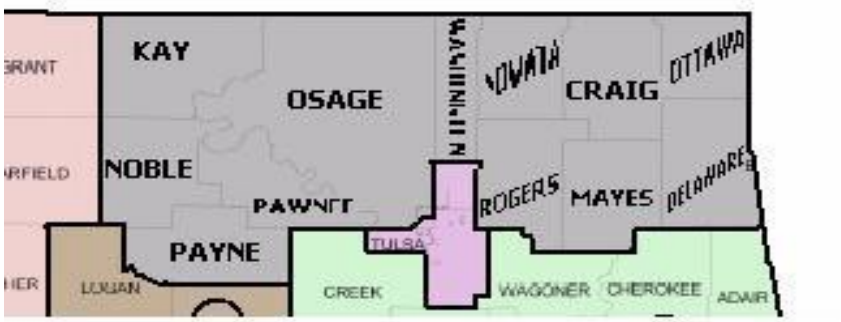
Northeast Trauma Plan

Region 2



Developed by the RTAB NE Regional Trauma Planning Committee

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Introduction

Goals and purpose

The goals of the regional trauma plan are to:

1. Assure trauma patients are transported to the most appropriate hospital facility with the available resources and capacity to provide care in a timely fashion.
2. Support the Pre-Hospital Trauma Triage and Transport Guidelines to effectively reduce trauma morbidity and mortality.
3. Match a facility's resources with each trauma patient's needs to ensure optimal and cost effective care is achieved.
4. This plan will not conflict with any rules and/or regulations that are already effective, currently in development or updated in the future. In the event new/updated rules and/or regulations are considered, the Regional Trauma Advisory Board should be included prior to implementation.

Region description

Region 2 consists of the northeastern portion of Oklahoma to include Craig, Delaware, Kay, Mayes, Noble, Nowata, Osage, Ottawa, Pawnee, Payne, Rogers, and Washington counties.

Region 2 encompasses 9,710 square miles with a population of 482,843.

It is serviced by (24) ambulances, (7) Air ambulance services, (2) level III trauma hospitals, (13) level IV trauma hospitals, (4) of which are designated critical access.

Trauma priority categorization

All injured patients must be identified and rapidly transported or transferred to the facility that provides the appropriate level of care based on the clinical need of the patient with specific attention focused on preserving the highest level of care for major trauma patients. A three-tiered system designed to determine appropriate patient hospital destinations 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. 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 or Level II Trauma Center. These patients should be directly transported to a Level I or Level II facility for treatment but may be stabilized at a Level III, Level IV, or Tribal 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

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 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.

Categorization of hospitals - See appendix B

Description of EMS services - See appendix B

Pre-hospital Trauma Destination Component

The Trauma Transfer and Referral Centers were created in statute (Senate Bill 1554, 2004). They were implemented 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 need of the patient in a timely fashion with specific attention focused on preserving the highest level of care for major trauma patients.

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

Ambulances from Region 2 are required to call into the center prior to delivering a patient to Region 7 or 8 to ensure appropriate destination. Likewise hospitals in Region 2 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 RTAB for QI purposes.

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.

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 1, 2, and 3 trauma patients hospital destination (see appendix B).

These Destinations are

1. All patients
    a. All trauma patients should be transported to the most appropriate medical facility with the available resources and capacity to provide trauma care in a timely fashion.
    b. Those patients with a traumatic arrest or without the inability to secure an airway should be transported to the closest facility.
    c. It should be noted that any priority 1 or 2 trauma patient that needs immediate stabilization should be transported to the nearest facility in an effort to expedite care of the trauma patient.
    d. Patient preference as well as the time and distance factor to definitive care will be considered for most priority 2 and 3 trauma patients.
2. General Trauma Patients
    a. Priority 1 adult and pediatric trauma patients that means the state approved trauma criteria should be transported to the closet Level I or II trauma center, to include: OU Medical Center (I-OKC), St John Medical Center (II-Tulsa), St Francis Hospital (II-Tulsa), St John Regional Health (I-MO), Via Christi Medical Center, St Francis Campus (I-KS), and

Wesley Medical Center (I-KS) Freeman Health Systems (II-MO), St John Regional Medical Center (II-MO), by the appropriate method of transport.

b. For the patients that air transport will improve arrival time to a Level I or Level II trauma center, or the patient will benefit from the higher level of care provided by the air ambulance, air transport should be activated, as defined in Section IX, to ensure rapid transport to the appropriate facility.

c. In the event air transport is unavailable, every effort shall be made to arrange for timely ground transport and / or ALS intercept. In the event there will be an excessive time delay for transport, the patient may be taken to the closet treating facility for stabilization.

Priority I adult and pediatric trauma patients

West of Hwy 18 & north of Hwy 60 should be transported to Wichita

East of Hwy 2 & Hwy 82 and north of Hwy 20 should be transported to Joplin

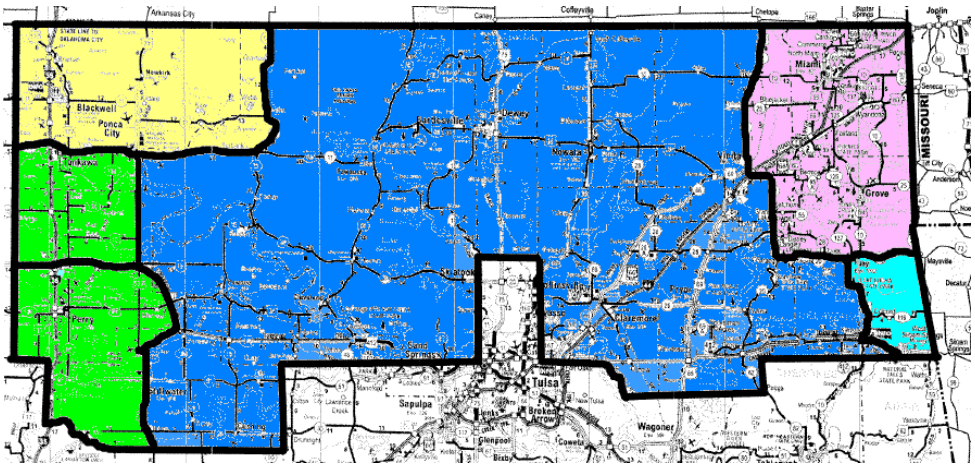
West of Hwy 18 & south of 412 should be transported to Oklahoma City

West of Hwy 177 should be transported to Oklahoma City

East of Hwy 177 should be transported to Tulsa

South of Hwy 20, east of Hwy 59 & south to the Delaware/Adair county line should be transported to Joplin or Tulsa

The following map helps graphically display the destinations for Priority 2 trauma patients in Region 2.



d. Priority 2 adult and pediatric trauma patients should be transported to the appropriate level III or higher facility based on the time/distance factor with preference given to patient desire and the ability to keep the patient in Region

e. Priority 3 adult and pediatric trauma patients should be transported to the closest facility or facility of patients' preference based on the time/distance factor with preference given to patient desire and the ability to keep the patient in region 2.

3. Burn patients

a. Adults: Refer to Triage & Transport Guidelines–Oklahoma Model Trauma Triage Algorithm.

b. Pediatric patients < 16 years: Refer to Triage & Transport Guidelines–Oklahoma Model Trauma Triage Algorithm.

Procedure for monitoring hospital status and capability

1. 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 the OSHD and made available to the Region 2/4/7 CQI Committee. Any problems and/or trends identified through review of this data will be addressed by the 2/4/7 CQI committee directly with the provider and if necessary through referral to the appropriate state level committee.

2. CQI Indicators

A set of CQI Indicators has been developed for use in monitoring hospital status and appropriateness of destination. The Region 2/4/7 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.

Air ambulance utilization protocol

1. When air transport will improve arrival time to a definitive care facility, the air ambulance service that can provide the quickest transport time should be utilized for all priority I and II trauma patients.

2. If at any time the patients' condition warrants, i.e. the need for immediate stabilization, establishment of an effective airway, resuscitation, etc., the responders should transport to the closest treating facility.
3. If a Non-EMS or First Responder activates an air ambulance service, the air service will communicate with local EMS to avoid multiple responses to the incident, to ensure and establish scene safety, to ensure appropriate pre-hospital care at the BLS or ALS level, and to establish a secure landing zone.
   a. "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:

      1. Patients at a location where time and distance constraints make air transport to the closest appropriate medical facility for the patients injury more time consuming should be transported by ground.
      2. A patient found by local EMS to be in cardiac arrest without return of spontaneous circulation in the field. A witnessed cardiac arrest patient should be transported to the closest appropriate facility with on-going resuscitation efforts.
      3. Priority 3 patients should be transported by ground ambulance.

   b. "Fly" conditions

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

      1. 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.
      2. Priority 2 trauma patients that are being transported to a facility with a transport time greater than 30 minutes by ground ambulance, based on local resource availability.
      3. The following are conditions that warrant the use of air ambulance even when the patient is within a 30 mile radius 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.

v. The closest available medical helicopter capable of providing needed services will be utilized to improve survival of all patients being transported to a definitive care facility.

vi. If the ETA of the aircraft is more than 10 minutes 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.

c. Early activation / standby

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 of the patients' condition warrants it.

1. Hospital activation:

When a patient presents by EMS or other means to a hospital, and after primary and secondary assessment, he/she is deemed to be a priority one trauma, then the activation of standby by a flight team should be affirmed. They should not be left on standby for more than 30 minutes.

When a hospital determines that a trauma patient is to be transferred by helicopter the transferring hospital should notify the helicopter service as soon as possible. All pertinent information should be given to the dispatch center so that appropriate flight crew is included on the flight. All precautions for a safe landing/takeoff will be followed by the hospital in an effort to expedite transfer of the patient.

2. EMS activation:

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:

i. significant mechanism of injury as defined in the Trauma Triage Algorithm
ii. multiple patients
iii. "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 at the time of dispatch to avoid multiple responses to the incident.

d. Landing zone parameters

1. Free of wires, tress, sign, poles, vehicles, and any other loose debris.
2. Ideally, it should be flat and smooth.
3. At least 100 x 100 feet square
4. Well defined at night without lights pointed towards the helicopter.
5. Area should be secured and 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 to ensure safe departure of the aircraft from the LZ area.

e. Training

Annual landing zone training shall be completed by all Region 2 EMS services. Individual ambulance services are responsible for contacting an air ambulance service for this training and assuring all employees are compliant with landing zone parameters.

f. EMTALA Clarification

Excerpt from the: State Operations Manual Appendix V - Interpretive Guidelines - Responsibilities of Medicare Participating Hospitals In Emergency Cases regarding ground EMS rendezvous with an air ambulance on a hospital helipad:
According to the Interpretative Guidelines, "the following two circumstances will not trigger EMTALA:

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 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 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 a MSE performed prior to 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."

Diversion

1. Guidelines to determine the possible need for Emergency Department divert are:
   a. The Emergency Department cannot handle additional emergencies based on the lack of professional personnel.
   b. Maximum capacity of the Emergency Department has been met.
   c. The hospital does not have the capability to care for the patient.
2. Notification of Emergency Department diversion status:
   a. A record shall be maintained documenting the date, time started, and times ended of each interval of divert status.
   b. Each hospital shall notify each entity providing emergency medical services, such as ambulance services and hospitals in the catchment area of the divert status.
   c. The EMResource™ will be updated to show current information.

3. Compliance:
    a. Compliance to the above plan will be monitored through CQI audits.

Inter-facility Trauma Destination Component

General principles

The vast majority of injured patients received their total care in the rural hospital, and transfer to a higher level of care is not necessary.

Physicians should assess their own capabilities and those of their institution. This assessment allows for early recognition of patients who may be safely cared for in the local hospital and those who require transfer to an institution that can provide optimal care.

Once the need for transfer is recognized, arrangements should be expedited and not delayed for diagnostic procedures that do not change the immediate plan of care.

Hospital obligations under EMTALA

1. **EMTALA** - Emergency Medical Treatment and Active Labor Act statute codified at §1867 of the Social Security Act, (the Act) the accompanying regulations in 42 CFR §489.24 (10/01/2005) and the related requirements at 42 CFR 489.20(1), (m). (q), and (r).

    EMTALA is also referred to as the "anti-dumping" law.

    EMTALA mandates that any individual who presents to the hospital's dedicated Emergency Department and requests, or has a request made on his/her behalf, for examination or treatment fora medical condition, or a prudent layperson observer would believe, based on the individual's appearance or behavior, that the individual needs examination or treatment for a medical condition receive: a medical screening examination by a qualified medical person to determine if an emergency medical condition exists or if the patient is in active labor, stabilizing treatment within the facilities capability and capacity and appropriate transfer if needed.

EMTALA definitions

1. **Capability** means the physical space, equipment, staff, supplies, and services (e.g., surgery, intensive care, pediatrics, obstetrics and psychiatry), including ancillary services available at Cleveland Area Hospital.

2. **Capacity** means the ability of a hospital to accommodate an individual requesting or needing examination or the treatment of a Transferred individual. Capacity encompasses the number and availability of qualified staff, beds, and equipment as well as the hospitals past practices of accommodating additional individuals in excess of its occupancy limits.

3. **Emergency Medical Condition** means 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 the woman or her unborn child) in serious jeopardy;
   b. Serious impairment to bodily functions; or
   c. Serious dysfunction of any bodily organ or part; or
   d. With respect to a pregnant woman who is having contractions:
   e. When there is inadequate time to effect a safe Transfer to another facility before delivery; or
   f. The Transfer may pose a threat to the health or safety of the woman or the unborn child.

4. **Medical Screening Examination** means the process required to reach, with reasonable clinical confidence, the point at which it can be determined whether or not an Emergency Medical Condition exists or a woman is in Labor. The Medical Screening Examination is an ongoing process, including monitoring of the individual, until the individual is either Stabilized or Transferred.

5. **Qualified Medical Person** means an individual other than a licensed Physician who:
   a. is licensed or certified by the state in which the Hospital is located;
   b. practices in a category of health professionals that has been designated by the Hospital and the Medical Staff Bylaws, or Rules and Regulations, to perform Medical Screening Examinations;
   c. has demonstrated current competence in the performance of Medical Screening Examinations within his/her health profession; and

d. as applicable, performs the Medical Screening Examination in accordance with protocols, standardized procedures or other policies as may be required by law or Hospital policy. A Qualified Medical Person includes registered nurses, nurse practitioners, nurse midwifes, psychiatric social workers, psychologists, and physician assistants. (NOTE: The Oklahoma Nurse Practice Act prohibits registered nurses from conducting a medical screening examination.)

6. **To Stabilize** means, with respect to an Emergency Medical Condition, to either provide such medical treatment of the condition as may be necessary to assure, within reasonable medical probability, that no material deterioration of the condition is likely to result from or occur during the Transfer of the individual from the Hospital or, in the case of a woman in Labor, that the woman has delivered the child and the placenta.

7. **Appropriate Transfer** means a transfer to another medical facility only in cases which:

   a. the transferring hospital has provided stabilizing treatment within its capacity and capability

   b. the receiving facility has the capability and capacity to accept the patient and has agreed to accept the transfer

   c. the transferring facility sends all the appropriate medical records

   d. the transfer is effected through qualified personnel and transport equipment

TRAUMA TEAM REQUIREMENTS BY HOSPITAL CLASSIFICATION LEVEL

OSDH – Hospital Trauma Requirements by Level: appendix D

Trauma program

A well-designed hospital trauma program, utilizing a team approach is crucial for providing optimal care to all trauma patients in Region 2.

All hospitals in Region 2 must establish criteria for the activation of their respective trauma programs and be clearly defined in the institutions policies and procedures. The following are intended as guidelines for each hospital.

1. The hospital must have a written policy for notification and mobilization of an organized trauma team (Level III) or to the extent that one is available (Level IV). The Trauma Team may vary in size and composition when responding to the trauma activation.
2. Each hospital shall have an established trauma program and designated trauma team that is appropriate for that facilities level of care. The trauma program must include a written commitment letter from the Board of Directors and the medical staff on behalf of the entire facility, which states the facility's commitment to compliance with the Oklahoma Trauma Care Regulations. Compliance with the above will be evidenced by:
    a. Board of Director's and medical staff letter of commitment
    b. Written policies, procedures and guidelines for care of the trauma patient
    c. A defined Trauma Team with written roles and responsibilities
    d. Appointed Trauma Medical Director with a written job description
    e. A written Trauma Performance Improvement Plan
    f. Appointed Trauma Program Manager with a written job description
    g. Documentation of trauma center representative's attendance at the Regional Trauma Advisory Committee meetings
3. Trauma Program Medical Director
    a. Level III facility; the medical director is a board-certified surgeon who leads the multidisciplinary activities of the trauma program. We recommend the director be currently certified by the American College of Surgeons Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director, or his designee, must be actively involved with the trauma system development at the community, regional and state level. The medical director will be responsible for:
        1. Developing a performance improvement process, recommending appointment and removal of physicians from the trauma team, patient, and developing treatment protocols for the trauma patients.
    b. Level IV facility; the medical director is a physician who leads the multidisciplinary activities of the trauma program. We recommend the physician director have current verification in ATLS. The physician director is responsible for:
        1. Overseeing the implementation of a trauma specific performance improvement process for the facility, assisting in the development of standards of care, and

Assuring appropriate policies and procedures are in place for the safe resuscitation and transfer of trauma patients.

4. Trauma Coordinator
   a. Level III facility should have an emergency department registered nurse and/or licensed medical professional qualified in the care of the trauma patient, working in the role of a Trauma Coordinator (TC). Working in conjunction with the medical director, the Trauma Coordinator is responsible for organization of the trauma program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. He/she is responsible for working with the trauma team to assure optimal patient care.
   b. Level IV facility should have a licensed medical professional qualified in the care of the trauma patient to act as the Trauma Coordinator. Specifically, this person is responsible, with the medical director, for coordinating optimal patient care for all trauma victims.
5. Composition of the trauma team; the physician leader or mid-level practitioner (PA, ARNP) on the team should be ATLS certified and is responsible for directing all phases of the resuscitation in compliance with accepted standards of care.
   a. Level III facility
      1. Physician, board certified surgeon
      2. Trauma Specialists
      3. Emergency nursing staff
      4. Laboratory & Radiology Technician
      5. Ancillary support staff – Respiratory therapy, blood bank

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

Anesthesia, and 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. Clinical laboratory services shall have the following services available in-house 24 hours per day: Blood typing and cross matching capabilities, access to sufficient quantities of blood and blood products, microbiology, blood gas and pH determination, alcohol and drug screening and coagulation studies.

b. Level IV facility

1. Physician or Mid-level practitioner
2. Emergency nursing staff
3. Laboratory Technician
4. Ancillary support staff

The ER of the Level IV trauma center must 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 available in-house 24 hours/day to ensure adequate care of the trauma patient.

Trauma team activation criteria

1. Full activation: In either a Level III or Level IV facility, immediate full activation of the trauma team should occur when any Priority I trauma patient, as defined in the Adult and Pediatric Inter-facility Triage, Transport and Transfer Guidelines (Appendix D), presents to the Emergency Department.
2. Partial activation: In a Level III or Level IV facility, immediate partial activation of the trauma team should occur when any Priority II or III trauma patient, as defined in the Adult and Pediatric Inter-facility Triage, Transport and Transfer Guidelines (Appendix D), presents to the Emergency Department. After triage and the medical screening examination by the QMP, the patient's injuries should be treated within the accepted standards of trauma care and if necessary full activation of the team may occur.

Hospital triage & transfer plan

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.

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 a mid-level practitioner (i.e. ARNP or PA), or Registered Nurse. The major trauma patient in this facility will be stabilized and transported to the most appropriate facility for the patients on-going care needs.

1. Stabilization criteria

   Regardless of facility trauma level, ALL trauma patients presenting to the hospital will be evaluated by the trauma team and emergency medical conditions will be identified, prioritized, treated and stabilized within the facilities capability and capacity.

   In an effort to optimize patient care, rapid assessment of the patient is imperative. When a trauma patient arrives at a destination hospital the trauma team will be activated (either full or partial) 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:

   a. The patient will be stabilized and then transferred to the most appropriate facility (Priority I or II trauma that is time sensitive),
   b. The patient will be stabilized and then admitted to that facility (Priority II or II that is not time sensitive),
   c. The patient will be stabilized and transferred to their facility of choice (Priority II or that is not tome sensitive), or
   d. The patient will be treated and discharged to home with appropriate instruction for their injuries (Priority III trauma).

2. Destination guidelines

   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.

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 destinations (see appendix C of the Pre-Hospital Trauma Destination Plan).

It is recommended that the transfer of Priority I, II and 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.

3. All patients
    a. Those patients with a traumatic arrest or the inability to secure an airway should be transported to the closest facility to the traumatic event.
    b. It should be noted that any priority I or II trauma patient that needs immediate stabilization should be transported to the most appropriate facility in or out of state, in an effort to expedite care of the trauma patient.
    c. Patient preference as well as the time and distance factor to definitive care will be considered for most Priority II and III trauma patients.
4. Burn patients
    a. Adults: Refer to Triage & Transport Guidelines–Oklahoma Model Trauma Triage Algorithm.
    b. Pediatric patients < 16 years: Refer to Triage & Transport Guidelines – Oklahoma Model Trauma Triage Algorithm.
5. Neurological trauma patients
    a. Priority I adult and pediatric trauma patients should be transported directly to the appropriate Level I or II facility. In-state transfers can be facilitated via use of the Trauma Transfer center.
    B. Priority II adult trauma patients should be transported to the appropriate facility in Region 7 or 8, based on the time/distance factor with preference given to patient desire.
    c. Priority II pediatric trauma patients should be transported to the most appropriate facility using the Trauma Transfer Center.

d. Priority III adult and pediatric trauma patients should be transported to the closest facility for stabilization before transfer to the appropriate facility.

6. Air ambulance utilization guidelines

When air transport will improve arrival time to a definitive care facility, the air ambulance service that can provide the quickest transport time should be utilized for all priority I and II trauma patients.

a. "No-Fly' conditions

1. Helicopter utilization is seldom indicated for patients without a chance for survival or without serious injury. The following are other situations in which air ambulance should be used.
2. Patients at a location where time and distance constraints make air transport to the closet appropriate medical facility for the patients injury more time consuming.
3. Priority III patients should be transported by ground ambulance.

b. "Fly" conditions

1. The following are conditions that warrant the use of an air ambulance
2. Priority I trauma patients that are being transported to a facility in which time and distance constraints make air transport more appropriate.
3. Priority II trauma patients that are being transported to a facility with a transport time greater than 30 minutes by ground ambulance, based on local resource availability.

c. Early activation / standby

1. When a hospital receives a call that meets the following criteria, it is recommended that the air ambulance be "early activated" or placed on ground standby
2. Significant mechanism of injury as defined in the Trauma Triage Algorithm.
3. Multiple trauma patients.

Hospital transfer agreements

All hospital in Region 2 will work collaboratively with other trauma facilities, in and out of state, to develop transfer protocols, written agreements and a well-defined transfer sequence.

Agreements should be in place so that ALL facilities will work together to implement the Trauma Transfer Guidelines.

1. Level III trauma centers shall have the following
    a. Written transfer agreements with other providers as a transferring facility.
2. Level IV trauma centers shall have the following:
    b. Written transfer agreements with either trauma facilities to and expedite the transfer sequence to assure the most appropriate care is rendered to the patients.

Procedure for monitoring hospital status and capability

1. 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 the OSHD and made available to the Region 2 QI Committee. Any problems and/or trends identified through review of this data will be addressed by the QI committee directly with the provider and if necessary through referral to the appropriate state level committee.

2. QI Indicators

    A set of QI Indicators has been developed for use in monitoring hospital status and appropriateness of destination. The Region 2 QI Committee will monitor these indicators. Any problems and/or trends through review of the indicators will be addressed by the QI committee directly with the provider and if necessary through referral to the appropriate state level committee.

Diversion

1. In the event the closest Level I or II facility is on divert for Priority I trauma patients, 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. In the event any hospital in the region is on divert status for Priority II patients, those patients will be taken either to the nearest treating facility for stabilization and transfer or to the nearest appropriate Level III trauma hospital if the patient’s condition warrants the transfer.
3. Guidelines to determine the possible need for total Emergency Department divert are:
    a. 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. The hospital does not have capability to care for the patient.

4. Notification of Emergency Department diversion status:
   a. A written record shall be maintained documenting the date, time started, and time ended of each interval of divert status.
      1. Each hospital shall notify each entity providing emergency medical services, such as ambulance services and hospitals in the catchment area of the divert status.
      2. A hospital on divert can maintain the status for a **maximum** of 2 hours and then the situation must be re-evaluated. If a hospital is continued on divert status for an additional 2 hour time period the MERC coordinator will assess the situation and determine if it is appropriate to continue on divert status.
      3. The EMSystem will be updated to show current information.
5. Compliance

   Compliance to the above plan will be monitored through QI audits.

Quality improvements

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 Coordinator each facility will conduct QI activities in accordance with the approved regional QI process.

Communication – EMResource ™ component

Introduction

For several years EMResource™ has served as a toll for hospital 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™ ability to serve this function is limited by the use of the system by providers.

Usage requirements

ALL providers within Region 2 are required 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.

1. Specific usage requirements include but are not limited to
2. Contact information
3. Each provider is responsible to maintain accurate contact information on the EMResource™.
4. Hospitals shall post the telephone number they wish other providers to use when calling patient referrals or reports in this area of EMResource™.
5. 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™.

a. Emergency Department status
   1. 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.
   2. 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.

b. Hospital Status
   1. 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.
   2. 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.

c. 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:

   1. Yes – coverage is currently available

2. No – coverage is not currently available
3. N/A – this service is not offered at this facility

d. Air ambulance status

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

1. Available – the aeromedical resource is currently ready and able to respond to emergency calls.
2. Call for Status – current conditions necessitate those providers in need of aeromedical transport call to determine resource availability because:
   i. The aeromedical resource may already be dispatched to a call or be on standby.
   ii. Local weather conditions may temporarily impact the ability of this aeromedical resource to respond.
   iii. This aeromedical resource may be temporarily unavailable due to routine service or fueling.
3. Not Available – the aeromedical resource is currently unable to respond in a timely manner.
4. In region 2 the air ambulances are required to keep their most accurate status current. They may not leave their status as 'call for statuses at all times.

d. System alerts

1. Providers in Region 2 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.
2. 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.
3. Compliance with appropriate usage will be monitored through routine MERC drills.

e. Data reporting

Providers in Region 2 are required to participate in reporting data supported by the EMResource™ application. This reporting requirement includes but is not limited to:

1. Hospital daily report of bed capacity and ED volume
2. EMS daily report of resources and volume

Monitoring

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

1. The QI 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™.

2. The QI committee will review all cases referred to them for inappropriate use of EMSystem in any of the listed categories.

3. 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 QI committee who will address problems/trends directly with the provider and if necessary through referral to the appropriate state level committee.

4. The QI 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 QI 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 2 supports use of this tool through adoption of these requirements.