



TIME CRITICAL DIAGNOSIS MANUAL

Missouri Department of Health and Senior Services

P.O. Box 570, Jefferson City, MO 65102-0570 Phone: 573-751-6400 FAX: 573-751-6010
RELAY MISSOURI for Hearing and Speech Impaired 1-800-735-2966 VOICE 1-800-735-2466



SUBJECT: Guidelines for Helicopter Use for Time Critical Diagnosis Patients	Chapter: 1. Out-of-Hospital
	Item: 1.2
REFERENCE Chapter 190, Emergency Services Section 190.134— (Review pending on appropriate statutory reference)	Page 1 of 3
	Date Issued: 9/2/09 (DRAFT)

DISTRIBUTION: All Emergency Medical Services-Medical Dispatch Agencies.

PURPOSE: To provide guidance on when to request an air ambulance response for transport of time critical diagnosis patient. This document is for use by agencies that incorporate early launch into their protocols.

I. Trauma Patient: The Helicopter Early Launch Process for the trauma patient should be considered when transport by ground EMS to the closest appropriate trauma center will require greater than 30 minutes **and one or more of the following criteria** are met:

A. Anatomical Criteria

- All penetrating injuries to head, neck, torso, boxer short and T-shirt coverage areas, and extremities proximal to elbow and knee
- Airway compromise or obstruction, flail chest, hemo- or pneumothorax, patients intubated on scene
- Two or more proximal long-bone fractures, open or closed
- *Crush, degloved, pulseless, or mangled extremity*
- Amputation proximal to wrist and ankle
- Pelvic fractures (*need to further specify?*)
- Open or depressed skull fractures
- Paralysis or signs of spinal cord or cranial nerve injury
- Active or uncontrolled hemorrhage
- *BURNS: ADULTS: Major burns >20% BSA or any signs of inhalation injury*
- *PEDS: BURNS > 10% BSA or any signs of inhalation injury*
- *PEDS other:*
 - Maxillo-facial or upper airway injury

B. Biomechanics of Injury/Evidence of High Energy Impact? (include or not to include)

- Falls
 - Adults: > 20 ft (one story = 10 ft.)
 - Children: > 10 ft. [*or 2-3 times height of the child- confirm why delete?*]
- High-risk auto crash
 - Intrusion: > 12 in occupant site; [*> 18 inches in any site- confirm why delete?*]

- Ejection (partial or complete) from automobile or rollover
- Death in same passenger compartment
- Vehicle telemetry data consistent with high risk of injury or highway speed
- High-risk Pedestrian, Cycle, ATV Crash
 - Auto v. Pedestrian/bicyclist thrown, run over, or with significant (> 20 mph) impact
 - Motorcycle or ATV crash > 20 mph with separation of rider
- *All open (non-long bone) fractures*
- *Amputation distal to wrist or ankle of two or more digits*
- *Penetrating injuries from elbow to wrist and knee to ankle*
- *Assault with other than brief Loss of Consciousness (? Define time span)*
- Pregnancy with acute abdominal pain and traumatic event
- Burns with associated trauma
- PEDS other:
 - Seat Belt Sign
 - Unrestrained child 8 years of age or younger
 - 2 or more extremity fractures

II. Burn Patient

1. Greater than 20% body surface area burned
2. Inhalation Injury (closed space – facial burns)

III. Medical Patient

1. Severe chest pain
2. Uncontrolled bleeding
3. Poisoning/overdose, especially with decreased level of consciousness
4. Respiratory distress
5. Anaphylaxis/severe allergic reaction
6. Significant mental status change
7. Continuous seizure

An air ambulance should be considered when it will assist the **Time Critical Diagnosis patient** in arriving at the appropriate facility during the time window specific to the disease.

IV. Suspected Stroke: Helicopters for the stroke patient should be considered when ground EMS determines that helicopter transfer to a designated stroke center will result in arrival at a facility that can provide treatment within the recommended time window.

V. STEMI patient: Helicopters for the STEMI patient should be considered when ground EMS and/or the STEMI center confirms a STEMI and [transport from scene to STEMI center (Level I or II) is greater than 60 minutes by ground or if] anticipated time from EMS first contact to reperfusion by

ground is greater than 120 minutes. If a Level III or IV STEMI center is within 30 minutes of scene EMS first contact, patient should be taken there by ground.

(Dispatch personnel will not be able to determine if the patient is experiencing a STEMI so therefore would not be in a position to authorize early launch of helicopter. It is for this reason that the work group recommended that this decision be made by EMS upon arrival and assessment.

Local HELP policies and procedures should be established with the approval of the ground emergency medical response agencies and consistent with existing Revised Statutes, Chapter 190, Emergency Services Section 190.134.

Note: These guidelines were developed by the Air Ambulance Subcommittee of the State Advisory Committee for Emergency Medical Services and suggestions from the Stroke and STEMI Work Group have been incorporated.

Acronyms:

- ATV-All terrain vehicle
- BSA-Body surface area
- EMS-Emergency Medical Services
- EMD-Emergency Medical Dispatchers
- HELP-Helicopter Early Launch Process
- PEDS-Pediatric, under xx years of age
- STEMI-ST-Elevation Myocardial Infarction

Stroke and STEMI meetings at which Out-of-Hospital, Stroke and STEMI Work Groups contributed input into this document: 2/10/09, 4/7/09, and 5/12/09.