

# North Central Regional Trauma Advisory Council



## Position Statement: Guidelines for the Prehospital use of Helicopter Emergency Medical Services

It is the position of the North Central Regional Trauma Advisory Council that helicopter EMS (HEMS) is an important piece of the trauma care system and should be used when appropriate to transport major trauma patients to the most appropriate trauma center.

The NCRTAC recommends that HEMS be used with the following considerations addressed by the local EMS and medical control authorities:

- I. Major trauma patients (see the 2021 National Guidelines for the Field Triage of Injured Patients, Attachment A) should be transported to the closest most appropriate Level I or II Trauma Center. If the Trauma Center is more than a 30-minute transport by ground ambulance (at safe driving speeds), transport by HEMS should be considered.
  - a. Basic Life Support providers should consider Advanced Life Support intercept when HEMS is not available or to augment HEMS response.
- II. All public safety responders including dispatch, should be authorized to request the dispatch of the closest HEMS based on preliminary incident information prior to EMS arrival at the scene. The NCRTAC supports the following criteria as appropriate reasons to dispatch HEMS:
  - a. High-Risk Auto Crash
    - Partial or complete ejection
    - Significant intrusion (including roof)
      - >12 inches occupant site OR
      - >18 inches any site OR
      - Need for extrication for entrapped patient
    - Death in passenger compartment
    - Child (Age 0–9) unrestrained or in unsecured child safety seat
    - Vehicle telemetry data consistent with severe injury
  - b. Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) or reported high speed crash
  - c. Pedestrian/bicycle rider thrown, run over, or with significant impact
  - d. Fall from height > 10 feet (all ages)
  - e. Large animal (rodeo, horse, bull, etc.) related injuries
  - f. Altered mental status or unconsciousness

- g. Serious burns or injuries from an explosion
  - h. Any penetrating injury to abdomen, pelvis, chest, neck or head (gunshot, knife wound, industrial accident)
  - i. Crushing injuries to abdomen, chest or head
  - j. Drowning patients
  - k. Any incident where signs indicate that a person may be seriously injured, and the reporting party/caller is not able to clearly relay the necessary information.
  - l. Any event with three or more critically injured patients
  - m. Seriously ill or injured patient in an inaccessible area
- III. Agencies should work with their dispatch centers and HEMS to use “auto-launch” protocols if such protocols would reduce the amount of time needed to activate HEMS
- IV. HEMS may be canceled once responders arrive on scene and assess the patient(s) or receive additional credible information that HEMS is not required. Cancellation should be done by or after consultation with the transporting ground EMS agency.
- V. Landing zone (LZ) safety is critical and a priority of the agency designated to establish the LZ
- a. Pre-designated landing zones should be established and used when possible
  - b. LZ guidelines established by the HEMS are to be practiced and followed
  - c. A dedicated LZ coordinator with reliable communication on MARC II will be appointed. (EMS-C is the alternative frequency)
- VI. EMS agencies using HEMS should have a process improvement plan in place to review all major trauma patients for appropriate triage, mode of transport, destination and outcome.
- a. Rates of overtriage and undertriage should be monitored with goals of keeping overtriage to 25-50% and undertriage less than 5% (ACS-COT, 2006).
  - b. Level I/II trauma centers and HEMS should work with the local EMS agencies to review transports and patient outcomes.

Approved by NCRTAC General Membership May 11, 2023

## National Guideline for the Field Triage of Injured Patients

### RED CRITERIA

#### High Risk for Serious Injury

Injury Patterns	Mental Status & Vital Signs
<ul style="list-style-type: none"> <li>▪ Penetrating injuries to head, neck, torso, and proximal extremities</li> <li>▪ Skull deformity, suspected skull fracture</li> <li>▪ Suspected spinal injury with new motor or sensory loss</li> <li>▪ Chest wall instability, deformity, or suspected flail chest</li> <li>▪ Suspected pelvic fracture</li> <li>▪ Suspected fracture of two or more proximal long bones</li> <li>▪ Crushed, degloved, mangled, or pulseless extremity</li> <li>▪ Amputation proximal to wrist or ankle</li> <li>▪ Active bleeding requiring a tourniquet or wound packing with continuous pressure</li> </ul>	<p><b>All Patients</b></p> <ul style="list-style-type: none"> <li>▪ Unable to follow commands (motor GCS &lt; 6)</li> <li>▪ RR &lt; 10 or &gt; 29 breaths/min</li> <li>▪ Respiratory distress or need for respiratory support</li> <li>▪ Room-air pulse oximetry &lt; 90%</li> </ul> <p><b>Age 0–9 years</b></p> <ul style="list-style-type: none"> <li>▪ SBP &lt; 70mm Hg + (2 x age years)</li> </ul> <p><b>Age 10–64 years</b></p> <ul style="list-style-type: none"> <li>▪ SBP &lt; 90 mmHg or</li> <li>▪ HR &gt; SBP</li> </ul> <p><b>Age ≥ 65 years</b></p> <ul style="list-style-type: none"> <li>▪ SBP &lt; 110 mmHg or</li> <li>▪ HR &gt; SBP</li> </ul>

*Patients meeting any one of the above RED criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system*

### YELLOW CRITERIA

#### Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
<ul style="list-style-type: none"> <li>▪ High-Risk Auto Crash                             <ul style="list-style-type: none"> <li>– Partial or complete ejection</li> <li>– Significant intrusion (including roof)                                     <ul style="list-style-type: none"> <li>▪ &gt;12 inches occupant site OR</li> <li>▪ &gt;18 inches any site OR</li> <li>▪ Need for extrication for entrapped patient</li> </ul> </li> <li>– Death in passenger compartment</li> <li>– Child (Age 0–9) unrestrained or in unsecured child safety seat</li> <li>– Vehicle telemetry data consistent with severe injury</li> </ul> </li> <li>▪ Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.)</li> <li>▪ Pedestrian/bicycle rider thrown, run over, or with significant impact</li> <li>▪ Fall from height &gt; 10 feet (all ages)</li> </ul>	<p><b>Consider risk factors, including:</b></p> <ul style="list-style-type: none"> <li>▪ Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact</li> <li>▪ Anticoagulant use</li> <li>▪ Suspicion of child abuse</li> <li>▪ Special, high-resource healthcare needs</li> <li>▪ Pregnancy &gt; 20 weeks</li> <li>▪ Burns in conjunction with trauma</li> <li>▪ Children should be triaged preferentially to pediatric capable centers</li> </ul> <p><b>If concerned, take to a trauma center</b></p>

*Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)*