

APA-1
6/93

TRANSMITTAL SHEET FOR NOTICE OF INTENDED ACTION

Control 420 Department or Agency Alabama Department of Public Health

Rule Number : 420-2-2-.02

Rule Title: Trauma Center Standards: Verification

 New X Amend Repeal Adopt by Reference

Would the absence of the proposed rule significantly harm or endanger the public health, welfare or safety? YES

Is there a reasonable relationship between the state's police power and the protection of the public health, safety or welfare? YES

Is there another, less restrictive method of regulation available that could adequately protect the public? NO

Does the proposed rule have the effect of directly or indirectly increasing the costs of any goods or services involved and, if so, to what degree? NO

Is the increase in cost, if any, more harmful to the public than the harm that might result from the absence of the proposed rule? NO

Are all facts of the rulemaking process designed solely for the purpose of and so they have as their primary effect, the protection of the public? YES

Does the proposed rule have an economic impact? NO

If the proposed rule has an economic impact, the proposed rule is required to be accompanied by a fiscal note prepared in accordance with subsection (f) of §41-22-23, Code of Alabama, 1975.

Certification of Authorized Official

I certify that the attached proposed rule has been proposed in full compliance with the requirements of Chapter 22, Title 41, Code of Alabama, 1975, and that it conforms to all applicable filing requirements of the Administrative Procedure Division of the Legislative Reference Service.

Signature of Certifying Officer Patricia B. [Signature] Date July 20, 2011

**STATE BOARD OF HEALTH
NOTICE OF INTENDED ACTION**

AGENCY NAME: Alabama Department of Public Health

RULE NUMBER AND TITLE: 420-2-2-.02 Trauma Center Standards: Verification

INTENDED ACTION: To amend current rule to strengthen the trauma system standards.

SUBSTANCE OF PROPOSED ACTION: To ensure that quality trauma care resources are readily available at each designated trauma center.

TIME, PLACE, AND MANNER OF PRESENTING VIEWS: A public hearing will be held on August 25, 2011, at 9:00 a.m., in Montgomery at the RSA Tower, 201 Monroe Street, Room 1586.

FINAL DATE FOR COMMENTS AND COMPLETION OF NOTICE: Written or oral comments will be received until the close of the record at 5:00 p.m., on September 2, 2011. All comments and requests for copies of the proposed rule should be addressed to the contact person listed below.

CONTACT PERSON AT AGENCY: Choona Lang, Department of Public Health, Office of EMS and Trauma, 201 Monroe Street, Suite 750, Montgomery, Alabama 36104. Telephone number: 334-206-5383.



Patricia E. Ivie, Agency Secretary

420-2-2-.02 Trauma Center Standards: Verification

Upon the receipt of advice and approval of the council, the board has adopted rules for verification and certification of trauma center status as set out in Appendix A.

Authors: John Campbell, M.D., and Choona Lang

Statutory Authority: Alabama Legislature, Act 299, Regular Session, 2007 (Code of Alabama 1975, § 22-11D-1, et seq.)

History: New Rule: Filed March 20, 2008, Effective April 24, 2008; Repeal and Replace: Filed February 18, 2009, Effective on March 25, 2009; Amended September 17, 2009; Effective October 22, 2009.

Alabama Trauma Center Designation

Trauma Facilities Criteria: APPENDIX A Trauma Rules

The following table shows levels of categorization and their **essential (E)** or **desirable (D)** criteria necessary for designation as a Trauma Facility by the Alabama Department of Public Health

| | Level I | Level II | Level III |
|--|---------|----------|-----------|
| INSTITUTIONAL ORGANIZATION | | | |
| Trauma Program <i>(Attached)</i> | E | E | E |
| Trauma Service <i>(Attached)</i> | E | E | - |
| Trauma Team <i>(Attached)</i> | E | E | E |
| Trauma Program Medical Director <i>(Attached)</i> | E | E | D |
| Trauma Multidisciplinary Committee <i>(Attached)</i> | E | E | D |
| Trauma Coordinator/ TPM <i>(Attached)</i> | E | E | E |
| HOSPITAL DEPARTMENTS/ DIVISIONS/ SECTIONS | | | |
| Surgey | E | E | E |
| Neurological Surgery | E | D | D |
| Orthopedic Surgery | E | E | D |
| Emergency Medicine | E | E | E |
| Anesthesia ³ | E | E | E |
| CLINICAL CAPABILITIES | | | |
| Published on-call schedule | E | E | E |
| General Surgery (attending surgeon promptly available ¹ to maintain green status) | E | E | E |
| Published back-up schedule or written back-up method ² | E | D | D |
| Dedicated to single hospital when on-call | E | D | D |
| Anesthesia (promptly available ³ to maintain green status) | E | E | E |
| Emergency Medicine (Immediately available in-house 24 hours/day) | E | E | E |

| | Level I | Level II | Level III |
|---|---------|----------|-----------|
| On-call and promptly available to maintain green status: | | | |
| Cardiac surgery | E | - | - |
| Hand surgery (does not include micro vascular/reimplantation) | E | D | - |
| Micro vascular/replant surgery | D | - | - |
| Neurologic surgery | E | D | - |
| Dedicated to one hospital or back-up call | E | D | - |
| Obstetrics/gynecologic surgery ⁴ | E | D | - |
| Ophthalmic surgery | E | D | - |
| Oral/maxillofacial surgery | E | D | - |
| Orthopedic | E | E | D |
| Dedicated to one hospital or back-up call | E | D | - |
| Plastic surgery | E | D | D |
| Critical care medicine | E | D | - |
| Radiology | E | E | E |
| Thoracic surgery | E | D | - |
| CLINICAL QUALIFICATIONS | | | |
| General/trauma surgeon | | | |
| Current board certification or eligible | E | E | E |
| Average of 6 hours of trauma related CME/year ⁵ | E | E | D |
| ATLS completion | E | E | E |
| Trauma Multidisciplinary Committee Attendance /Peer Review Committee Attendance > 50% | E | E | E |
| Emergency Medicine | | | |
| Board certification ⁶ or eligible | E | D | D |
| ATLS completion ⁷ | E | E | E |
| Average of 6 hours of trauma related CME/year ⁵ | E | E | E |
| Trauma Multidisciplinary Committee Attendance /Peer Review Committee Attendance > 50% | E | E | - |

| | Level I | Level II | Level III |
|--|---------|------------|-----------|
| Neurosurgery | | | |
| Current board certification or eligible | E | D | <u>D</u> |
| Average of 6 hours of trauma related CME/year ⁵ | E | D | D |
| ATLS completion | D | D | D |
| Trauma Multidisciplinary Committee Attendance/ Peer Review Committee Attendance > 50% | E | <u>ED</u> | <u>D</u> |
| Orthopedic surgery | | | |
| Board certification or eligible | E | D | <u>D</u> |
| Average of 6 hours of trauma related CME/year ⁵ | E | <u>D-E</u> | D |
| ATLS Completion | D | D | D |
| Trauma Multidisciplinary Committee Attendance/ Peer Review Committee Attendance > 50% | E | <u>ED</u> | <u>D</u> |
| FACILITIES/ RESOURCES/ CAPABILITIES | | | |
| Volume Performance | | | |
| Trauma admissions <u>1200/year</u> or 240 patients with ISS>15/Pediatric Centers 200 under the age of 16 | E | - | - |
| Presence of surgeon at resuscitation | E | E | D |
| Presence of surgeon at operative procedures | E | E | E |
| Emergency Department (ED) | | | |
| Personnel - designated physician director | E | E | E |
| Equipment for resuscitation for patients of all ages | | | |
| Airway control and ventilation equipment | E | E | E |
| Pulse oximetry | E | E | E |
| Suction devices | E | E | E |
| Electrocardiograph-oscilloscope-defibrillator | E | E | E |
| Internal paddles | E | E | - |
| CVP monitoring equipment | E | E | D |
| Standard IV fluids and administration sets | E | E | E |
| Large-bore intravenous catheters | E | E | E |

| | Level I | Level II | Level III |
|---|---------|----------|-----------|
| Sterile surgical sets for: | | | |
| Airway control/ cricothyrotomy | E | E | E |
| Thoracostomy | E | E | E |
| Venous cutdown | E | E | E |
| Central line insertion | E | E | - |
| Thoracotomy | E | E | - |
| Peritoneal lavage | E | E | E |
| Arterial pressure monitors | E | D | D |
| Ultrasound | E | E | D |
| Drugs necessary for emergency care | E | E | E |
| X-ray available to maintain green status ¹¹ | E | E | D |
| Cervical traction devices | E | E | D |
| Length based Pediatric Resuscitation tape | E | E | E |
| Rapid infuser system | E | E | D |
| Qualitative end-tidal CO ₂ determination | E | E | E |
| Communications with EMS vehicles | E | E | E |
| OPERATING ROOM | | | |
| Immediately available to maintain green status ⁸ | E | D | D |
| Operating Room Personnel | | | |
| In-house to maintain green status ⁸ | E | - | - |
| Available to maintain green status | - | E | E |
| Age Specific Equipment | | | |
| Cardiopulmonary bypass | E | - | - |
| Operating microscope | D | D | - |
| Thermal Control Equipment | | | |
| For patient | E | E | E |
| For fluids and blood | E | E | E |

| | Level I | Level II | Level III |
|--|---------|----------|-----------|
| X-ray capability, including c-arm image intensifier | E | E | E |
| Endoscopes, bronchoscopes | E | E | D |
| Craniotomy instruments | E | D | - |
| Equipment for long bone and pelvic fixation | E | E | D |
| Rapid infuser system | E | E | D |
| Post Anesthetic Recovery Room (SICU is acceptable) | | | |
| Registered nurses available to maintain green status | E | E | - |
| Equipment for monitoring and resuscitation | E | E | E |
| Intracranial pressure monitoring equipment | E | D | - |
| Pulse oximetry | E | E | E |
| Thermal control | E | E | E |
| Intensive or Critical Care Unit for Injured Patients | | | |
| Registered nurses with trauma education | E | E | - |
| Designated surgical director or surgical co-director ¹² | E | D | D |
| Surgical ICU service physician in-house 24 hours/day (Emergency physician will satisfy this requirement) | E | D | - |
| Equipment for monitoring and resuscitation | E | E | - |
| Intracranial monitoring equipment | E | - | - |
| Pulmonary artery monitoring equipment | E | E | - |
| Respiratory Therapy Services | | | |
| Available in-house to maintain green status | E | E | D |
| On-call to maintain green status | - | - | D |
| Radiological services | | | |
| In-house radiology technologist to maintain green status | E | E | D |
| Angiography | E | D | - |
| Sonography | E | E | D |
| Computer Tomography (CT) prom | E | E | D |
| In-house CT technician | E | - | - |

| | Level I | Level II | Level III |
|--|---------|----------|-----------|
| Magnetic Resonance Imaging (Technician not required in-house) | E | D | - |
| Clinical laboratory services (Available to maintain green status) | E | E | E |
| Standard analyses of blood, urine, and other body fluids, including microsampling when appropriate | E | E | E |
| Blood typing and cross-matching | E | E | E |
| Coagulation studies | E | E | E |
| Comprehensive blood bank or access to a community central blood bank and adequate storage facilities | E | E | E |
| Blood gasses and pH determinations | E | E | E |
| Microbiology | E | E | E |
| Acute Hemodialysis | | | |
| In-house (staff not required in-house for green status) | E | - | - |
| Burn Care – Organized | | | |
| In-house | D | - | - |
| Acute Spinal Cord Management | | | |
| In-house | E | D | - |
| REHABILITATION SERVICES | | | |
| Physical therapy | E | E | D |
| Occupational therapy | E | D | D |
| Speech therapy | E | D | - |
| Social Service | E | E | D |
| PERFORMANCE IMPROVEMENT | | | |
| Performance improvement programs | E | E | E |
| Trauma registry | | | |
| Participate in state registry | E | E | E |
| Audit of all trauma deaths | E | E | E |
| Morbidity and mortality review | E | E | E |
| Trauma conference-multidisciplinary | E | E | D |

| | Level I | Level II | Level III |
|--|---------|----------|-----------|
| Medical nursing audit | E | E | E |
| Review of pre-hospital trauma care ⁹ | E | E | E |
| Review of times and reasons for trauma status being red | E | E | E |
| Review of times and reasons for transfer of injured patients | E | E | E |
| Performance improvement personnel dedicated assigned to review care of injured patients | E | D | D |
| CONTINUING EDUCATION/OUTREACH | | | |
| General Surgery residency program | D | - | - |
| ATLS provider/participate | E | D | D |
| Programs provided by hospital for: | | | |
| Staff/community physicians (CME) | E | E | D |
| Nurses | E | E | D |
| Allied health personnel | E | E | - |
| Feedback provided to pre-hospital personnel ¹⁰ | E | E | E |
| PREVENTION | | | |
| Collaboration with other institutions for injury control and prevention | E | D | D |
| Designated prevention coordinator-spokesman for injury control | E | D | - |
| Outreach activities | E | D | D |
| Information resources for public | E | D | - |
| Collaboration with existing national, regional and state programs | E | E | E |
| Coordination and/or participation in community prevention activities | E | E | E |
| RESEARCH | | | |
| Trauma registry performance improvement activities | E | E | E |
| Research committee | D | - | - |
| Identifiable IRB process | D | - | - |
| Extramural educational presentations | D | D | - |
| Number of scientific publications | D | - | - |

¹In both Level I and Level II facilities 24-hour in-house availability is the most direct method for the attending surgeon to provide care. In hospitals with residency programs, a team of physicians and surgeons that can include the Emergency Department Physicians, Surgical Residents, or Trauma Residents may start evaluation and treatment allowing the attending surgeon to take call outside the hospital if he/she can arrive. For hospitals without residency programs, the attending surgeon may take call from outside the hospital but should be promptly available. Promptly available for Level I facilities will be 15 minutes response time for 80 percent of trauma system patients except for EMT Discretion. Levels II and III response time will be 30 minutes. Compliance with these requirements must be monitored by the hospital's quality improvement program and the ATS Trauma Registry.

²If there is no published back-up call schedule there must be a written procedure of how to identify or locate another surgeon when needed and this should be monitored by the quality improvement plan.

³~~Timeliness of anesthesia response should be monitored by the hospital's quality improvement program.~~ Anesthesiologist will be available in-house 24 hours a day for Level I trauma centers. In Level II and III trauma centers anesthesiologist or CRNA will be available within 30 minutes response time.

⁴Alabama licensed specialty pediatric facilities, which are PPS exempt under Title 42 USC Section 1395ww(d)(1)(B)(iii) and receive funding under Title 42 USC 256e shall not be required to have an obstetric/gynecologic surgery service but should have a transfer agreement for OB-GYN surgery services.

⁵An average of 18 hours of trauma CME every three years is acceptable.

⁶Physicians may be board certified in Emergency Medicine or Pediatric Emergency Medicine by an ABMS- or AOA-recognized board, or may be board certified in a primary care specialty if they have extensive experience in management of trauma patients.

⁷Physicians not board certified in Emergency Medicine or Pediatric Emergency Medicine by an ABMS- or AOA-recognized board must maintain their ATLS certification. There will be a three-year grace period for emergency department staff to become compliant with this requirement

⁸An operating room must be adequately staffed and immediately available in a Level I trauma center to remain available (green) to the trauma system. This is met by having a complete operating room team in the hospital at all times, so if an injured patient requires operative care, the patient can receive it in the most expeditious manner. These criteria cannot be met by individuals who are also dedicated to other functions within the institution. Their primary function must be the operating room.

An operating room must be adequately staffed ~~and available when needed~~ in a timely fashion in 30 minutes or readily available in a Level II trauma center to remain available (green) to the trauma system. The need to have an in-house OR team will depend

on a number of things, including patient population served, ability to share responsibility for OR coverage with other hospital staff, prehospital communication, and the size of the community served by the institution. If an out-of-house OR team is used, then this aspect of care must be monitored by the performance improvement program.

⁹All levels of trauma centers should monitor prehospital trauma care. This includes the quality of patient care provided, patients brought by EMS and not entered into the trauma system but had to be entered into the trauma system by the hospital (under triage), and patients entered into the trauma system by EMS that did not meet criteria (over triage).

¹⁰Hospital must complete and return to the RTAC the initial patient findings, treatment provided, and outcome at the end of the first 24 hours. This should be noted on the ATCC patient record.

¹¹Level III X-ray services will be available promptly after hours and on weekends

¹²Level I director of surgical critical care team will be surgical critical care board certified except for pediatric facilities that have 24 hours in-house pediatric intensivist

ALABAMA TRAUMA SYSTEM (ATS)

INSTITUTIONAL ORGANIZATION

The purpose of this document is to primarily assist Level I, Level II, and Level III trauma hospitals with suggestions of composition, organization, and process for the institutional and organizational aspects of trauma care. It is recognized that the institutional organization for each level ATS hospital differs. A suggestion of use of the American College of Surgeons (ACS) Resources for the Optimal Care of Trauma Patients is made for all ATS Level hospitals.

The Trauma Program

The trauma program involves multiple care disciplines and departments within the hospital that transcend normal departmental hierarchies. Because the best trauma care begins at the scene of an injury through the acute care setting to discharge from a rehabilitation center, the trauma program should have appropriate representation from all phases of care. Representatives of all disciplines and hospital departments involved in trauma patient care provide the appropriate skills, as team members working in concert, to implement treatment based on a prioritized plan of care. To ensure optimal and timely care, a multidisciplinary trauma program must continuously evaluate its processes and outcomes.

The Trauma Medical Director

The trauma medical director is the surgeon who leads the multidisciplinary activities of the trauma program. The director must be a board-certified surgeon (usually a general surgeon) or an American College of Surgeons Fellow with special interest in trauma care and must participate in trauma call and be current in Advanced Trauma Life Support (ATLS).

Membership and active participation in regional or national trauma organizations is essential for the trauma director in Level I trauma centers.

The trauma medical director's responsibility extends beyond the technical skills of surgery. The trauma medical director must have the authority to manage all aspects of trauma care. The trauma medical director authorizes trauma service privileges of the on-call panel, works in cooperation with nursing administration to support the nursing needs of trauma patients, develops treatment protocols along with the trauma team, and coordinates the performance improvement and peer review processes. The trauma medical director must have the authority to correct deficiencies in trauma care and exclude from trauma call the trauma team members who do not meet specified criteria. With the assistance of the hospital administrator and the trauma program manager, the trauma medical director is responsible for coordinating the budgetary process for the trauma program. The trauma medical director will identify representatives from neurosurgery, orthopedic surgery, anesthesiology, emergency medicine, and other appropriate

disciplines to determine which physicians from their disciplines are qualified to be members of the trauma program and on-call panel.

The Trauma Team

The trauma team consists of physicians, nurses, and allied health personnel. The size and composition of the team will vary with hospital size, the severity of the injury, and the corresponding level of trauma team activation. A high-level response to a severely injured patient must include the following: (1) a general surgeon; (2) surgical and emergency residents, as available; (3) emergency department nurses, including a scribe nurse; (4) laboratory technician; (5) a radiology technologist; (6) a critical care nurse; (7) an anesthesiologist or a certified registered nurse anesthetist; (8) an operating room nurse; (9) security officers, if needed; and (10) a chaplain or social worker.

In contrast, the trauma team's response to a less severely injured patient may initially consist of only an emergency physician and the emergency department nurses until the general surgeon arrives. The team leader must be a trauma surgeon. The criteria for trauma activation must be clearly defined by the trauma center and continuously evaluated by the Quality Assurance (QA) program and patient safety program.

A preplanned and coordinated approach defining which patients need to be seen in consultation by or admitted to the trauma service or other specialty services should be in place. Programs that admit more than 10 percent of injured patients to nonsurgical services must demonstrate the appropriateness of that practice through the QA program and patient safety program.

The Trauma Coordinator (TC)

The TC is fundamental to the development, implementation, and evaluation of the trauma program. In addition to administrative ability, the TC must show evidence of educational preparation and clinical experience in the care of injured patients. The TC works in close collaboration with the trauma medical director and complements the director's efforts. A constructive, mutually supportive relationship between these key leaders is important to the success of the program.

The TC may be a full-time registered nurse and is responsible for the organization of services and systems necessary for the multidisciplinary approach to providing care to trauma patients. The TC, in particular, assumes day-to-day responsibility for process and performance improvement activities as they relate to nursing and ancillary personnel and assists the trauma medical director in carrying out the same functions for the physicians. Ultimate accountability for all activities of the trauma program resides with the trauma medical director. The role of the TC in the educational, clinical, research, administrative, and outreach activities of the trauma program is determined by the needs of the trauma medical director and the institution.

Administrative and budgetary support will be provided for the TC. Secretarial and clinical nursing personnel help fulfill needs for outreach, concurrent case review, and discharge planning. The registrar, secretary, and nurse clinician(s) must be supervised by the TC.

The Trauma Service (TS)

A trauma service must represent a structure of care for injured patients. The service includes personnel and other resources necessary to ensure appropriate and efficient provision of care. In a Level I trauma center, seriously injured patients must be admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers. Sufficient infrastructure and support to ensure adequate provision of care must be provided for this service. To be sufficient, the infrastructure and support must require additional qualified physicians, residents, nurse practitioners, physician's assistants, or other physician extenders. The number and type of individuals required for a trauma service should be determined by the volume of patients requiring care and the complexity of their conditions. In teaching facilities, the requirements of the Residency Review Committee must also be met.

The trauma service and individual surgeons who make up the TS must admit trauma patients to the floor and Trauma Intensive Care Unit (TICU) as well as be the primary physician for the patient until discharge. The director of the surgical critical care team must be a board certified or board eligible surgeon. The director of the TICU must also be board certified in critical care.

The Trauma Registrar (TR)

The trauma registrar is an important member of the trauma team. Trauma registrars may be from diverse backgrounds such as nursing, medical records, computer science, medical informatics, and other fields. They must work directly with the trauma team and report to the TC. The TR should also complete four hours of registry-specific continuing education each year which the Alabama Department of Public Health Office of EMS and Trauma (ADPH/OEMS&T) will provide. Technical support, locally and from the ADPH/OEMS&T, is available to assist with these training requirements. It is the TR's responsibility to complete the ATS LifeTrac Form on each patient and e-mail or fax each patient's completed form to the Birmingham Regional Emergency Medical Services System.

The trauma medical director and the trauma coordinator must ensure and document dissemination of information and findings from the peer review meetings to the noncore surgeons on the trauma call panel.

Trauma Multidisciplinary Committee or Peer Review

There must be a multidisciplinary committee or peer review committee with the trauma medical director, along with representatives from emergency medicine, anesthesia, the trauma coordinator, and hospital administration. A purpose of the committee is to improve trauma care along with other medical care by reviewing all deaths, complications, and sentinel events with objective identification of issues and appropriate responses. The aforementioned representatives must attend at least 50 percent of these multidisciplinary or peer-review committee meetings. This meeting may be held monthly, however, the frequency is to be determined by the medical director based on the needs of the performance improvement and patient safety programs.

ALABAMA TRAUMA SYSTEM (ATS)

INSTITUTIONAL ORGANIZATION

The purpose of this document is to primarily assist Level I, Level II, and Level III trauma hospitals with suggestions of composition, organization, and process for the institutional and organizational aspects of trauma care. It is recognized that the institutional organization for each level ATS hospital differs. A suggestion of use of the American College of Surgeons (ACS) Resources for the Optimal Care of Trauma Patients is made for all ATS Level hospitals.

The Trauma Program

The trauma program involves multiple care disciplines and departments within the hospital that transcend normal departmental hierarchies. Because the best trauma care begins at the scene of an injury through the acute care setting to discharge from a rehabilitation center, the trauma program should have appropriate representation from all phases of care. Representatives of all disciplines and hospital departments involved in trauma patient care provide the appropriate skills, as team members working in concert, to implement treatment based on a prioritized plan of care. To ensure optimal and timely care, a multidisciplinary trauma program must continuously evaluate its processes and outcomes.

The Trauma Medical Director

The trauma medical director is the surgeon who leads the multidisciplinary activities of the trauma program. The director must be a board-certified surgeon (usually a general surgeon). The trauma medical director must have had Advanced Trauma Life Support (ATLS), but it does not have to be current.

The trauma medical director's responsibility extends far beyond the technical skills of surgery. The trauma medical director will have the authority to manage all aspects of trauma care. The trauma medical director authorizes trauma service privileges of the on-call panel, works in cooperation with nursing administration to support the nursing needs of trauma patients, develops treatment protocols along with the trauma team, and coordinates the performance improvement and peer review processes. The trauma medical director will have the authority to correct deficiencies in trauma care and exclude from trauma call the trauma team members who do not meet specified criteria. With the assistance of the hospital administrator, the trauma medical director is responsible for coordinating the budgetary process for the trauma program. The trauma medical director should identify representatives from neurosurgery, orthopedic surgery, anesthesiology, emergency medicine, and other appropriate disciplines to determine which physicians from their disciplines are qualified to be members of the trauma program and on-call panel.

The Trauma Team

The trauma team consists of physicians, nurses, and allied health personnel. The size and composition of the team will vary with hospital size, the severity of the injury, and the corresponding level of trauma team activation. It is anticipated that primarily physiologically stable patients will be routed to a Level II ATS hospital. However, patient choice, a trauma patient with an airway unable to be secured, hemodynamically unstable patient with no IV secured, or uncontrolled hemorrhage in a patient, an unstable patient beyond a reasonable transport time to an ATS Level I hospital, or a non-EMS delivered patient may arrive at a Level II ATS hospital. Thus, there is a need for a graded response by the Level II hospital to meet the potential varied patient arrivals. The determination of the level of response should be made by the emergency medical doctor receiving the information in the emergency department.

A high-level response to a severely injured unstable patient must include the following: (1) a general surgeon; (2) an emergency physician; (3) emergency department nurses, including a scribe nurse; (4) a laboratory technician; (5) a radiology technologist; (6) a critical care nurse; (7) an anesthesiologist or a certified registered nurse anesthetist; and (8) security officers.

The trauma team's response to a less severely injured stable patient may consist of an emergency medicine physician and the emergency department nurses (Level III) until the general surgeon arrives, if needed. The criteria for trauma activation should be clearly defined by the trauma center and continuously evaluated by the Quality Assurance (QA) program and patient safety program.

The Trauma Coordinator (TC)

The TC is fundamental to the development, implementation, and evaluation of the trauma program. In addition to administrative ability, the TC must show evidence of educational preparation and clinical experience in the care of injured patients. The TC works in close collaboration with the trauma medical director and complements the director's efforts. A constructive, mutually supportive relationship between these key leaders is important to the success of the program.

The TC may be a full-time registered nurse and is responsible for the organization of services and systems necessary for the multidisciplinary approach to providing care to trauma patients. The TC, in particular, assumes day-to-day responsibility for process and performance improvement activities, as they relate to nursing and ancillary personnel, and assists the trauma medical director in carrying out the same functions for the physicians. Ultimate accountability for all activities of the trauma program resides with the trauma medical director. The role of the TC in the educational, clinical, research, administrative, and outreach activities of the trauma program is determined by the needs of the trauma medical director and the institution.

Administrative and budgetary support will be provided for the TC. Secretarial and clinical nursing personnel help fulfill needs for outreach, concurrent case review, and discharge planning. The registrar, secretary, and nurse clinician(s) must be supervised by the TC.

The Trauma Service (TS)

A trauma service represents a structure of care for injured patients. The service includes personnel and other resources necessary to ensure appropriate and efficient provision of care. The precise nature of a trauma service may vary based on specific needs of the medical facility, available personnel, and the quantity of resources. In a Level II trauma center, seriously injured patients must be admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers. Sufficient infrastructure and support to ensure adequate provision of care must be provided for this service. To be sufficient, the infrastructure and support must require additional qualified physicians, residents, nurse practitioners, physician's assistants, or other physician extenders. In teaching facilities, the requirements of the Residency Review Committee must also be met.

The Trauma Registrar (TR)

The trauma registrar is an important member of the trauma team. Trauma registrars may be from diverse backgrounds such as nursing, medical records, computer science, medical informatics, and other fields. They must work directly with the trauma team and report to the TC. The TR also should complete four hours of registry-specific continuing education each year which the Alabama Department of Public Health Office of EMS and Trauma (ADPH/OEMS&T) will provide. Technical support, locally and from the ADPH/OEMS&T, is available to assist with these training requirements. It is the TR's responsibility to complete the ATS LifeTrac Form on each patient and e-mail or fax each patient's completed form to the Birmingham Regional Emergency Medical Services System.

Trauma Multidisciplinary Committee or Peer Review

There is a multidisciplinary/peer review committee chaired by a medical director or designee, with representatives from orthopedic surgery, emergency medicine, anesthesia, and hospital administration. The purpose of the committee is to improve trauma care along with other types of medical care by reviewing deaths, complications, and sentinel events with objective identification of issues and appropriate responses. The aforementioned representatives must attend at least 50 percent of these multidisciplinary or peer-review committee meetings. Although this meeting is usually held monthly, the frequency is to be determined by the trauma medical director based on the needs of the performance improvement and patient safety programs.

General surgery attendance at the committee or peer review meetings is essential. The general surgeon is the foundation of care in the trauma program in a Level II hospital. All general surgeons on the trauma call panel should attend meetings if possible. At a minimum, the surgeons who constitute the core of trauma call coverage must each attend at least 50 percent of these meetings. This core group must be defined by the trauma medical director. This core group must take at least 60 percent of the total trauma call hours each month. Evidence for appropriate participation and acceptable attendance must be documented. The trauma medical director must ensure and document dissemination of information and findings from the peer review meetings to the noncore surgeons on the trauma call panel.

ALABAMA TRAUMA SYSTEM (ATS)

INSTITUTIONAL ORGANIZATION

The purpose of this document is to primarily assist Level I, Level II, and Level III trauma hospitals with suggestions of composition, organization, and process for the institutional and organizational aspects of trauma care. It is recognized that the institutional organization for each level ATS hospital differs. A suggestion of use of the American College of Surgeons (ACS) Resources for the Optimal Care of Trauma Patients is made for all ATS Level hospitals.

The Trauma Program

The trauma program involves multiple care disciplines and departments within the hospital that transcend normal departmental hierarchies. Because the best trauma care begins at the scene of an injury through the acute care setting to discharge from a rehabilitation center, the trauma program should have appropriate representation from all phases of care. Representatives of all disciplines and hospital departments involved in trauma patient care should provide team members working in concert to give care based on a prioritized plan. Optimal and timely care, in a multidisciplinary trauma program, is continuously evaluated by processes and outcomes.

The Trauma Medical Director

The trauma medical director is the surgeon or emergency medical doctor who leads the multidisciplinary activities of the trauma program.

The trauma medical director's responsibility extends far beyond the technical skills of trauma care. The trauma medical director should have the authority to manage trauma care. The trauma director coordinates trauma service privileges of the on-call panel, works in cooperation with nursing administration to support the nursing needs of trauma patients, develops treatment protocols along with the trauma team, and coordinates the performance improvement and peer review processes. The medical trauma director must have the authority to correct deficiencies in trauma care. With the assistance of the hospital administrator and the trauma coordinator, the trauma director is responsible for coordinating the budgetary process for the trauma program. The trauma medical director should identify representatives from surgery, anesthesiology, emergency medicine, and other appropriate disciplines to determine which physicians from their disciplines are qualified to be members of the trauma program and on-call panel.

The Trauma Team

The trauma team consists of physicians, nurses, and allied health personnel. The size and composition of the team will vary with hospital size, hospital trauma level, the severity of

the injury, and the corresponding level of trauma team activation. It is anticipated that only physiologically stable patients will be routed to a Level III ATS hospital. However, patient choice, a trauma patient with an airway unable to be secured, hemodynamically unstable patient with no IV secured, or uncontrolled hemorrhage in a patient, an unstable patient beyond a reasonable transport time to an ATS Level I or II hospital, or a non-EMS delivered patient may arrive at a Level III ATS hospital. Thus there is a need for a graded response by the Level III hospital to meet the potential varied patient arrivals. The determination of the level of response should be made by the emergency medical doctor receiving the information in the emergency department.

A high-level response to a severely injured unstable patient should include the following: (1) a general surgeon; (2) an emergency physician; (3) emergency department nurses, including a scribe nurse; (4) a laboratory technician; (5) a radiology technologist; (6) a critical care nurse; (7) an anesthesiologist or a certified registered nurse anesthetist; and (8) security officers.

The trauma team's response to a less severely injured stable patient usually consists of an emergency medicine physician and the emergency department nurses (Level III) until the general surgeon arrives, if needed. The criteria for trauma activation should be clearly defined by the trauma center and continuously evaluated by the Quality Assurance program and patient safety program.

The Trauma Coordinator (TC)

The TC is fundamental to the development, implementation, and evaluation of the trauma program. The TC works in close collaboration with the trauma medical director and complements the director's efforts. A constructive, mutually supportive relationship between these key leaders is important to the success of the program.

The TC, usually a registered nurse and most likely the emergency department nurse manager, is responsible for the organization of services and systems necessary for the multidisciplinary approach to providing care to trauma patients. The TC provides day-to-day responsibility for process and performance improvement activities, as they relate to nursing and ancillary personnel, and assists the trauma medical director in carrying out the same functions for the physicians. Accountability for all activities of the trauma program resides with the medical director and the TC. The role of the TC in the educational, clinical, research, administrative, and outreach activities of the trauma program is determined by the needs of the trauma medical director and the institution.

Administrative and budgetary support is needed for the TC. The registrar, secretary, and nurse clinician(s) must be supervised by the TC.

The Trauma Registrar (TR)

The trauma registrar is an important member of the trauma team. Trauma registrars may be from diverse backgrounds such as nursing, medical records, computer science, medical informatics, and other fields. The TR must work directly with the trauma team and report to the TC or may

be the TC in smaller Level III hospitals. Trauma registrars will receive initial training as the Alabama State Trauma Registry is rolled out. They also must complete four hours of registry-specific continuing education each year which the Alabama Department of Public Health Office of EMS and Trauma (ADPH/OEMS&T) will provide. Technical support must be available to assist with these training requirements.

Trauma Multidisciplinary Committee or Peer Review

There may be a multidisciplinary/peer review committee chaired by the trauma medical director or designee, with representatives from surgery, emergency medicine, anesthesia, and hospital administration. The purpose of the committee is to improve trauma care, along with other medical care by reviewing all trauma deaths, complications, and sentinel events with objective identification of issues and appropriate responses. A monthly meeting should be held.

General surgery attendance at the committee/peer review meetings is essential. The general surgeon is the foundation of care in the trauma program. All general surgeons on the trauma call panel should attend meetings, if possible.

The trauma medical director must ensure and document dissemination of information and findings from the peer review meetings to the noncore surgeons on the trauma call panel.

The trauma multidisciplinary or peer-review committee may also serve other Quality Assurance/Quality Improvement (QA/QI) functions or be combined as a part of other QA/QI functions.