respiratory rate < 10 bpm or > 29 bpm
2. Altered mental status is defined as Glasgow Coma Scale < 14 or motor score ≤ 5 (see Appendix A: Glasgow Coma Scale (GCS))
3. If patient is not stabilized prior to transferring to another facility, continue to pursue a transfer if the individual requests the transfer or the expected benefits outweigh the increased risks of the transfer. See Emergency Medical Screening Examination, Stabilization, and Appropriate Transfers Policy (#CLN3280).

**Anatomic injury includes the following:**

- Open or depressed skull fracture
- Penetrating injury to head, neck, torso, and/or extremities proximal to elbow and knee
- Crushed, degloved, or mangled extremity
- Pelvic fractures
- Paralysis or suspected spinal cord injury
- Flail chest
- Long bone fracture
- Axial force:
  - Intrusion > 12 inches occupant site or 18 inches any site
  - Ejection (partial or complete) from vehicle
  - Death in same passenger compartment

**Evidence of high-energy event includes the following:**

- Falls > 20 feet (6 meters) in adults and > 10 feet (3 meters) 2-3 times height in children
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (> 20 mph) impact
- High-energy electrical injury
- Burns > 10% total body surface area and/or inhalation injury
- Tender or rigid abdomen

**Note:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.
Hemodynamic or respiratory compromise¹ or altered mental status²?

- Call Code Blue Team (713-792-7099) and
- Request additional support from Public Space Code Blue Team

Evidence of anatomical injury³?
- Notify Primary Team
- Call MERIT (713-792-7090)

Evidence of high-energy event⁴?
- Maintain airway with cervical spine stabilization as indicated
- Transfer to ICU and notify Primary Team
- Consider surgical team consult (General Surgery, Thoracic Surgery, Neurosurgery and/or Orthopedics)
- Imaging as determined by medical teams

Stabilized⁵?
- Transfer to outside hospital for higher level of care (see Page 4)

Manage patient as clinically indicated

Inpatient

Note: Comorbid factors may increase the severity of injury:
- Age ≤ 5 or > 70 years
- Significant cardiac or respiratory disease
- Pregnancy
- Diabetes, cirrhosis, end-stage renal disease, morbid obesity
- Immunosuppression
- Bleeding disorders or currently taking anticoagulants

¹ Hemodynamic or respiratory compromise is defined as: SBP < 90 mmHg, respiratory rate < 10 bpm or > 29 bpm
² Altered mental status is defined as Glasgow Coma Scale < 14 or motor score ≤ 5 (see Appendix A: Glasgow Coma Scale (GCS))
³ If patient is not stabilized prior to transferring to another facility, continue to pursue a transfer if the individual requests the transfer or the expected benefits outweigh the increased risks of the transfer. See Emergency Medical Screening Examination, Stabilization, and Appropriate Transfers Policy (#CLN3280).
⁴ Anatomic injury includes the following:
- Open or depressed skull fracture
- Penetrating injury to head, neck, torso, and/or extremities proximal to elbow and knee
- Flail chest
- Crushed, degloved, or mangled extremity
- Prolonged or suspected spinal cord injury
- Amputation proximal to wrist and ankle
- Pelvic fractures
- Intrusion > 12 inches occupant site or 18 inches any site
- Ejection (partial or complete) from vehicle
- Death in same passenger compartment
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (> 20 mph) impact
- High-energy electrical injury
- Burns > 10% total body surface area and/or inhalation injury
- Tender or rigid abdomen

⁵ Evidence of high-energy event includes the following:
- Falls > 20 feet (6 meters) in adults and > 10 feet (3 meters) or 2-3 times height in children
- High-risk auto crash:
- Intrusion > 12 inches occupant site or 18 inches any site
- Ejection (partial or complete) from vehicle
- Death in same passenger compartment
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (> 20 mph) impact
- High-energy electrical injury
- Burns > 10% total body surface area and/or inhalation injury
- Tender or rigid abdomen
**Triage, Stabilization and Transfer Process for Individuals with Trauma**

**PRESENTATION AND ASSESSMENT**

- **Ambulatory/MD Anderson public spaces**
  - Notify Responding Provider and activate the appropriate emergency response process for your area
  - Hemodynamic or respiratory compromise or altered mental status?
    - Yes: Maintain airway with cervical spine stabilization as indicated
    - No: Evidence of anatomical injury?
      - No: Evidence of high-energy event?
        - Yes: Stabilized?
        - No: Manage individual as clinically indicated
      - Yes: Stabilized?
      - No: Manage individual as clinically indicated

**Note:** Comorbid factors may increase the severity of injury:
- Age ≤ 5 or > 70 years
- Significant cardiac or respiratory disease
- Pregnancy
- Diabetes, cirrhosis, end-stage renal disease, morbid obesity
- Immunosuppression
- Bleeding disorders or currently taking anticoagulants

1. Appropriate provider may include: On-call Provider, Attending Physician, Anesthesiologist, Radiation Oncology Team, or Diagnostic Imaging Team/Radiologist
2. For ambulatory and public spaces, Code Blue Team (713-792-7099) and/or Emergency Medical Services (EMS) to evaluate and determine disposition as clinically indicated. For Code Blue Team, request additional support from Public Space Code Blue Team
3. Hemodynamic or respiratory compromise is defined as: SBP < 90 mmHg, respiratory rate < 10 bpm or > 29 bpm
4. Altered mental status is defined as Glasgow Coma Scale < 14 or motor score ≤ 5 [see Appendix A: Glasgow Coma Scale (GCS)]
5. Anatomic injury includes the following:
   - Open or depressed skull fracture
   - Penetrating injury to head, neck, torso, and/or extremities
   - Proximal to elbow and knee
   - Crushed, degloved, or mangled extremity
   - Amputation proximal to wrist and ankle
   - Pelvic fractures
   - Paralysis or suspected spinal cord injury
   - Flail chest
   - Long bone fracture

**Evidence of high-energy event includes the following:**
- Falls > 20 feet (6 meters) in adults and > 10 feet (3 meters) or 2-3 times height in children
- High-risk auto crash:
  - Intrusion > 12 inches occupant site or 18 inches any site
  - Ejection (partial or complete) from vehicle
- Death in same passenger compartment
- Auto vs. pedestrian/bicyclist thrown, run over, or with significant (> 20 mph) impact
- High-energy electrical injury
- Burns > 10% total body surface area and/or inhalation injury
- Tender or rigid abdomen

**DISPOSITION**

- Code Blue Team or Responding Provider contacts Emergency Medical Services (EMS) for transfer to outside facility for higher level of care
- Code Blue Team or Responding Provider to notify clinical or administrative leaders in the ambulatory area of patient disposition, if applicable
- Ambulatory team to notify available family and primary team as appropriate
- Medical management and disposition per Code Blue and/or Responding Providers as indicated

**Note:** For emergencies occurring on MD Anderson campus locations not supported by the Code Blue Team, contact 911 (Code Blue Team vs. 911 Response Map)

Department of Clinical Effectiveness V4
Approved by the Executive Committee of the Medical Staff on 03/19/2024
EMERGENCY TRANSFER ADMINISTRATIVE PROCESS

1. If patient is not stabilized prior to transferring to another facility, continue to pursue a transfer if the individual requests the transfer or the expected benefits outweigh the increased risks of the transfer. See Emergency Medical Screening Examination, Stabilization, and Appropriate Transfers Policy (#CLN3280).
2. Emergency Medical Treatment and Labor Act (EMTALA) generally does not apply for admitted patients. See Emergency Medical Screening Examination, Stabilization, and Appropriate Transfers Policy (#CLN3280).
3. See Transfer of Patients To, From, and Within MD Anderson Cancer Center Policy (#CLN0614).
4. Discuss with Attending Physician regarding preference for receiving hospital based on clinical scenario. See Appendix B: Texas Medical Center (TMC) Hospital Contact Information.
5. Discuss with Attending Physician regarding required level of ambulance team (e.g., basic life support, advanced life support, critical care), equipment and special medications (e.g., infusion pumps, oxygen, ventilator), and special patient-specific factors (e.g., large body habitus, isolation status).
6. Documentation: *Face sheet* · Diagnostic imaging films or CDs as indicated · Other documentation as appropriate · Medical records to include a current reconciled medication list and transfer orders per primary care team.

OSA = off shift administrator

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

Triage, Stabilization and Transfer Process for Individuals with Trauma

Department of Clinical Effectiveness V4
Approved by the Executive Committee of the Medical Staff on 03/19/2024
## APPENDIX A: Glasgow Coma Scale (GCS)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye Opening Response</strong></td>
<td>Spontaneous</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>To verbal stimuli, command, speech</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>To pain only (not applied to face)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td><strong>Verbal Response</strong></td>
<td>Oriented</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Confused conversation, but able to answer questions</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Inappropriate words</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Incomprehensible speech</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td><strong>Motor Response</strong></td>
<td>Obey commands for movement</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Localizes pain</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Withdraws in response to pain</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Flexion in response to pain</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Extension in response to pain</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>1</td>
</tr>
</tbody>
</table>

1 GCS is obtained by adding the score from each parameter

## APPENDIX B: Texas Medical Center (TMC) Hospital Contact Information

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memorial Hermann TMC</td>
<td>For Transfers: Transfer Center (713) 704-2500</td>
</tr>
<tr>
<td>Ben Taub Hospital</td>
<td>Transfer Center (713) 873-8601</td>
</tr>
</tbody>
</table>
Triage, Stabilization and Transfer Process for Individuals with Trauma

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

SUGGESTED READINGS


MD Anderson Institutional Policy #CLN0614 – Transfer of patients To, From, and Within MD Anderson Cancer Center Policy

MD Anderson Institutional Policy #CLN3280 – Emergency Medical Screening Examination Stabilization, and Appropriate Transfers Policy


Copyright 2024 The University of Texas MD Anderson Cancer Center

Department of Clinical Effectiveness V4
Approved by the Executive Committee of the Medical Staff on 03/19/2024
Triage, Stabilization and Transfer Process for Individuals with Trauma

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient's care.

DEVELOPMENT CREDITS

This practice consensus statement is based on majority opinion of the Emergent Triage/Transfer Process workgroup at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

Core Development Team Leads
Patricia A. Brock, MD (Emergency Medicine)
John W. Crommett, MD (Critical Care Medicine)

Workgroup Members
Gregory H. Botz, MD (Critical Care Medicine)
Ginny Bowman, DNP, APRN, CNS-Onc, NEA-BC (Ambulatory Operations)
Robert T. Drew, MBA, RN (Nursing - Acute Cancer Care Center)
Wendy Garcia, BS*
Marina C. George, MD (Inpatient Medical Operations)
Petra S. Grami, DNP, RN (Nursing Administration)
Amanda V. Hamlin, MS, PA-C (Ambulatory Operations)
Angela Y. Hayes-Rodgers, MBA (Off-Shift Administration)
Jeffrey A. Merlin, MD (Emergency Medicine)
Karen E. Plexman, MSN, RN (Code Blue Operations)
Jenise B. Rice, MSN, RN (Perioperative Nursing)
Regina F. Smith, MSN, MBA, RN (RCC Administration)
Delmy A. Vesho, MSN, RN (Nursing Administration)
Mary Lou Warren, DNP, APRN, CNS-CC*
Suzanne M. Wilson, BSN, DBA, RN (Case Management)

* Clinical Effectiveness Development Team