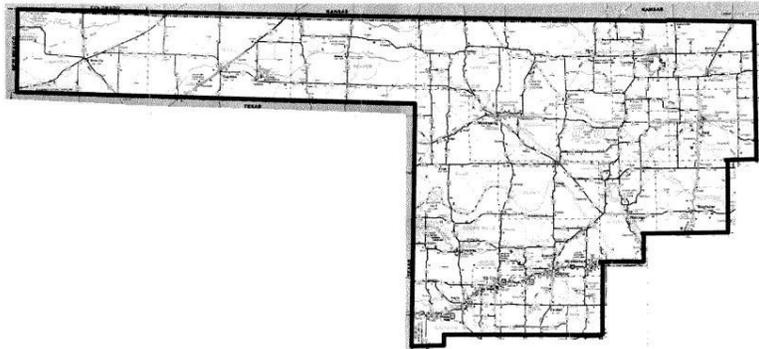


Region 1 Trauma Plan

Developed by the RTAB NW Regional Planning Committee



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Northwest Regional Trauma Triage and Destination Plan

I. GOALS / PURPOSE

The goals of the regional trauma pre-hospital destination/inter-facility transfer plans are to:

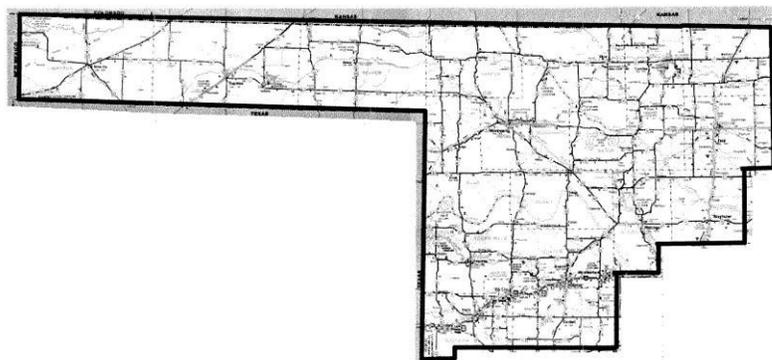
- A. Assure trauma patients are stabilized and transported to the most appropriate hospital facility with the available resources and capacity to provide care in a timely fashion.
- B. Support the Pre-Hospital/Inter-Facility Trauma Triage and Transport Guidelines to effectively reduce trauma morbidity and mortality.
- C. Match a facility's resources with each trauma patient's needs to ensure optimal and cost effective care is achieved.
- D. This plan will not conflict with any rules and/or regulations that are currently in place, or may be written or changed in the future. In the event new rules and/or regulations are considered, the RTAB should be included in that dialogue prior to implementation.

II. REGION DESCRIPTION

Region 1 consists of the northwest portion of Oklahoma and includes the following counties: Alfalfa, Beaver, Beckham, Blaine, Cimarron, Custer, Dewey, Ellis, Garfield, Grant, Harper, Kingfisher, Major, Roger Mills, Texas, Washita, Woods and Woodward.

Region 1 is the largest region in Oklahoma and encompasses 21,334 square miles with a population of 232,461. Region 1 has common borders with four states: Colorado, Kansas, New Mexico and Texas.

It is serviced by 43 ambulance services, two (2) Level III trauma hospitals, and eighteen (18) level IV trauma hospitals of which seven (7) are designated critical access, and one (1) psychiatric facility and one (1) Long Term Acute Care hospital.



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III. TRAUMA PRIORITY CATEGORIZATION

All injured patients must be identified and transported/transferred to the facility that provides the appropriate care based on the clinical needs of the patient. This should be done in a timely fashion with specific attention focused on preserving the highest level of care for major trauma patients. A three-tiered system designed to determine the appropriate hospital destination for all injured patients considers injury severity, severity risk, time and distance from injury to definitive care, and available resources to meet the region's specific needs. This three-tiered system is outlined in Appendix C and it is imperative that all pre-hospital and hospital medical providers use this system and language.

Three trauma triage priorities are used in determining the appropriate destination for patients.

1. **Priority 1 Trauma Patients:**

These are patients with blunt or penetrating injury causing physiological abnormalities or significant anatomical injuries. These patients have time-sensitive injuries requiring the resources of a Level I, Level II or designated Level III Trauma Centers with 24/7 in house ED physicians, 24/7 general and orthopedic surgeon availability. These patients should be directly transported to a Level I, Level II or designated Level III facility for treatment, but may be stabilized at any Level III or Level IV facility, if needed, depending on location of occurrence and time and distance to the higher-level trauma center. If needed, these patients may receive definitive care in a Level III facility if the appropriate services and resources are available. (e.g. orthopedic, vascular or maxillofacial surgery).

2. **Priority 2 Trauma Patients:**

These patients are those that have potentially time-sensitive injuries because of a high-energy event or single system injury. These patients do not have physiological abnormalities or significant anatomical injuries and can be transported to a trauma facility with the resources to perform a complete trauma evaluation and medical screening and can care for their injuries.

3. **Priority 3 Trauma Patients:**

These patients are without physiological instability, altered mentation, neurological deficit, or significant anatomical or single system injury that have been involved in a low energy event. These patients should be treated at the nearest treating facility or the patient's hospital of choice.

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IV. CATEGORIZATION OF HOSPITALS

- A. Hospital Providers in Region 1 include: (2008 Information). For the latest information regarding facility capabilities, refer to EMResource™
1. **Level I:** None
 2. **Level II:** None
 3. **Level III:**
 - a. INTEGRIS Bass Baptist Health Center (Enid)
 - b. St. Mary's Regional Medical Center (Enid)
 4. **Level IV:**
 - a. Beaver County Memorial Hospital (Beaver)
 - b. Cimarron Memorial Hospital (Boise City)
 - c. Cordell Memorial Hospital (Cordell)
 - d. Fairview Hospital (Fairview)
 - e. Harper County Community Hospital (Buffalo)
 - f. INTEGRIS Clinton Regional Hospital (Clinton)
 - g. Kingfisher Regional Hospital (Kingfisher)
 - h. Memorial Hospital of Texas County (Guymon)
 - i. Newman Memorial Hospital (Shattuck)
 - j. Okeene Municipal Hospital (Okeene)
 - k. Roger Mills Memorial Hospital (Cheyenne)
 - l. Sayre Memorial Hospital (Sayre)
 - m. Seiling Municipal Hospital Authority (Seiling)
 - n. Share Memorial Hospital (Alva)
 - o. Weatherford Regional Hospital (Weatherford)
 - p. Watonga Municipal Hospital (Watonga)
 - q. Great Plains Regional Medical Center (Elk City)
 - r. Woodward Regional Health Center (Woodward)
 5. **Long Term Acute Care Facilities:**
 - a. INTEGRIS Bass Pavilion
 6. **Psychiatric Hospitals:**
 - a. Northwest Center for Behavioral Health (Ft. Supply)
 7. **Other Facilities:**
 - a. USPHS Indian Hospital (Clinton)
 - b. Oklahoma Veterans Center (Clinton)

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B. Out of Region Hospital Resources:

1. **Level I:**
 - a. OU Medical Center, Oklahoma City, OK
 - b. Wesley Medical Center, Wichita, KS
 - c. Via Christi Regional Medical Center(St. Francis Campus), Wichita, KS
 - d. University Medical Center Health System, Lubbock, TX
2. **Level II:**
 - a. St. John Medical Center, Tulsa, OK
 - b. St. Francis Medical Center, Tulsa, OK
3. **Level III:**
 - a. Northwest Texas Healthcare System, Amarillo, TX

V. DESCRIPTION OF EMS SERVICES

Region 1 is a very large area encompassing 18 counties (Population 232,461) and covering approximately 21,334 square miles that is serviced by 42 ambulance services and two air transport service with three bases.

A. Ground Ambulance Services: (2008 Information). For current information, refer to the EMS Registry available at:

[http://www.ok.gov/health/Protective Health/Emergency Medical Services/](http://www.ok.gov/health/Protective_Health/Emergency_Medical_Services/)

1. Alfalfa County:
2 Basic ambulance services cover Alfalfa County with 4 routine units covering the 881 square miles of the county.
2. Beaver County:
1 Basic ambulance service covers Beaver County with 2 routine units covering the 1,818 square miles of the county.
3. Beckham County:
2 Basic ambulance services and 1 intermediate ambulance service covers Beckham County with 5 routine units that cover the 904 square miles of the county.
4. Blaine County:
Blaine County is covered by 4 Basic ambulance services with 11 routine units covering the 939 square miles of the county.
5. Cimarron County:
Cimarron County is covered by 2 Basic ambulance services with 3 routine units that cover the 1,841 square miles of the county.
6. Custer County:
Custer County is covered by 3 Intermediate ambulance services and 1 Basic service with 10 routine units that cover the 1,002 square miles of the county.

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7. Dewey County:
Dewey County is covered by 4 Basic services with 8 routine units that cover the 1,002 square miles of the county.
8. Ellis County:
Ellis County is covered by 1 Basic ambulance service with 3 routine units that cover the 1,232 square miles of the county.
9. Garfield County:
Garfield County is covered by 1 Paramedic service and 1 Basic Service with 6 routine units that cover the 1,060 square miles of the county.
10. Grant County:
Grant County is covered by 2 Basic ambulance services with a total of 4 units that cover the 1,004 square miles of the county.
11. Harper County:
Harper County is covered by 2 Basic ambulance services with a total of 4 units that cover the 1,041 square miles of the county.
12. Kingfisher County:
1 Paramedic, 1 Intermediate and 1 Basic ambulance service cover Kingfisher County with 5 routine units that cover the 906 square miles of the county.
13. Major County:
Major County is covered by 1 Basic Ambulance service with 3 routine units that cover the 958 square miles of the county.
14. Roger Mills County:
Roger Mills County is covered by 1 Basic ambulance service with 4 routine units that cover the 1,146 square miles of the county.
15. Texas County:
Texas County is covered by 1 Intermediate and 3 Basic ambulance services with 7 routine units that cover the 2,049 square miles of the county.
16. Washita County:
Washita County is covered by 3 Basic ambulance services with 5 routine units that cover the 1,009 square miles of the county.
17. Woods County:
Woods County is covered by 3 Basic ambulance services with 6 routine units that cover the 1,290 square miles of the county.
18. Woodward County:
Woodward County is covered by 1 Basic ambulance service with 5 routine units that cover the 1,246 square miles of the county.

B. Air Ambulance Services

1. Air Evac Lifeteam based in Elk City (AE21) and Woodward (AE70)

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2. Eagle Med based in Guymon, Oklahoma and Stillwater, Oklahoma (EagleMed8) (Stillwater is in Region 2 but provides Air Service to Region 1).
3. Midwest Life Team based in Liberal, KS provides fixed wing service to Region 1.
4. Eaglemed has one Fixed Wing Aircraft (EagleMed21) located in Yukon, Oklahoma that can service all Regions.

VI. TRAUMA TRANSFER AND REFERRAL CENTER (TReC)

The Trauma Transfer and Referral Centers were created by statute (Senate Bill 1554, 2004) and they were implemented on July 1, 2005. The purpose of these centers is to ensure that trauma patients transported or transferred to facilities in Region 7 or 8 are transported to the facility that provides the appropriate level of care based on the clinical needs of the patient. This should be done in a timely fashion with specific attention focused on preserving the highest level of care for major trauma patients. On April 1, 2010, TReC was consolidated to a single call center in Region 7. TReC is located in the Tulsa 911 center and serves the entire State of Oklahoma.

Statewide training sessions were held throughout June 2005 to orient all providers to the use of these centers.

Ambulances from Region 1 are required to call into the center prior to entering Regions 7 or 8 in order to ensure appropriate patient destination. Likewise, hospitals may call these centers for assistance in identifying the appropriate destination for their trauma patients.

These centers will provide information on resource utilization to the OSDH that will be available to the Region 1 RTAB for Quality Improvement purposes.

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PRE-HOSPITAL DESTINATION PROTOCOLS

I. PROCEDURE FOR SELECTION OF HOSPITAL DESTINATION

It is recognized that some patients have needs that can only be met at specific destination hospitals. Thus, a trauma patient will often benefit from transfer directly to an appropriate hospital with the capability and capacity to provide definitive trauma care. This care may not necessarily be at the closest or patient preferred facility, and this must be taken into account when treating the patient.

Rapid pre-hospital recognition and appropriate triage of trauma patients using the Oklahoma Trauma Triage and Transport Guidelines is essential in determining the appropriate hospital destination for Priority 1, 2, and 3 trauma patients (see appendix B).

These Destinations are:

ALL PATIENTS:

1. All trauma patients should be rapidly transported to the closest medical facility with the capability and capacity to provide the appropriate level of care as indicated by the patient's injury type and severity.
2. Patients with a traumatic arrest or the need to secure an airway should be transported to the closest facility to the traumatic event.
3. Any priority 1 or 2 trauma patient who needs immediate stabilization should be transported to the nearest facility with the capability and capacity to provide definitive care.
4. Patient preference as well as the time and distance should factor into where definitive care will be considered for most Priority 2 and 3 trauma patients.

GENERAL TRAUMA PATIENTS:

General trauma patients who meet the State of Oklahoma approved trauma criteria should be transported using the following guidelines. General geographic and transportation borders have been used as boundaries for these transportation designations. These boundaries are used as guidelines and it is understood that there are sites in the region that based on time and distance may need to be transported into a different border area.

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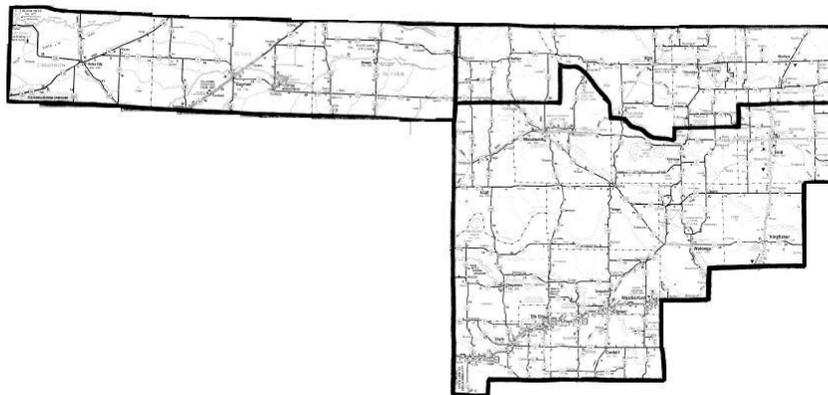
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1. Priority 1 adult and pediatric trauma patients that meet the state approved trauma criteria should be transported to the nearest Level 1 or 2 trauma center.
 - a. OU Medical Center will be the appropriate center for the majority of Region 1.
 - b. Cimarron, Texas and Beaver counties may transport to University Medical Center Health Systems in Lubbock, Via Christi Regional Medical Center or Wesley Medical Center in Wichita, and OU Medical center in Oklahoma City.
 - c. Harper, Woods, Alfalfa and Grant counties may transport to Via Christi Regional Medical Center or Wesley Medical Center in Wichita, Kansas.
 - d. The appropriate method of transport for those patients **outside** of an area **45 minutes** from the appropriate center should activate **air transport** as defined in Section IX, as soon as possible to ensure rapid transport to the appropriate facility.
 - e. If air transport is unavailable ground transport and/or ALS intercept can be utilized for transport. In the event there will be an excessive time delay for transport the patient may be taken to the closest treating facility for stabilization.

Region 1 Priority 1 Trauma Patient Destinations:



2. Priority 2 trauma patients that meet the state approved trauma criteria should be transported using the following guidelines:
 - a. These patients are those that have potentially time-sensitive injuries because of a high-energy event or single system injury. These patients do not have physiological abnormalities or significant anatomical injuries and can be

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transported to a trauma facility with the resources to perform a complete trauma evaluation and medical screening and can care for their injuries. Additionally, Priority 2 patients should be transported to a facility with the capability and capacity to provide definitive care.

- b. If air transport is unavailable ground transport and/or ALS intercept can be utilized for transport. In the event there will be an excessive time delay for transport, the patient may be taken to the closest treating facility for stabilization.
 - c. All single system Priority 2 Pediatrics being transferred or transported into Region 8 will now go directly to The Children's Hospital at OUMC.
3. Priority 3 adult and pediatric trauma patients should be transported to the nearest appropriate treating facility or the facility of patient preference.

NEUROLOGICAL TRAUMA PATIENTS:

1. Priority 1 adult and pediatric neurological trauma patients.
 - a. The majority of Priority 1 neurosurgical trauma patient in Region 1 will go to Oklahoma City via use of the TReC.
 - b. Cimarron, Texas and Beaver counties should transport to the Northwest Texas Healthcare System in Amarillo, Texas. University Medical Center Health Systems in Lubbock, Texas, Via Christi Regional Medical Center or Wesley Medical Center in Wichita, Kansas and OU Medical center in Oklahoma City, Oklahoma.
 - c. Harper, Woods, Alfalfa and Grant counties should transport to Via Christi Regional Medical Center or Wesley Medical Center in Wichita, Kansas.
 - d. Adult Priority 1 neurological trauma patients may also be transported to St. Mary's Medical Center in Enid if neurosurgical services are available at the time.
2. Priority 2 adult trauma patients should be transported to the appropriate facility in Enid or Oklahoma City based on the time/distance factor with preference given to patient preference and the ability to keep the patient within Region 1.
3. All single system Priority 2 Pediatrics being transferred or transported into Region 8 will now go directly to The Children's Hospital at OUMC.
4. Priority 3 adult and pediatric trauma patients should be transported to the closest facility for evaluation.

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BURN PATIENTS:

1. Combination of burns > 10% or significant burns involving face, airway, hands, feet or genitalia *without* significant trauma transport to regional Burn Center. Burns >10% *with* significant trauma, transport to trauma center.
2. Pediatric: Combination of burns > 10% or significant burns involving face, airway, hands, feet or genitalia *without* significant trauma transport to Hillcrest Burn Center or OUMC Children's Hospital. Burns >10% *with* significant trauma, transport to trauma center.

II. PROCEDURE FOR MONITORING HOSPITAL STATUS AND CAPABILITY

A. EMResource™

The MERC coordinator will generate reports from the EMResource™ for use in monitoring hospital status related to destination. These reports will be provided periodically to OSDH and made available to the Region 1 CQI Committee. Any problems and/or trends identified through review of this data will be addressed by the CQI committee directly with the provider and if necessary through referral to the appropriate state level committee.

B. QI Indicators

A set of QI Indicators has been developed for use in monitoring hospital status and appropriateness of destination. The Region 1 CQI Committee will monitor these indicators. Any problems and/or trends through review of the indicators will be addressed by the CQI committee directly with the provider and if necessary through referral to the appropriate state level committee.

III. ALS INTERCEPT (Ground)

- ### **A. Purpose: Appropriate utilization of ground ambulance resources by Region 1 providers.**

This differs from other mutual aid requests that may occur during a mass casualty incident or other catastrophe. For the purposes of this protocol, an ALS Intercept occurs when a BLS unit requests assistance for an emergent patient. This support is to be rendered if the ALS unit is available and will not put the ALS response area at risk.

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B. Conditions of use

BLS units should request ALS units for the purposes of:

1. Airway and respiratory interventions
2. Circulatory Support
3. Other life-sustaining interventions beyond the scope and practice of BLS crewmembers.

BLS units should not request support from ALS units for the purposes of non-emergency transports of the trauma patients, as this will tax resources of supporting agencies. As such, it is only when a BLS unit is transporting Priority 1 and 2 patients should an ALS intercept be considered.

Additionally, the BLS unit should consider location, time constraints and distance when considering a ground or air unit for support and transportation.

ALS agency or ALS units that can provide ALS intercepts should support requests for intercepts and assistance in the following circumstances:

1. Crew is available for response
2. Adequate time is received for the request to meet the BLS crew before arrival at a receiving facility.
3. Any safety concerns such as hazardous material, violence, weather, and traffic are addressed or within acceptable margins.

IV. HELICOPTER UTILIZATION PROTOCOL

A. Purpose

Appropriate utilization of air ambulance resources by Region 1 providers.

B. "No Fly" Conditions:

Helicopter utilization is seldom indicated for patients without a chance for survival or without serious injury. The following are other situations in which an air ambulance should not be used:

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- a. Patients at a location where time and distance constraints make air transport to the closest appropriate medical facility more time consuming should be transported by ground. This is generally within 45 minutes of the destination facility.
- b. Priority 3 patients should be transported by ground ambulance.
- c. Cardiac arrest without return of spontaneous circulation in the field.

C. "Fly" Conditions:

1. The following are conditions that warrant the use of an air ambulance:
 - a. Priority 1 trauma patients that are being transported to a facility in which time and distance constraints make air transport more timely, generally for distances with a transport time greater than 45 minutes by ground ambulance.
 - b. Priority 2 trauma patients that are being transported to a facility with a transport time greater than 45 minutes by ground ambulance, based on local resource availability.
2. The following are conditions that warrant the use of an air ambulance even when the patient is within a 45 minutes of a medical facility:
 - a. The closest facility is not appropriate for the patients' injury and the appropriate facility is at a distance in which time and distance constraints justify air transport.
 - b. There are hazardous or impassable road conditions resulting in significant delays for ground transportation.
 - c. There are multiple patients of a serious nature requiring rapid transport, overwhelming available ground units.
 - d. Based on information available, the lead rescuer determines a lengthy rescue is required and transportation by ground would extend and delay definitive care.

- D. The **closest available** medical helicopter will be utilized to improve survival of all patients being transported to a definitive care facility.

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- E. After the responders have initially treated the patient using standard protocol and the patient is ready for transport, the responders should proceed to the closest pre-existing landing area (PELA site) or to the nearest treating facility if the patients' condition warrants.

F. Early Activation / Standby:

When a dispatch center or ground ambulance service receives a call that meets the following criteria, it is recommended that the air ambulance be "early activated" or placed on ground standby:

1. Significant mechanism of injury as defined in the Trauma Triage Algorithm
2. Multiple patients
3. "Gut Feeling" from the responding crew

**** NOTE: If a Non-EMS/First Responder or bystander activates an air service, the air service will communicate with local EMS to avoid multiple responses to the incident. ****

G. Landing Zone Parameters:

1. Free of wires, trees, signs, poles, vehicles, and people;
2. Landing zone is flat, smooth, and clear of debris;
3. The landing zone should be at least 100 x 100 feet square in size;
4. The landing zone should be well defined at night without lights pointed towards the helicopter;
5. The area should be secured and free of all loose debris as well as clear of all unauthorized personnel;
6. The helicopter should be approached with the crew only and care should be taken to avoid the tail rotor;
7. The landing zone should remain clear and secure for at least one minute after departure for safety reasons.

H. Training:

Landing zone training should be accomplished by all ground ambulance services on an annual basis. Each individual ground ambulance service can contact an air ambulance service for this training.

I. EMTALA:

There are concerns regarding air utilization and rendezvous with a local ground transport at a helipad upon a medical facilities property. This is addressed in Appendix C.

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V. DIVERSION

Guidelines to determine the possible need for total Emergency Department divert are: The Emergency Department cannot handle additional emergencies based on the lack of professional personnel.

1. Maximum capacity (beds) of the Emergency Department has been met.
2. Maximum capability (staff) of the Emergency Department has been met.

Notification of Emergency Department diversion status:

1. Each hospital will notify the MERC or his/her designee of the diversion status and a written record shall be maintained documenting the date, time started, and time ended of each interval of divert status.
2. Each hospital shall notify each entity providing emergency medical services, such as ambulance services and hospitals in the catchment's area of the divert status.
3. The EMResource™ will be updated to show current information.

Compliance:

1. If a hospital goes on Emergency Department divert, then the MERC or his/her designee will re-evaluate every 2 hours for continuation of diversion.
2. The MERC or his/her designee has the authority at any time to deny or discontinue Emergency Department divert based on the needs of the community.
3. The MERC or his/her designee also has the authority to place ambulance services on a rotating basis to avoid over-saturation of any one given facility.
4. Update of the EMResource™ will be made accordingly.

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INTER-FACILITY TRANSFER PROTOCOLS

I. TRAUMA CENTER PROGRAM

Each hospital shall have a designated Trauma Team that is appropriate for that facilities level of care. It is important to incorporate all facilities in trauma planning and implementation, as well as, in the planning of transfer protocols.

Level III Trauma Center:

In general the Level III Trauma Center is expected to provide initial resuscitation of the trauma patient and immediate operative intervention to control hemorrhage and to assure maximal stabilization prior to transfer to a higher level of care institution. In many instances, patients will remain in the Level III trauma center unless the medical needs of the patient require secondary transfer. The decision to transfer will rest with the physician attending the trauma patient and all Level III centers will work collaboratively with other trauma facilities to develop transfer protocols and a well-defined transfer sequence.

Level IV Trauma Center:

In general the Level IV Trauma Center is a licensed, small, rural facility with a commitment to the resuscitation of the trauma patient and written transfer protocols in place to assure those patients needing a higher level of care are transferred appropriately. These facilities may be staffed by a Physician, or licensed independent practitioner, RN, LPN, Paramedic or Intermediate EMT. The major trauma patient in this facility will be stabilized and transported to the most appropriate facility for the patients on-going care needs.

Trauma Program:

Each hospital shall provide the level of Trauma Services for which the facility is licensed in accordance with the Hospital Standards of Oklahoma Administrative Code 310:667. It is important to incorporate all facilities in trauma planning and implementation, as well as, in the planning of the transfer protocol.

There must be a commitment letter from the Hospital Board and the Medical Staff on behalf of the entire facility, which states the facility's commitment to compliance with the Oklahoma Trauma Care Regulations. A trauma program must be established and recognized by each organization and evidenced by:

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

1. Hospital Board and Medical Staff commitment to trauma care.
2. Written policies and procedures for the care of the trauma patient.
3. A defined Trauma Team with written roles and responsibilities.
4. Appointed Trauma Medical Director with a written job description.
5. A written Trauma Performance Improvement plan.
6. Appointed Trauma Program Manager (coordinator) with a written job description.
7. Documentation of the trauma center representative's attendance at the Regional Trauma Advisory Boards meetings.

II. TRAUMA TEAM

The team approach is optimal in the care of the injured patient. The trauma center must have a written policy for notification and mobilization of an organized trauma team (in a Level III facility) or to the extent that one is available (Level IV facility). The Trauma Team may vary in size and composition when responding to trauma activation. The physician leader or the mid-level practitioner on the trauma team should have ATLS or possess equivalent training for care of the trauma patient and is responsible for directing all phases of the resuscitation.

Suggested composition of the trauma team includes:

Level III:

- a. ED Physicians
- b. Physician Specialists
- c. Laboratory Technicians
- d. Nursing
- e. Auxiliary Support Staff

Level IV:

- a. Physician or Mid Level Practitioner
- b. Nursing
- c. Laboratory Technicians
- d. Auxiliary Staff

Compliance with the above will be evidenced by:

There will be written resuscitation protocols that adhere to the principles of ATLS guidelines, and a written trauma team criteria activation policy. This policy should include physiologic, anatomical, and mechanism of injury protocols in accordance with the Oklahoma Trauma Triage Algorithms and protocols.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

Medical Director:

The Trauma Center should have a physician director for the trauma program. The physician should be responsible for working with all members of the trauma team, and overseeing the implementation of a trauma specific performance improvement plan for the entire facility. Through this process, he/she should have the overall responsibility for the quality of trauma care rendered at the facility. The director should assist in the development of standards of care and assure appropriate policies and procedures are in place for the safe resuscitation and transfer of trauma patients. The physician director should have ATLS or possess equivalent training for care of the trauma patient

Trauma Program Manager (Coordinator):

All Level III trauma centers must have a Registered Nurse working in the role of the Trauma Program Manager (TPM). In conjunction with the Medical Director, the TPM is responsible for organization of the program and all necessary systems for the multidisciplinary approach throughout the continuum of trauma care. He/she is responsible for working with the trauma team to assure optimal care and will liaison with local EMS personnel, the RTAB, and other trauma centers.

The TPM will also develop a methodology for which activation of the trauma team is accomplished in their facility. The activation may be either full or partial depending upon the severity of the trauma patients' injuries.

III. HOSPITAL TRIAGE AND TRANSFER PLAN:

A well designed trauma program within the hospital is crucial to the success for providing optimal care to the trauma patients in Region 1. A written commitment on behalf of the entire facility devoted to the organization of trauma care is vital. Therefore, all hospitals in the region will establish criteria for the activation of their respective trauma programs and these criteria will be clearly defined in each institutions trauma policy. The following are intended as guidelines only for each hospitals policy as each and every hospital is unique in the way it serves its stakeholders.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

A. LEVEL III TRAUMA CENTER

A team approach is optimal in the care of the trauma patient. As noted above, the trauma team should consist of those individuals that can expedite care for the trauma patient. In a Level III facility this should include:

- i. Emergency Physician(s)
- ii. Emergency Room Nurses
- iii. Laboratory
- iv. Radiology
- v. Respiratory Therapy

The Level III trauma center must have an Emergency Department (ER) staffed so that trauma patients are assured immediate and appropriate initial care. An ER physician deemed competent in the care of the trauma patient shall be available 24 hours/day. This ER physician must be in-house 24 hours/day, immediately available at all times, and capable of evaluating trauma patients and provide initial resuscitation. The ER physician will provide team leadership and care for the trauma patient until the surgeon or other specialist arrives to take over care. The ER must have established standards and procedures to ensure immediate and appropriate care for the adult as well as the pediatric trauma patient. The medical director of the ER must participate in the trauma PI process.

The Level III trauma center must also have published on-call schedules and have the following medical specialties immediately available 24 hours/day to the injured patient:

- i. General Surgery
- ii. Anesthesia
- iii. Other medical specialties that may be available in the local area to assist with care of the trauma patient.

A surgical team must be on-call with a well-defined mechanism for notification to expedite transfer to the operating room if the patient's condition warrants.

Clinical support services such as Respiratory Therapy and Radiology technicians shall be available 24 hours/day to meet the immediate needs of the trauma patient. Written policies should exist delineating the prioritization/availability of the CT scanner for trauma patients. The use of tele-radiology is an acceptable practice in the Level III facility.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

Clinical laboratory services shall have the following services available in-house 24 hours per day:

- i. Blood typing and cross matching capabilities
- ii. Access to sufficient quantities of blood and blood products
- iii. Microbiology
- iv. Blood gas and pH determination
- v. Alcohol and drug screening
- vi. Coagulation studies.

All Level III trauma centers should have the following:

- i. Written transfer agreements with other providers as a transferring facility
- ii. Available Helipad.

B. LEVEL IV TRAUMA CENTER

The team approach is optimal in the care of trauma patients. The Level IV trauma center must have a written policy for notification and mobilization of an organized trauma team to the extent that one is available. The team may vary in size and composition depending on the logistics of the facility. The physician leader or mid-level practitioner on the trauma team is responsible for directing all phases of the resuscitation. Suggested composition of the trauma team includes, if available:

- i. Physician or Licensed Mid-level practitioner
- ii. Emergency Room Nurse
- iii. Laboratory
- iv. Radiology
- v. Ancillary personnel as needed

The ER of the Level IV trauma center should be staffed so trauma patients are assured immediate and appropriate initial care. A system must be developed and in place to assure early notification of the on-call practitioner. Adequate number of nurses must be immediately available 24 hours/day to ensure adequate care of the trauma patient.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

The Level IV trauma center should have the following clinical services available for consultation via a communication system on a 24-hour basis:

- i. General surgery
- ii. Neurology
- iii. Neurosurgery
- iv. Orthopedics

The Level IV facility must have written transfer agreements with other trauma facilities in the region. A policy must be in place to facilitate and expedite the transfer sequence to assure the most appropriate care is rendered to the patient. Agreements should be in place so that ALL facilities will work together to implement the Trauma Transfer Guidelines.

IV. CRITERIA FOR ACTIVATION OF THE TRAUMA TEAM

In either a Level III or Level IV facility, immediate activation of the trauma system (FULL ACTIVATION) should occur when you have any of the following:

- a. Glasgow Coma Scale (GCS) < 10
- b. Systolic blood pressure < 90 mmHg (adult)
- c. Respiratory rate < 10 or > 30/min
- d. Penetrating injury to the head, neck, torso, or extremities above the elbows or knees
- e. Flail chest
- f. Two or more proximal long bone fractures
- g. Pelvic fracture
- h. Limb paralysis
- i. Amputation proximal to the wrist or ankle
- j. Body surface burns > 5% (second or third degree)
- k. Burns associate with other traumatic or inhalation injury
- l. Trauma transfer patient that is intubated or receiving blood
- m. Children under 12 with any of the following criteria
- n. Ejection from vehicle
- o. Death of same passenger compartment
- p. Extrication time greater than 20 minutes
- q. Rollover MVC
- r. High-speed auto crash greater than 40 mph
- s. Auto deformity greater than 20 inches of external damage or intrusion into passenger compartment greater than 12 inches
- t. Pedestrian thrown or run over
- u. Motorcycle crash greater than 20 mph or separation of rider from the bike.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

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OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

In a Level III or Level IV facility, PARTIAL ACTIVATION of the trauma team should occur when a patient presents to the ER with a Priority II or Priority III injury. After triage by the appropriate personnel the patient should be treated appropriately for the injury and if necessary full activation of the team may occur.

V. INTER-FACILITY TRANSFERS

In an effort to optimize patient care and deliver the trauma patient to most appropriate destination, rapid assessment of the patient is imperative. When a trauma patient arrives at a destination hospital the trauma team should be activated and the patient will have an immediate medical screening completed. Depending upon the screening and the needs of the patient any of the following may occur:

1. The patient will be stabilized and then transferred to the most appropriate facility (Priority I or Priority II trauma that is time-sensitive), if appropriate staff and resources are available, stabilization may require surgical intervention, all Priority I patients that are admitted at a level III or IV hospital will have automatic CQI by the RTAB,
2. The patient will be stabilized and then admitted to that facility (Priority II that is not time-sensitive or Priority III),
3. The patient will be stabilized and transferred to their facility of choice (Priority II that is not (time-sensitive), or
4. The Priority III trauma patient will be treated at the closest acute care hospital or the hospital of patient's choice. The patient will be treated and discharged to home with appropriate instruction for their injuries (Priority III trauma).

It is recommended that the transfer of Priority II and Priority III trauma patients follow the same routing as the Pre-Hospital Destination Plan. This is an effort to provide optimal care in the most appropriate amount of time for the trauma patient. As always, the patient's choice of facility will be considered when the injuries are not of a time-sensitive matter.

In accordance with the ATLS guidelines of the American College of Surgeons, "Once the need to transfer is recognized, arrangements should be expedited and not delayed for diagnostic procedures that do not change the immediate plan of care for the patient."

VI. PROCEDURE FOR SELECTION OF HOSPITAL DESTINATION

It is recognized that some patients have needs that can only be met at specific destination hospitals. Thus, a trauma patient will often benefit from transfer directly to an appropriate hospital with the capabilities and capacity to provide definitive trauma care. This care may not necessarily be at the closest or patient preferred facility and this must be taken into account when treating the patient.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

Rapid pre-hospital recognition and appropriate triage of trauma patients using the Oklahoma Model Trauma Triage and Transport Guidelines is essential in determining the appropriate selection of Priority I, II, and III trauma patient hospital destination (see appendix B of the Pre-Hospital Trauma Destination Plan).

VII. PROCEDURE FOR MONITORING HOSPITAL STATUS AND CAPABILITY

A. EMResource™

The MERC coordinator will generate reports from the EMResource™ for use in monitoring hospital status related to destination. These reports will be provided periodically to OSDH and made available to the Region 1 CQI Committee. Any problems and/or trends identified through review of this data will be addressed by the CQI committee directly with the provider and if necessary through referral to the appropriate state level committee.

B. QI Indicators

A set of QI Indicators has been developed for use in monitoring hospital status and appropriateness of destination. The Region 1 CQI Committee will monitor these indicators. Any problems and/or trends through review of the indicators will be addressed by the CQI committee directly with the provider and if necessary through referral to the appropriate state level committee.

VIII. HELICOPTER UTILIZATION PROTOCOL

A. Purpose

Appropriate utilization of air ambulance resources by Region 1 providers.

B. "No Fly" Conditions:

Helicopter utilization is seldom indicated for patients without a chance for survival or without serious injury. The following are other situations in which an air ambulance should not be used:

- i. Patients at a location where time and distance constraints make air transport to the closest appropriate medical facility more time consuming should be transported by ground. This is generally within 45 minutes of the destination facility.
- ii. Priority 3 patients should be transported by ground ambulance.
- iii. Cardiac arrest without return of spontaneous circulation in the field.

Plan Approval Dates:

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Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

C. "Fly" Conditions:

The following are conditions that warrant the use of an air ambulance:

- i. Priority 1 trauma patients that are being transported to a facility in which time and distance constraints make air transport more timely, generally for distances with a transport time greater than 30 minutes by ground ambulance.
- ii. Priority 2 trauma patients that are being transported to a facility with a transport time greater than 45 minutes by ground ambulance, based on local resource availability.

D. The following are conditions that warrant the use of an air ambulance even when the patient is within a 45 minutes of a medical facility:

- i. The closest facility is not appropriate for the patients' injury and the appropriate facility is at a distance in which time and distance constraints justify air transport.
- ii. There are hazardous or impassable road conditions resulting in significant delays for ground transportation.
- iii. There are multiple patients of a serious nature requiring rapid transport, overwhelming available ground units.
- iv. Based on information available, the lead rescuer determines a lengthy rescue is required and transportation by ground would extend and delay definitive care.

E. The **closest available** medical aircraft should be utilized to improve survival of all patients being transported to a definitive care facility.

IX. DIVERSION

A hospital on divert can maintain that status for a **maximum** of 2 hours and then the situation should be re-evaluated. If it a hospital is continued on divert status for an additional 2 hour time period the Medical Emergency Response Center (MERC) coordinator in conjunction with the Regional Medical Director will assess the situation and determine if it is appropriate to continue on divert status and activate the MERC if deemed necessary.

X. QUALITY IMPROVEMENT

Each facility in the region shall conduct Quality Improvement (QI) activities with regard to their trauma program. Under the auspices of the Medical Director and the Trauma Program Manager each facility will conduct QI activities in accordance with the approved regional QI process.

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Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

EMResource™ Usage

Introduction

For several years EMResource™ has served as a tool for hospitals to display their diversion status in Oklahoma City. Although diversion is still a feature on the EMResource™ we are going to ask that you look at EMResource™ as a communication tool capable of demonstrating resource availability, health alerts and disaster notifications. EMResource™ is now a vital tool that can better enable communication in both routine daily circumstances and during disasters. EMResource's™ ability to serve this function is limited by the use of the system by providers.

Usage Requirements

Within Region 1 all providers are required of to comply with the guidelines established by the State *EMResource™ Joint Advisory Committee* and/or the Oklahoma State Department of Health in the *EMResource™ Manual*. In the event that the *EMResource™ Manual* is updated, the revisions to the *EMResource™ Manual* override the requirements in this document.

Specific usage requirements include but are not limited to:

Contact Information

Each provider is responsible to maintain accurate contact information on the EMResource™ Hospitals shall post the telephone number they wish other providers to use when calling patient referrals or reports in this area of EMResource™

Provider Status

Each hospital is required to maintain current status on the EMResource™ so that their capabilities or capacity can be readily accessed by other hospitals, EMS agencies and the Trauma Transfer and Referral Center.

Critical Concept: Emergency Departments and Hospitals are considered open unless posted otherwise on EMResource™

Emergency Department Status

This is the specific status of the Emergency Department and is the only status appropriate for diversion of pre-hospital transports. The current ED Status categories are: Open, Total ED Divert, Trauma Divert, CT Divert, ED select, Forced Open, and Closed.

If a facility has not updated their status on the EMResource™ their attempt to divert may be overridden by the pre-hospital provider or the Trauma Transfer and Referral Center.

Hospital Status

This status is specific to the inpatient capability/capacity and is only appropriate for diverting inter- facility transfer patients. The current Hospital Status categories are: Open, Caution, and Closed. If a facility has not updated their status on the EMResource™ their attempt to divert may be overridden by the Trauma Transfer and Referral Center.

Critical Concept: Emergency Departments and Hospitals are considered open unless posted otherwise on EMResource™ .

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

Provider Resource Availability

This status is for displaying hospital specialty coverage on a real time basis. A customized list of eight specialties has been developed to meet the needs of Oklahoma. The status categories for these coverage areas are:

Yes – Coverage is currently available.

No – Coverage is not currently available.

N/A – This service is not offered at this facility.

Air Ambulance Status

This status is for displaying the current status/availability of Air Ambulances. The status categories for this status are:

Available – the aeromedical resource is currently ready and able to respond to emergency calls.

Call for Status – current conditions necessitate that providers in need of aeromedical transport call to determine resource availability because:

The aeromedical resource may already be dispatched to a call or be on standby.

Local weather conditions may temporarily impact the ability of this aeromedical resource to respond.

This aeromedical resource may be temporarily unavailable due to routine service or fueling.

Not Available – the aeromedical resource is currently unable to respond in a timely manner.

In region 1 the air ambulances are required to keep their most accurate status current. They may not leave their status as ‘call for status’ at all times.

System Alerts

Providers in Region 1 are required to maintain EMResource™ in a manner that enables them to receive alerts in a timely manner. It is suggested that all providers maintain a computer specifically for EMResource™ use 24 hours a day.

If a provider is unable to maintain a computer with EMResource™ displayed 24 hours a day the provider is expected to work with the regional EMResource™ administrator to arrange the delivery of all System Alerts to the text enabled device of designated staff responsible to share the alert information with other on-duty staff.

Compliance with appropriate usage will be monitored through routine MERC drills.

Data Reporting

Providers in Region 1 are required to participate in reporting data supported by the EMResource™ application. This reporting requirement includes but is not limited to:

Hospital Daily Report of bed capacity and ED volume;

EMS Daily Report of resources and volume;

Monitoring

Appropriate use of EMResource™ will be enforced in the region through the QI process

The CQI committee will routinely review reports from the Trauma Transfer and Referral Center on diversion of patients and compare the patient diversion list with the list of facility diversion hours generated from the EMResource™.

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OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

The CQI committee will review all cases referred to them for inappropriate use of EMResource™ in any of the listed categories. The regional and/or state EMResource™ administrator will perform periodic drills using EMResource™ and monitor appropriateness of provider response. Reports of these drills will be provided to the RTAB CQI committee who will address problems/trends directly with the provider and if necessary through referral to the appropriate state level committee. The CQI committee will work with these providers to come into compliance with EMResource™ usage requirements. If these attempts fail the cases will be referred to the State CQI committee for further action.

Summary

EMResource™ is a vital communication tool that provides the capability of real time communication among trauma system participants. This ability is limited by provider use of the system. Region 1 supports use of this tool through adoption of these requirements.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

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Appendix A

EMS Provider Descriptions

Plan Approval Dates:

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EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

DESCRIPTION OF EMS SERVICES

EMS Providers within Region 1 include: 2008 Information. For current information go to:
http://www.ok.gov/health/Protective_Health/Emergency_Medical_Services/

Alfalfa County

Alfalfa County EMS is a Basic Service with 11 First Responders, 13 Basic EMTs and 1 Intermediate EMT.

Helena EMS is a Basic Service with 2 First Responders, 6 Basic EMTs, 6 Intermediate EMTs and 1 Paramedic.

Beaver County

Beaver County EMS is a Basic Service with 6 First Responders and 12 Basic EMTs.

Beckham County

Elk City Fire Department EMS is a Basic Service with 1 Intermediate EMT and 4 Paramedics.

Erick Ambulance Service is a Basic Service with 11 First Responders, 6 Basic EMTs and 2 Paramedics.

Sinor EMS (Sayre) is an Intermediate Service with 2 Basic EMTs, 1 Intermediate EMT and 1 Paramedic.

Blaine County

Canton-Longdale EMS is a Basic Service with 7 Basic EMTs.

Okeene Ambulance is a Basic Service with 3 First Responders, 5 Basic EMTs, 2 Intermediate EMTs and 1 Paramedic.

Parkview Ambulance (Geary EMS) is a Basic Service with 8 Basic EMTs and 1 Paramedic.

Watonga EMS is a Basic Service with 4 First Responders, 5 Basic EMTs, 3 Intermediate EMTs and 4 Paramedics.

Cimarron County

Cimarron County EMS is a Basic Service with 8 Basic EMTs, 1 Intermediate EMT, 3 Paramedics, and 1 First Responder.

Keyes EMS is a Basic Service with 8 Basic EMTs.

Custer County

Butler EMS is a Basic Service with 6 Basic EMTs and 1 Intermediate EMT.

Cheyenne-Arapaho Tribes EMS is an Intermediate with 1 First Responders, , 6 Intermediate EMTs and Paramedics.

Sinor EMS Clinton is an Intermediate Service with 2 First Responders, 4 Basic EMTs, 2 Intermediate EMTs, and 6 Paramedics.

Sinor EMS (Weatherford) is an Intermediate Service with 5 Basic EMTs and 7 Paramedics.

Dewey County

Community Ambulance Service is a Basic Service with 3 First Responders, 6 Basic EMTs and 1 Paramedic.

Leedey Ambulance Service is a Basic Service with 4 Basic EMTs and 1 Paramedic.

Taloga Ambulance Service is a Basic Service with 12 First Responders, 8 Basic EMTs and 1 Paramedic.

Vici-Camargo EMS is a Basic Service with 5 First Responders, 3 Basic EMTs, 1 Intermediate EMT and 3 Paramedics.

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

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Northwest Regional Trauma Triage and Destination Plan

Ellis County

Ellis County EMS is a Basic Service with 20 First Responders and 17 Basic EMTs.

Garfield County

Life EMS is a Paramedic Service with 6 Basic EMTs, 7 Intermediate EMTs, 14 Paramedics and 8 Specialty Care.

Grant County

Medford Ambulance Service is a Basic Service with 2 First Responders, 6 Basic EMTs, 1 Intermediate EMT and 2 Paramedics.

Pond Creek Fire Department Ambulance is a Basic Service with 13 First Responders, 12 Basic EMTs, 5 Intermediate EMTs and 1 Paramedic.

Harper County

Buffalo EMS District is a Basic Service with 9 First Responders, 8 Basic EMTs and 1 Paramedic.

Laverne EMS is a Basic Service with 5 First Responders and 7 Basic EMTs.

Kingfisher County

Cashion Fire Department is a Basic Service with 8 First Responders and 10 Basic EMTs.

Kingfisher Ambulance Service is an Intermediate Service with 10 Basic EMTs, 6 Intermediate EMTs and 3 Paramedic.

Life EMS (Hennessey) is a Paramedic Service with 6 Basic EMTs, 7 Intermediate EMTs and 14 Paramedics.

Major County

Major County EMS is a Basic Service with 1 First Responders, 4 Basic EMTs, 7 Intermediate EMTs and 2 Paramedics.

Roger Mills County

Roger Mills Ambulance is a Basic Service with 17 First Responders, 14 Basic EMTs, 5 Intermediate EMTs and 4 Paramedics.

Texas County

Goodwell Ambulance Service is a Basic Service with 6 Basic EMTs, 1 Intermediate EMT and 2 Paramedics.

Guymon Fire Department is an Intermediate Service with 3 First Responders, 14 Basic EMTs, 4 Intermediate EMT, and 13 Paramedics.

Hooker Municipal Ambulance is a Basic Service with 4 First Responders and 7 Basic EMTs.

Texhoma Ambulance Service is a Basic Service with 2 First Responders, 5 Basic EMTs and 2 Intermediate EMTs.

Washita County

Burns Flat is a Basic Service with 3 First Responders, 8 Basic EMTs, 9 Intermediate EMTs and 1 Paramedic.

Cordell Ambulance is a Basic Service with 2 First Responders and 6 Basic EMTs.

Sentinel City Ambulance is a Basic Service with 2 First Responders and 7 Basic EMTs.

Woods County

Alva Ambulance is a Basic Service with 6 Basic EMTs and 1 Intermediate EMTs.

Freedom Volunteer Ambulance is a Basic Service with 4 Basic EMTs.

Waynoka Ambulance is a Basic Service with 4 First Responders and 2 Basic EMTs.

Plan Approval Dates:

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EMResource™ RTAB: 05-23-2006 OTSIDAC: 08-02-2006

OTSIDAC Revision to Trauma Triage Algorithm Guidelines: February 2, 2010

Northwest Regional Trauma Triage and Destination Plan

Woodward County

Woodward County EMS is a Basic Service with 2 First Responders, 6 Basic EMTs, 4 Intermediate EMTs and 8 Paramedics.

AIR SERVICES

Air Evac Lifeteam – Elk City and Woodward OK
EagleMed – Guymon and Stillwater OK
Midwest Lifeteam – Liberal, KS

Plan Approval Dates:

Pre-Hospital RTAB: 07-18-2006 OTSIDAC: 08-02-2006

Inter-facility RTAB: 03-27-2007 OTSIDAC: 08-01-2007

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Appendix B

Oklahoma Trauma Patient Definitions and Triage Algorithms

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EMResource™ RTAB: 05-23-2006 OTSIDAC 08-02-2006

TRAUMA PATIENT TRIAGE DEFINITIONS

Trauma Triage

Since patients differ in their initial response to injury, trauma triage is an inexact science. Current patient identification criteria does not provide 100% percent sensitivity and specificity for detecting injury. As a result, trauma systems are designed to over-triage patients in order not to miss a potentially serious injury. Under-triage of patients should be avoided since a potentially seriously injured patient could be delivered to a facility not prepared to manage their injury. Large amounts of over-triage is not in the best interest of the Trauma System since it will potentially overwhelm the resources of the facilities essential for the management of severely injured patients.

Priority 1 Trauma Patients

These are patients with high energy blunt or penetrating injury causing physiological abnormalities or significant single or multisystem anatomical injuries. These patients have time sensitive injuries requiring the resources of a designated Level I, Level II, or Regional Level III Trauma Center. These patients should be directly transported to a Designated Level I, Level II, or Regional Level III facility for treatment but may be stabilized at a Level III or Level IV facility, if needed, depending on location of occurrence and time and distance to the higher level trauma center. If needed these patients may be cared for in a Level III facility if the appropriate services and resources are available.

Physiological Compromise Criteria:

Hemodynamic Compromise-Systolic BP <90 mmHg

Other signs that should be considered include:

- Sustained Tachycardia
- Cool diaphoretic Skin

Respiratory Compromise-RR<10 or >29 Breaths/Minutes

Or <20 in infant <1 year

Altered Mentation- of trauma etiology- GCS <14

Anatomical Injury Criteria

Penetrating injury of head, neck, chest/abdomen, or extremities proximal to elbow or knee.

Amputation above wrist or ankle.

Paralysis or suspected spinal fracture with neurological deficit.

Flail chest.

Two or more obvious proximal long bone fractures (upper arm or thigh).

Open or suspected depressed skull fracture.

Unstable pelvis or suspected pelvic fracture.

Tender and/or distended abdomen.

Burns associated with Priority I Trauma

Crushed, degloved, or mangled extremity

Priority 2 Trauma Patients

These are patients with potentially time sensitive injuries due to a high energy event (positive mechanism of injury) or with a less severe single system injury but currently with no physiological abnormalities or significant anatomical injury.

I. Significant Single System Injuries

Neurology: Isolated head trauma with transient loss of consciousness or altered mental status but currently alert and oriented.

Orthopedic: Single proximal and distal extremity fractures (including open) from high energy event, isolated joint dislocations-knee, hip, elbow, shoulder without neurovascular deficits, and unstable joint (ligament) injuries without neurovascular deficits.

Maxillofacial trauma: Facial lacerations; such as those requiring surgical repair, isolated open facial fractures or isolated orbit trauma with or without entrapments, or avulsed teeth.

TRAUMA PATIENT TRIAGE DEFINITIONS

High Energy Event

Patient involved in rapid acceleration deceleration events absorb large amounts of energy and are at an increased risk for severe injury despite normal vital signs on their initial assessment. Five to fifteen percent of these patients, despite normal vital signs and no apparent anatomical injury on initial evaluation, will have a significant injury discovered after a full trauma evaluation with serial observations. Determinates to be considered are direction and velocity of impact and the use of personal protection devices. Motor vehicle crashes when occupants are using personal safety restraint devices may not be considered a high-energy event. Personal safety devices will often protect the occupant from absorbing high amounts of energy even when the vehicle shows significant damage. High Energy Events:

Ejection of the patient from an enclosed vehicle

Auto/pedestrian or auto/bike or motorcycle crash with significant impact (> 20 mph) impact with the patient thrown or run over by a vehicle.

Falls greater than 20 feet for adult, >10 feet for pediatric or distance 2-3 times height of patient

Significant assault or altercations

High risk auto crash

- The following motor vehicle crashes particularly when the patient has not used personal safety restraint devices:

- Death in the same passenger compartment

- Rollover

- High speed auto crash

- Compartment intrusion greater than 12 inches at occupant site or >18 inches at any site

- Vehicle telemetry data consistent with high risk injury.

Medic Discretion

Since trauma triage is an inexact science and patients differ in their response to injury, clinical judgment by the medic at the scene is an extremely important element in determining the destination of all patients. If the medic is concerned that a patient may have a severe injury which is not yet obvious, the patient may be upgraded in order to deliver that patient to the appropriate level Trauma Center. Paramedic suspicion for a severe injury may be raised by but not limited to the following factors:

Age greater than 55

Age less than 5

Extremes of environment

Patient's previous medical history such as:

- Anticoagulation or bleeding disorders
- End stage renal disease on dialysis

Pregnancy (>20 weeks)

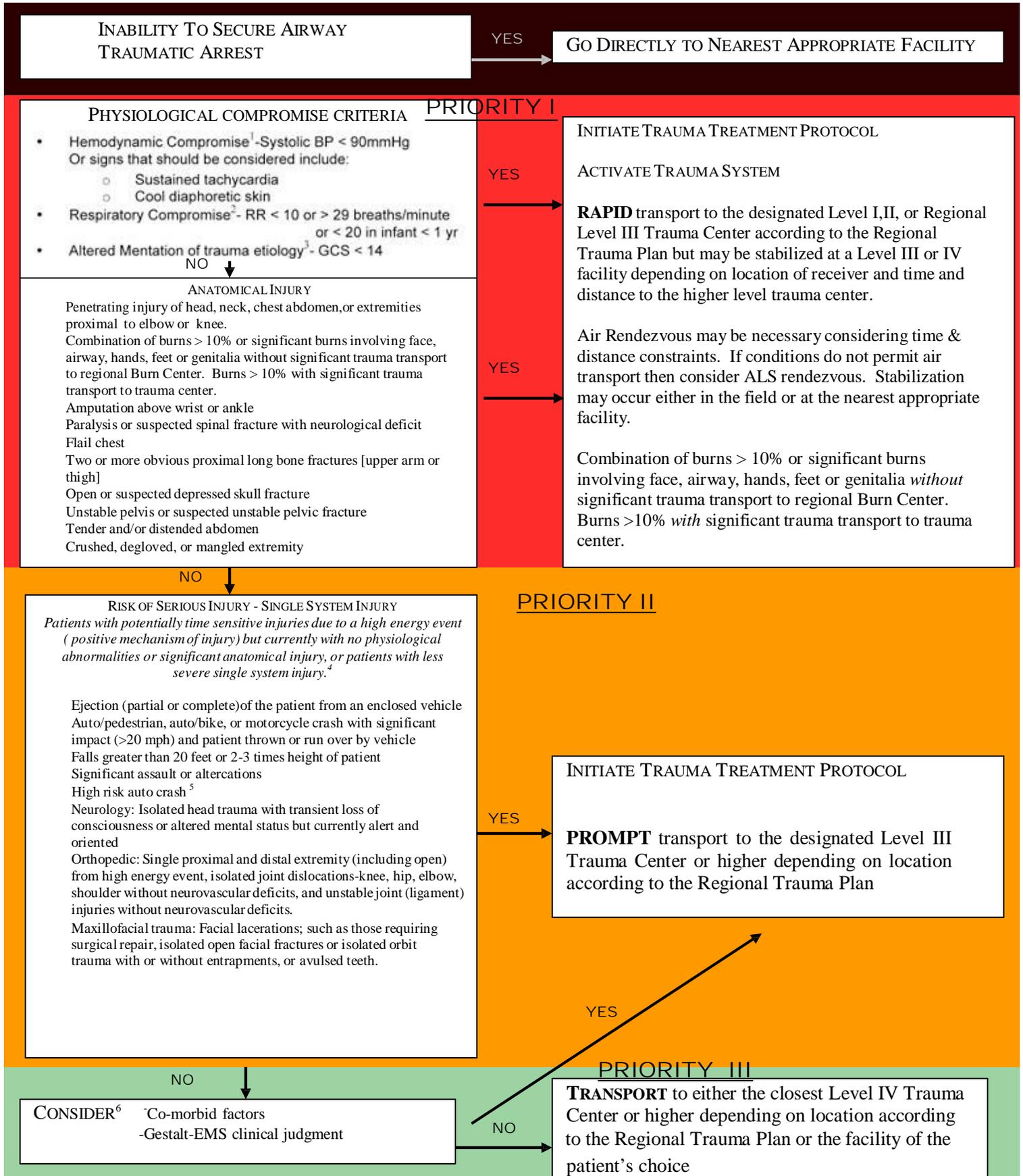
Priority 3 Trauma Patients

These patients are without physiological abnormalities, altered mentation, neurological deficit, or a significant single system injury that has been involved in a low energy event. These patients should be treated at the nearest treating facility or the patient's hospital of choice.

Example: Same level fall with extremity or hip fracture.

ADULT PRE-HOSPITAL TRIAGE AND TRANSPORT GUIDELINES

Oklahoma Model Trauma Triage Algorithm



Approved : OTSIDAC 02/01/06
 Revised: OTSIDAC 08/01/07; 02/06/08, 08/06/08; 02/03/10
 Clarification Revision by MAC: 11/19/08

**ADULT PRE-HOSPITAL
TRIAGE AND TRANSPORT GUIDELINES**
Oklahoma Model Trauma Triage Algorithm

1. In addition to hypotension: pallor, tachycardia or diaphoresis may be early signs of hypovolemia
2. Tachypnea (hyperventilation) alone will not necessarily initiate this level of response.
3. Altered sensorium secondary to sedative-hypnotic will not necessarily initiate this level of response.
4. High Energy Event signifies a large release of uncontrolled energy. Patient is assumed injured until proven otherwise, and multisystem injuries may exist. Determinants to be considered by medical professionals are direction and velocity of impact, use of personal protection devices, patient kinematics and physical size and the residual signature of energy release (e.g. Major vehicle damage). Motor vehicle crashes when occupants are using personal safety restraint devices may not be considered a high energy event because the personal safety restraint will often protect the occupant from absorbing high amounts of energy.
5. The following motor vehicle crashes particularly when the patient has not used personal safety restraint devices:
 - a. Death in the same passenger compartment
 - b. Rollover
 - c. High speed auto crash
 - d. Compartment intrusion greater than 12 inches at occupant site or > 18 inches at any site
 - e. Vehicle telemetry data consistent with high risk of injury
6. Since trauma triage is an inexact science and patients differ in their response to injury, clinical judgment by the medic at the scene is an extremely important element in determining the destination of all patients. If the medic is concerned that a patient may have a severe injury which is not yet obvious, the patient may be upgraded in order to deliver that patient to the appropriate level Trauma Center. EMS provider suspicion for a severe injury may be raised by but not limited to the following factors:

Age greater than 55

Age less than 5

Extremes of environment

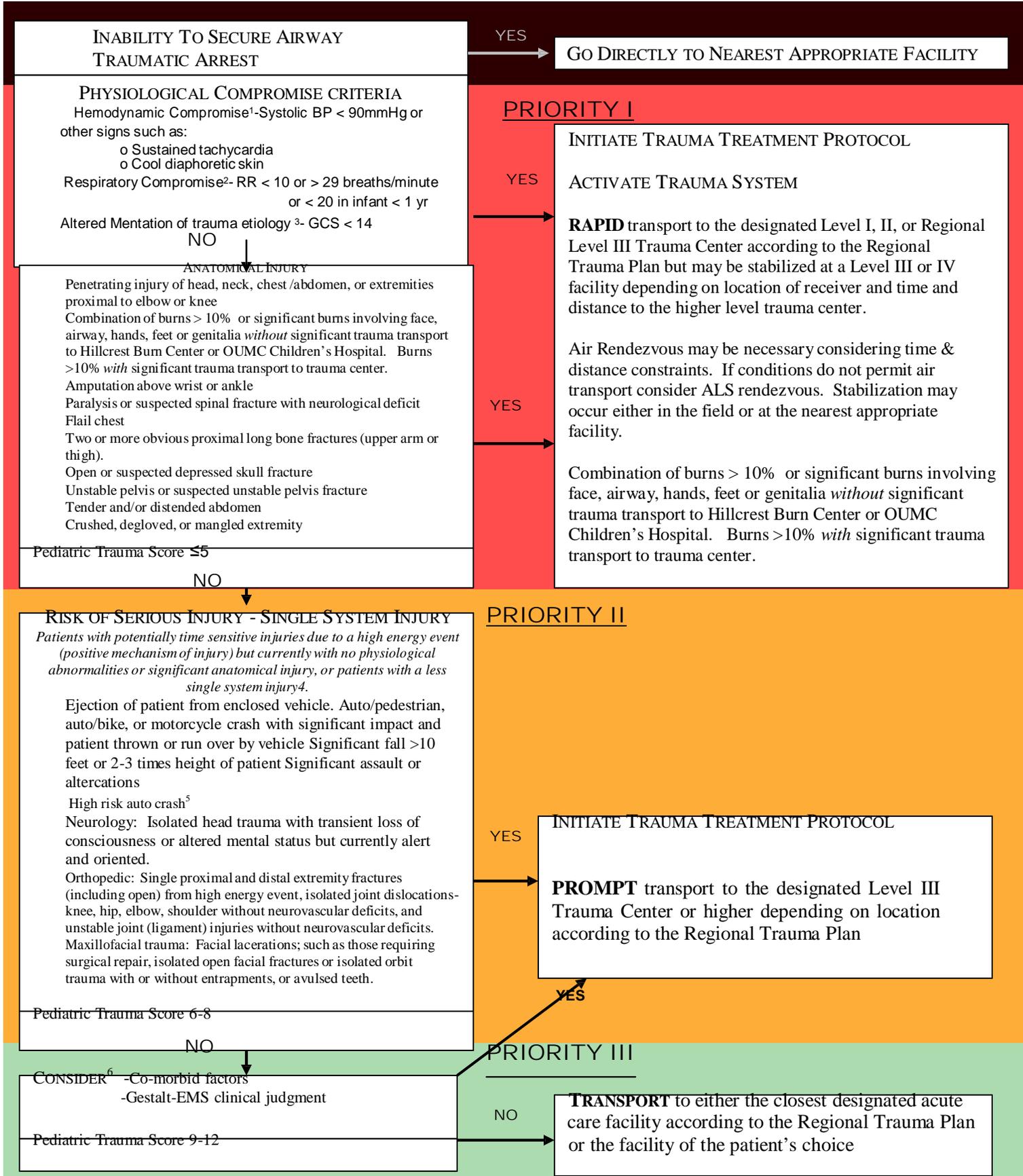
Patient's previous medical history such as:

- Anticoagulation or bleeding disorders
- End state renal disease on dialysis

Pregnancy (>20 weeks)

PEDIATRIC (16 YEARS) PRE-HOSPITAL TRIAGE AND TRANSPORT GUIDELINES

Oklahoma Model Trauma Triage Algorithm



Approved : OTSIDAC 02/01/06
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PEDIATRIC (16 YEARS) PRE-HOSPITAL TRIAGE AND TRANSPORT GUIDELINES

Oklahoma Model Trauma Triage Algorithm

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Age greater than 55

Age less than 5

Extremes of environment

Patient's previous medical history such as:

- Anticoagulation or bleeding disorders
- End state renal disease on dialysis

Pregnancy (>20 weeks)

**PEDIATRIC (16 YEARS) PRE-HOSPITAL
TRIAGE AND TRANSPORT GUIDELINES**
Oklahoma Model Trauma Triage Algorithm

Pediatric Trauma Score (PTS)				
Components	+2	+1	-1	Score
Weight	>20 kg (44 lb)	10-20 kg (22-44 lb)	< 10 kg (< 22 lb)	
Airway	Patent *	Maintainable ^	Unmaintainable #	
Systolic (cuff) Or BP (pulses)	> 90 mm Hg Radial	50-90 mm Hg Femoral/Carotid	< 50 mm Hg None palpable	
CNS	Awake, no LOC	Obtunded Some LOC†	Comatose, unresponsive	
Fractures	None	Closed (or suspected)	Multiple open or closed	
Wounds	None	Minor	Major ‡, Burns or penetrating	
TOTAL	Range – 6 to +12			

Score: Possible Range –6 to +12, decreasing with increasing injury severity.

Generally:

- 9 to 1 = minor trauma
- 6 to 8 = potentially life threatening
- 0 to 5 = life threatening
- < 0 = usually fatal

* No assistance required.

^ Protected by patient but constant observation required for position, patency, or O₂ administration

Invasive techniques required for control (e.g., intubation).

† Responds to voice, pain, or temporary loss of consciousness.

‡ Abrasions or lacerations

**ADULT INTERFACILITY
TRIAGE AND TRANSFER GUIDELINES**
Oklahoma Model Trauma Triage Algorithm

PRIORITY I

Anatomy of the Injury

Penetrating injury of the head, neck, torso or groin.

Abdominal/Pelvic Injuries

- Hemodynamically unstable patient with physical evidence of abdominal or pelvic trauma
- Unstable pelvic ring disruption
- Pelvic fracture with shock or other evidence of continuing hemorrhage
- Open pelvic fracture
- Penetrating wound of abdomen with suspicion of penetration of the peritoneum
- Ruptured hollow viscous

CNS

- Penetrating Head Injury or Depressed skull fracture
- Open Head Injury
- GCS <= 10 or deterioration of 2 or more points
- Lateralizing signs
- New neurological deficits
- CSF Leak
- Spinal cord injury with neurological deficits
- Unstable spinal cord injuries

Chest

- Widened mediastinum or other signs suggesting great vessel injury
- Major chest wall or pulmonary injury with respiratory compromise
- Cardiac injury (blunt or penetrating)
- Cardiac tamponade
- Patients who may require prolonged ventilation
- Suspected tracheobronchial tree or esophageal injury

Hemodynamic Instability

- Adult SBP consistently <90 following 2 liters of crystalloid
- Respiratory distress with rate <10 or > 29

Major Extremity Injury

- Fracture/dislocation with loss of distal pulses
- Amputation of extremity proximal to wrist or ankle
- Pelvic fractures with hemodynamic instability
- Two or more long bone fracture sites
- Major vascular injuries documented by arteriogram **or** loss of distal pulses
- Crush Injury or prolonged extremity ischemia

Multiple System

- Head Injury combined with face, chest, abdominal, or pelvic injury
- Significant injury to two or more body regions
- Combination of burns > 10% or significant burns involving face, airway, hands, feet or genitalia *without* significant trauma transport to regional Burn Center. Burns >10% *with* significant trauma transport to trauma center.

Secondary Deterioration

- Prolonged mechanical ventilation
- Sepsis
- Single or multiple organ system failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or coagulation systems)
- Major tissue necrosis

YES

Initiate internal Trauma Treatment Protocol if definitive surgical care and critical care monitoring are available

If definitive surgical care or critical care monitoring are not available then immediate stabilization & transfer to appropriate designated facility according to regional plan. Stabilization may involve surgical intervention. prior to transfer. Air transport may be necessary considering time & distance constraints.

NO

Proceed to Priority II Interfacility Transfer Criteria

ADULT INTERFACILITY TRIAGE AND TRANSFER GUIDELINES Oklahoma Model Trauma Triage Algorithm

PRIORITY II

Abdominal/Pelvic Injuries

- Stable pelvic fractures
- Hemodynamically stable isolated abdominal trauma
 - o diffuse abdominal pain/tenderness
 - o seat belt contusions
 - o visceral injuries
- Hemodynamically stable isolated solid organ injuries

CNS

- Head Injury with GCS > 10
- Head Injury with Transient loss of consciousness < 5 min
- Head Injury with Transient neurological deficits
- Spinal cord injury without neurological deficits

Chest

- Isolated Chest Trauma- pain, mild dyspnea
- Rib fractures, sternal fractures, pneumothorax, hemothorax *without* respiratory compromise
- Unilateral pulmonary contusion without respiratory compromise

Comorbid

- Age <5 or > 55
- Known cardiac, respiratory or metabolic disease
- Pregnancy
- Immunosuppression
- Bleeding disorder or anticoagulants

Major Extremity Injury

- Single proximal extremity fractures, including open
- Distal extremity fractures, including open
- Isolated joint dislocations-knee, hip, elbow, shoulder without neurovascular deficits
- Unstable joint (ligament) injuries without neurovascular deficits
- Degloving injuries without evidence of limb threatening injury

Mechanism

- Ejection of patient from enclosed vehicle
- Adult auto/pedestrian, auto/bike, or motorcycle crash with significant impact and patient thrown or run over by vehicle
- Falls greater than 20 feet
- Significant assault or altercations
- Other "high energy" events based on Paramedic discretion⁴, e.g.: patients involved in motor vehicle crashes with significant vehicular damage and not using personal safety restraint devices

Other

- Isolated open facial fractures
- Isolated orbit trauma with or without entrapments, without visual deficits

YES

Perform complete trauma evaluation and appropriate serial observations. Consider admission if condition remains stable.

Deterioration of Glasgow Coma Scale, vital signs or patient's condition or significant findings on further evaluation

YES

If definitive surgical care or critical care monitoring are not available, activate Trauma System and prepare for RAPID transfer to the appropriate designated Trauma Facility according to the Regional Trauma Plan. Stabilization may involve surgical intervention.

NO

Consider admission if condition remains stable.

NO

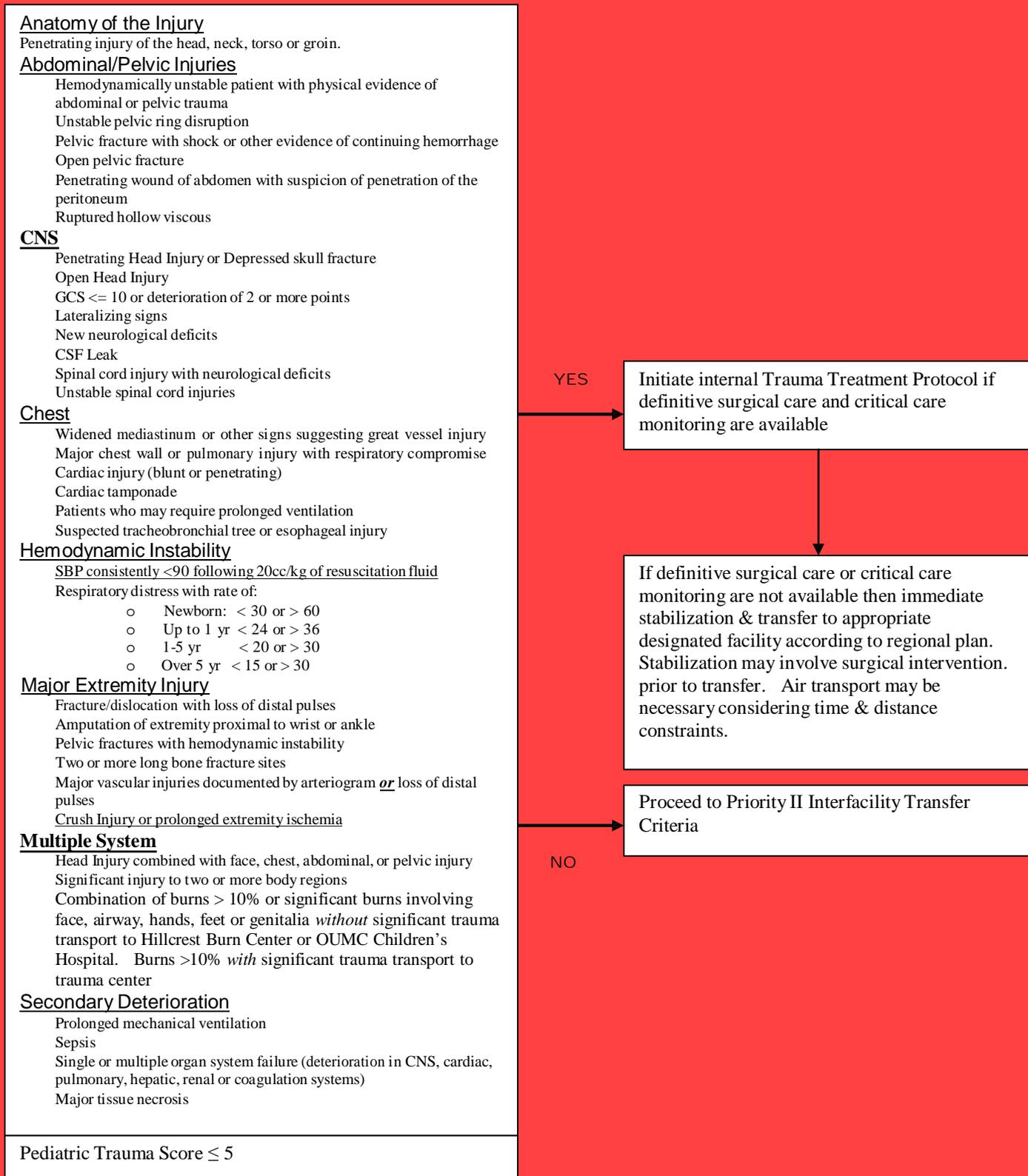
Priority III

Perform appropriate emergency department evaluation. Consider discharge or admit if condition remains stable.

Deterioration of Glasgow Coma Scale, vital signs or patient's condition or significant findings on further evaluation: Initiate Trauma Treatment Protocol- Activate Trauma System and prepare for RAPID transfer to the appropriate designated Trauma Facility according to the Regional Trauma Plan if definitive surgical care and critical care monitoring are not available.

Pediatric Interfacility Triage and Transfer Guidelines Oklahoma Model Triage Algorithm

PRIORITY I



Pediatric Interfacility Triage and Transfer Guidelines Oklahoma Model Triage Algorithm

PRIORITY II

Abdominal/Pelvic Injuries

- Stable pelvic fractures
- Hemodynamically stable isolated abdominal trauma
 - o diffuse abdominal pain/tenderness
 - o seat belt contusions
 - o visceral injuries
- Hemodynamically stable isolated solid organ injuries

CNS

- Head Injury with GCS > 10
- Head Injury with Transient loss of consciousness < 5 min
- Head Injury with Transient neurological deficits
- Spinal cord injury without neurological deficits

Chest

- Isolated Chest Trauma- pain, mild dyspnea
- Rib fractures, sternal fractures, pneumothorax, hemothorax *without* respiratory compromise
- Unilateral pulmonary contusion without respiratory compromise

Comorbid

- Known cardiac, respiratory or metabolic disease
- Pregnancy
- Immunosuppression
- Bleeding disorder or anticoagulants

Major Extremity Injury

- Single proximal extremity fractures, including open
- Distal extremity fractures, including open
- Isolated joint dislocations-knee, hip, elbow, shoulder without neurovascular deficits
- Unstable joint (ligament) injuries without neurovascular deficits
- Degloving injuries without evidence of limb threatening injury

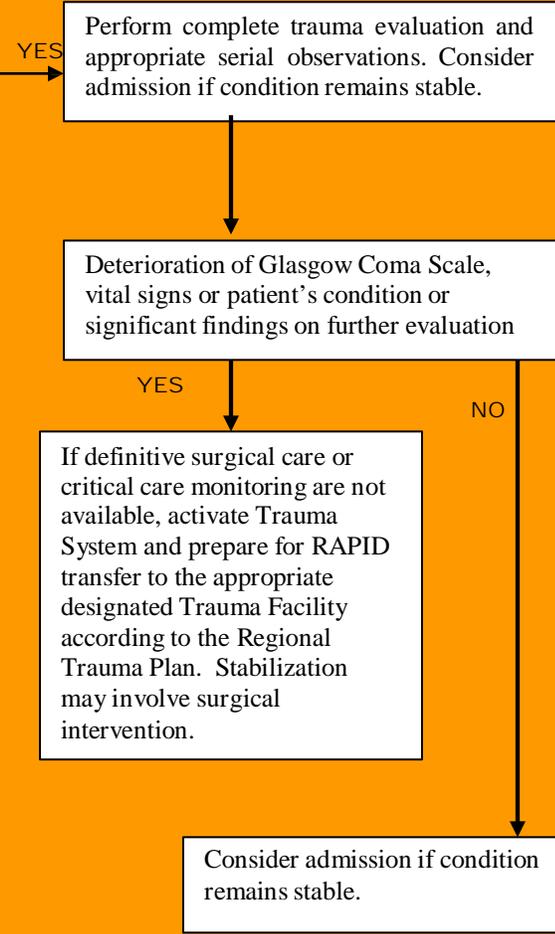
Mechanism

- Ejection of patient from enclosed vehicle
- Auto/pedestrian, auto/bike, or motorcycle crash with significant impact and patient thrown or run over by vehicle
- Falls greater than 20 feet
- Significant assault or altercations
- Other "high energy" events based on Paramedic discretion⁴, e.g.: patients involved in motor vehicle crashes with significant vehicular damage and not using personal safety restraint devices

Other

- Isolated open facial fractures
- Isolated orbit trauma with or without entrapments, without visual deficits

Pediatric Trauma Score 6-8



NO Priority III

Perform appropriate emergency department evaluation. Consider discharge or admit if condition remains stable.
Pediatric Trauma Score 9-12

Deterioration of Glasgow Coma Scale, vital signs or patient's condition or significant findings on further evaluation: Initiate Trauma Treatment Protocol- Activate Trauma System and prepare for RAPID transfer to the appropriate designated Trauma Facility according to the Regional Trauma Plan if definitive surgical care and critical care monitoring are not available.

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Appendix C

EMTALA Clarification

Plan Approval Dates

Pre-Hospital RTAB: 07-18-2006 OTSIDAC 08-02-2007 RTAB Revised 1-29-2008

Inter-Facility RTAB: 03-27-2007 OTSIDAC 08-01-2007

EMResource™ RTAB: 05-23-2006 OTSIDAC 08-02-2006

I. EMTALA Regarding Helipad Usage

There have been some concerns of possible EMTALA violations when using a hospital's helipad to transfer a patient from a ground ambulance to an air ambulance. The following two (2) circumstances will not trigger EMTALA. (Excerpt from the State Operations Manual, Appendix V – Interpretive Guidelines – Responsibilities of Medicare Participating Hospitals in Emergency Cases)

1. The use of a hospital's helipad by local ambulance services or other hospitals for the transport of individuals to tertiary hospitals located throughout the state does not trigger an EMTALA obligation for the hospital that has the helipad on its property when the helipad is being used for the purpose of transit as long as the sending hospital conducted the Medical Screening Exam (MSE) prior to transporting the individual to the helipad for medical helicopter transport to a designated recipient hospital. The sending hospital is responsible for conducting the MSE prior to transfer to determine if an Emergency Medical Condition (EMC) exists and implementing stabilizing treatment or conducting an appropriate transfer. Therefore, if the helipad serves simply as a point of transit for individuals who have received an MSE performed prior to the transfer to the helipad, the hospital with the helipad is not obligated to perform another MSE prior to the individual's continued travel to the recipient hospital. If, however, while at the helipad the individual's condition deteriorates, the hospital at which the helipad is located must provide another MSE and stabilizing treatment within its capacity if requested by medical personnel accompanying the individual.
2. If as part of the EMS protocol, EMS activates helicopter evacuation of an individual with a potential EMC, the hospital that has the helipad does not have an EMTALA obligation if they are not the recipient hospital, **unless a request** is made by EMS personnel, the individual, or a legally responsible person acting on the individual's behalf for the examination or treatment of an EMC.

II. EMTALA EMERGENCY DEPARTMENT DEFINITIONS & DESCRIPTIONS

Situations may occur in which patients are diverted to other healthcare facilities provided EMTALA is followed.

Emergency Medical Treatment and Active Labor Act ("EMTALA") refers to Sections 1866 and 1867 of the Social Security Act, 42 U.S.C. Section 1395dd, which obligates hospitals to provide medical screening, treatment, and transfer of individuals with emergency medical conditions or women in labor. It is also referred to as the "anti-dumping" statute and COBRA.

Emergency Medical Condition:

1. A medical condition manifesting itself by acute symptoms of sufficient severity (including severe pain, psychiatric disturbances, and/or symptoms of substance abuse) such that the absence of immediate medical attention could reasonably be expected to result in:
 - a. Placing the health of the individual or, with respect to a pregnant woman, the health of a woman and her unborn child in serious jeopardy;
 - b. Serious impairment of bodily functions, or
 - c. Serious dysfunction of any bodily organ or part; or

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2. With respect to a pregnant woman who is having contractions:
 - a. That there is inadequate time to effect a safe transfer to another hospital before delivery;
or
 - b. That transfer may pose a threat to the health or safety of the woman or the unborn child.

Capacity means the ability of the hospital to accommodate the individual requesting examination or treatment of the transferred individual. Capacity encompasses number and availability of qualified staff, beds, equipment, and the hospital's past practices of accommodating additional patients in excess of its occupancy limits.

- Such as Emergency Department beds are filled, patients are backed up in the Emergency Department waiting room, and there are no other beds or personnel available to provide appropriate care for the patients.

Capabilities of a medical facility or main hospital provider means the physical space, equipment, supplies, and services (e.g. trauma care, surgery, intensive care, pediatrics, obstetrics, burn unit, neonatal unit, or psychiatry), including ancillary services available at the hospital. The capabilities of the hospital's staff mean the level of care that the hospital's personnel can provide within the training and scope of their professional licenses. For off-campus departments, the capability of the hospital as a whole is included. The obligations of the hospital provider must be discharged within the hospital as a whole. However, the hospital is not required to locate additional personnel or staff to off-campus departments to be on-call for possible emergencies.

Under no circumstances will an Emergency Department patient who has an emergency medical condition be transferred to another facility because of inability to pay for services or based on any illegal form of discrimination (national origin, race, gender, religion, etc.). Prior to any Emergency Department transfer, the Emergency Department staff will comply fully with EMTALA. A transfer form is to be used for patients who are transferred to a different acute care facility.

If a patient Comes to the Hospital Property or Premises and has an emergency medical condition, the hospital must provide either: (a) further medical examination and treatment, including hospitalization, if necessary, as required to stabilize the medical condition within the capabilities of the staff and facilities available at the hospital; or (b) a transfer to another more appropriate or specialized facility.

- **Comes to the Emergency Department** with respect to an individual presenting for examination and treatment for what may be an emergency medical condition means that the individual is on the hospital property and premises. An individual in a non-hospital owned ambulance on hospital property or premises is considered to have come to the hospital's Emergency Department.

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Appendix D

Advanced Life Support Intercept Protocol

Plan Approval Dates

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ALS INTERCEPT PROTOCOL FOR REGION 1

Purpose:

To provide guidelines to Emergency Medical Services personnel on when to request Advanced Life Support (ALS) assistance from neighboring ambulance services.

Policy:

The following will apply to ensure that BLS/ALS assistance requests are managed appropriately.

ALS Assist is defined as any request for an air or ground advanced life support unit to respond to and/or intercept with an EMS Unit for the purpose of providing an advanced level of patient care. A licensed Intermediate or Paramedic level of care should provide ALS Assist.

ALS Assist/intercept requests should be made in any situation where the EMS provider has determined that the patient may be unstable or has life-threatening injuries or illness. Medics should refer to the Oklahoma Trauma Triage and Transportation guidelines for classification of the patient.

Procedure:

1. Consideration must be given as to the location of the EMS unit, and anticipated location of intercept. The decision to request ALS should be made immediately.
2. The location of the intercept shall be decided as soon as possible.
3. Only if it is deemed to be in the best interest of the patient should the patient be transferred from a BLS unit to a ground ALS unit.
4. The ALS provider should be licensed at the Intermediate or Paramedic level or an Air Ambulance.
5. BLS and ALS personnel may elect to request air medical support based on the Regional Trauma Plan. BLS personnel need not wait for an assessment prior to requesting air medical support. Landing zone selection and security shall be coordinated with local resources. Transportation to the closest most appropriate medical facility shall not be inordinately delayed while waiting for air support.
6. A full verbal patient care report shall be given to the ALS personnel upon arrival and a full patient care report will be left with the patient at the hospital.

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