

North Central Texas Trauma Regional Advisory Council

Trauma Triage & Transport Guidelines

Approved by the Board of Directors

June 9, 2015



On June 9, 2015, the Board of Directors for the North Central Texas Trauma Regional Advisory Council (NCTTRAC) approved the revised **Trauma Triage & Transport Guidelines** for Trauma Service Area E.

These guidelines were developed by the NCTTRAC EMS Committee with input from all pre-hospital providers. The guidelines were then reviewed and recommended for approval by the Trauma Committee. The Physician Advisory Group (PAG) met to review the guidelines and made the final recommendation for approval to the Board of Directors. The PAG liaison, Dr. Robert Simonson, invited both EMS and Trauma Medical Directors from across the region to participate in the PAG review.

The most significant change in the guidelines is the elimination of the drive time criteria in the transport destination decision.

Key notes in the transport algorithm:

- Level 1 and Level 2 Trauma Centers are regarded as having equal capabilities.
- Per the NCTTRAC Physician Advisory Group, the higher the level of Trauma Center, the better the outcome.
- Trauma Centers in Active Pursuit (IAP) are regarded as having the capabilities of the level of pursuit.
- Pediatric patients should be triaged preferentially to a Pediatric Trauma Center.
- Geriatric patients, pregnant patients, and/or patients with pre-existing medical conditions may require higher-level triage and/or care at an appropriate specialty center.
- **Ultimately, the final transport decision rests with the individual EMS personnel directing patient care at the scene, in consultation with local protocol and/or local medical direction.**

NCTTRAC thanks the following Agencies/Facilities who represented the PAG in the final recommendation of the Field Triage & Transport Guidelines:

THR Arlington, THR Presby Plano, EPAB, UTSW, Medical Center of Plano, Parkland, Medical Center Arlington, Methodist Dallas, JPS, Acadian Ambulance.

Please feel free to contact Winga Manning, Emergency Healthcare Systems Coordinator at 817-607-7011 or wmanning@ncttrac.org for any questions.

North Central Texas Trauma Regional Advisory Council (NCTTRAC) 2015 Trauma Triage and Transport Guidelines

I. Introduction

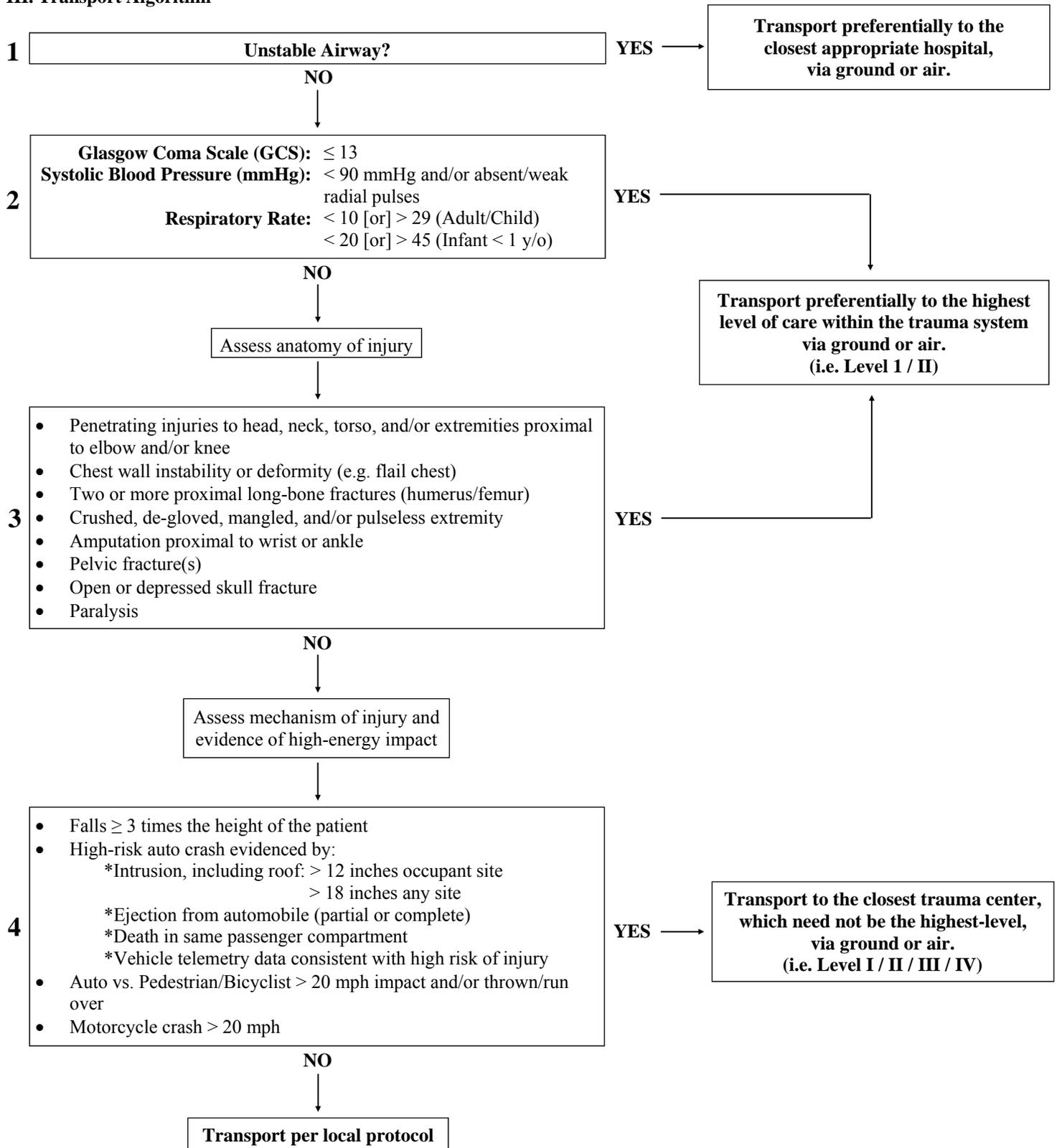
Texas Administrative Code, Title 25, Part 1, Chapter 157, Subchapter G, Rule §157.123 establishes the legal framework of the Emergency Medical Services (EMS) Trauma System in the State of Texas; which includes the creation of Regional Advisory Councils and their respective authority to develop an EMS/Trauma System plan based on standard guidelines for comprehensive system development, to include pre-hospital triage criteria, diversion protocols, bypass protocols, and regional trauma treatment guidelines. As such, the North Central Texas Trauma Regional Advisory Council (NCTTRAC) has developed, vetted, and approved the following Trauma Triage and Transport Guidelines for use by North Central Texas EMS providers licensed by the Texas Department of State Health Services (TDSHS).

II. Overview

- A. For the trauma patient, as for other critically ill patients, assessment is the foundation on which all management and transportation decisions are based.
- B. The survival of the trauma patient is dependent upon rapid recognition/management of life-threatening injuries and rapid transport to an appropriate facility, as outlined on Page 2 of this document. Scene times should be kept to a minimum with only the necessary interventions made to correct immediate life threats. All secondary interventions should be performed enroute to an appropriate facility or while awaiting aeromedical evacuation.
- C. The first step in trauma assessment is the **Scene Assessment** / Scene Size-Up. As you approach the scene, assure safety for yourself and the patient while taking BSI precautions. Rapidly identify the number/type of patients and request additional resources as appropriate.
 1. Additional resources (e.g. aeromedical evacuation, special rescue, additional ambulances) should be notified based off of dispatch information; and requested to proceed with arrival/landing on scene during scene assessment / scene size-up.
 2. Recognition of multi-patient incidents and mass-casualty incidents is critical. In these incidents, priority shifts from focusing all resources on the most injured patient to providing the greatest good to the greatest number of patients.
- D. Once a brief scene assessment / scene size-up has been performed, which may include rapid triage of multiple patients, attention should focus on evaluating individual patients. Individual patients should be assessed/treated based off of initial triage priority.
- E. The **Primary Assessment** begins with a simultaneous, or *global*, overview of the status of the patient's respiratory, circulatory, and neurological systems to identify obvious, significant problems with oxygenation, circulation, hemorrhage, or gross deformities; followed by a rapid focused assessment of Airway, Breathing/Ventilation, Circulation/Bleeding, Disability, and Expose/Environment.
 1. Make immediate interventions to correct life-threats in the order found. Progress from BLS (least invasive) to ALS (most invasive), utilizing the most appropriate intervention warranted in a given situation.
 2. **Assess the Patient's Mental Status:** If unresponsive, check for a pulse. If no pulse, initiate CPR per local protocol.
 4. **Airway:** While simultaneously applying C-spine precautions (if able), the provider should establish/ensure a patent airway by opening (e.g. jaw-thrust), clearing (e.g. suction), assessing, and intervening (e.g. OPA/NPA, King LTD-S, ET Tube).
 4. **Breathing:** Ensure adequate oxygenation and ventilation of the lungs utilizing appropriate oxygen-delivery devices. If abnormal ventilation is present, expose the chest and visually assess for trauma while obtaining breath sounds. If an open pneumothorax is present, cover with an occlusive dressing. If a tension pneumothorax is suspected, rapidly decompress the affected side.
 5. **Circulation:** Control massive hemorrhage utilizing appropriate hemorrhage control devices. Observe the color, temperature, and moisture of the skin while rapidly assessing for the presence/location/quality of pulses (e.g. carotid, femoral, radial) to estimate Blood Pressure and/or perfusion. IV access and fluid administration is secondary to initiation of Rapid Transport.
 6. **Disability:** Rapidly assess Level of Consciousness, pupils, and motor/sensory responses. If Central Nervous System injury suspected, utilize appropriate devices to restrict spinal motion. Observe for increased ICP and signs/symptoms of impending brain-stem herniation (e.g. unequal pupils, bradycardia, hypertension, irregular respirations).
 7. **Expose/Environment:** Rapidly extricate/remove patients from dangerous environments (e.g. fire, snow, pool, etc.). Remove patients clothing in order to fully assess for injury. After assessing, cover patient to maintain body heat.
- F. The **Secondary Assessment** begins after the recognition/management of life-threatening injuries found in the Primary Assessment, and after a transport decision has been made. The objective of the Secondary Assessment is to identify injuries not initially found.
 1. Reassess/Confirm Airway, Breathing, and Circulation. Make appropriate interventions as necessary.
 2. Obtain full/detailed vital signs utilizing available equipment.
 3. Obtain vascular access and administer appropriate fluid boluses to restore/maintain a radial pulse and/or SBP > 90 mmHg. Do not over-infuse fluids in trauma patients. Do not attempt to restore baseline vital signs.
 4. Perform a detailed head-to-toe physical examination.
 5. Immobilize/Splint suspected fractures and dress secondary wounds.
 6. Obtain SAMPLE history if able.
- G. Continuously **Reassess** airway, breathing, circulation, and disability. Document vital signs frequently. Make appropriate interventions as necessary.

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III. Transport Algorithm



- ◇ Level 1 and Level 2 Trauma Centers are regarded as having equal capabilities.
- ◇ Trauma Centers in Active Pursuit (IAP) are regarded as having the capabilities of the level of Pursuit.
- ◇ Pediatric patients should be triaged preferentially to a Pediatric Trauma Center.
- ◇ Geriatric patients, pregnant patients, and/or patients with pre-existing medical conditions may require higher-level triage and/or care at an appropriate specialty center.
- ◇ **Ultimately, the final transport decision rests with the individual EMS personnel directing patient care at the scene, in consultation with local protocol and/or local medical direction.**

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IV. Special Considerations

- A. Aeromedical Evacuation:** When requesting air medical assets, confirm the aircraft's present location and estimated time of arrival (ETA) to the scene. The ETA includes start-up, lift-off, and flight time(s) to the scene.
1. If the aircraft's ETA is greater than the time it would take to transport by ground to a Level 1 or Level 2 Trauma Center, initiate ground transport.
 2. Air medical assets may be utilized to deliver higher echelons of care and/or specialty services when indicated (e.g. need for advanced airway management, surgical amputation teams).
 3. The purpose of air medical evacuation is to achieve getting the critical patient to the most appropriate definitive care hospital in the shortest amount of time. The air medical helicopter to be utilized is the closest medical helicopter to the scene appropriate for the patient's needs
- B. Burns:** Life threatening traumatic injuries should be identified and treated prior to burns. The following patients generally require treatment at a verified Burn Center as per the American Burn Association. In addition, treatment of these conditions at a non-Burn Center often results in transfer to a Burn Center and an overall delay in care.
1. >10% Partial-thickness burns.
 2. Full-thickness burns.
 3. Electrical burns.
 4. Chemical burns.
 5. Inhalation injury.
 6. Burns to the face, hands, feet, genitalia, and/or major joints.
- C. Cardiac Arrest:** If patients are found to meet one or more the following criteria, CPR may be withheld and the patient declared dead if in accordance with local protocol.
1. Pulseless and apneic in addition to signs incompatible with life (e.g. decapitation, dependent lividity, rigor mortis, and decomposition).
 2. No pupillary reflexes, no spontaneous movement, and no organized cardiac rhythm on the ECG greater than 40 complexes per minute.
- D. Geriatrics:** Consider transport to a facility with a specialty Geriatric Trauma Team/Program if/when appropriate.
- E. Obstetrics:** Trauma has become the leading cause of maternal death in the U.S.; therefore, the main principle guiding therapy must be aimed towards aggressive resuscitation of the mother.
1. Any pregnant woman who has reached 20 weeks gestation or more, who has been involved in any trauma, especially a motor vehicular crash, regardless of the absence of any perceived contractions or pain, should be evaluated at the nearest trauma center that has OB capabilities.
 2. Carbon monoxide exposure in a pregnant female should be considered a mandatory transport.
 3. Pregnant patients should not be supine for long periods. Left uterine displacement can be achieved by placing the patient on their left side.
 4. Hypoxemia of the fetus may go unnoticed in the injured pregnant patient. Treatment should include high-flow oxygen.
 5. Stretching of the peritoneum during the third trimester of pregnancy blunts the normal perception of pain. Therefore, relying on complaints of abdominal pain in the pregnant woman to alert the care provider to possible injury is unreliable.
- F. Pediatrics:** Pediatric patients should be triaged preferentially to a Pediatric Trauma Center.
1. If the term "lethargic" is used by the caregiver, the term needs to be described.
 2. When evaluating a patient that has experienced a possible life threatening event and the parents/guardians refuse medical treatment or transport, contact medical control.
- G. Transfer of Patient Care Info:** The regional standard for Patient Care Report (PCR/ePCR) handoff communication is as follows:
1. The receiving facility should be notified of patient and patient status prior to EMS arrival.
 2. At the time of transfer of patient care, at a minimum, verbal communication will occur, and a paper short-list and/or electronic draft-report will be delivered.
 3. A final written or electronic full care report will be available within one business day.
 4. *This regional standard expounds upon the minimum requirements set-forth in TDSHS EMS Rule §157.11(m).*