Title 19 - DEPARTMENT OF HEALTH AND SENIOR SERVICES
Division 30 – Division of Regulation and Licensure
Chapter 40 – Comprehensive Emergency Medical Services Systems Regulations
(April 21, 2010)

PROPOSED RULE

19 CSR 30-40.450 Standards for Level IV Trauma Center Designation

PURPOSE: This rule establishes standards for level IV trauma center designation.

EDITOR'S NOTE: IV-R after a standard indicates a requirement for a level IV trauma center. IV-IH after a standard indicates an in-house requirement for a level IV trauma center. IV-IA indicates an immediately available requirement for level IV trauma centers. IV-PA indicates a promptly available requirement for level IV trauma centers.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) **General Standards for Trauma Center Designation**

(A) The hospital board of directors, administration, medical staff and nursing staff shall demonstrate a commitment to quality trauma care. Methods of demonstrating the commitment shall include, but not be limited to, a board resolution that the hospital governing body agrees to establish policy and procedures for the maintenance of services essential for a trauma center; assure that all trauma patients will receive medical care at the level of the hospital's designation; commit the institution's financial, human and physical resources as needed for the trauma program; and establish a priority admission for the trauma patient to the full services of the institution. (IV-R)

(B) Trauma centers shall agree to accept all trauma victims appropriate for the level of care provided at the hospital, regardless of race, sex, creed or ability to pay. (IV-R)

(C) Trauma centers shall identify, stabilize according to its capability and patient condition, and facilitate rapid transfer of the severely injured trauma patient to a higher level of care. Situations in which the severely injured trauma patient might be taken to a Level IV center per approved EMS protocol (other than self-transport or walk-ins) include, but are not limited to, immediate life threatening situations such as cardiac or respiratory arrest. For the non-severely injured trauma patient, the Level IV center shall evaluate and transfer to higher level trauma center per local or regional protocol as approved by the state~~as needed~~. A level IV center that decides to keep an injured patient not directed to another level of care by approved local regional protocol shall ensure that it has the capability to provide for the surgical and medical management of that patient twenty-four hours a day, seven days a week. The administration and staff shall determine whether the level IV center is equipped and competent to admit and care for this subset of patients.

(D) The hospital shall demonstrate evidence of a trauma program that provides the trauma team with appropriate experience to maintain skill and proficiency in the care of trauma patients. Such evidence shall include meeting of continuing education unit requirements by all professional staff, documented regular attendance by all trauma care providers at trauma program performance improvement and patient safety program meetings, documentation of continued experience as defined by the trauma medical director in management of sufficient numbers of severely injured patients to maintain skill levels, and outcome data on quality of patient care as defined by regional emergency medical service committees. Regular attendance shall be defined by each trauma service, but shall be not less than fifty percent (50%) of all meetings. The trauma medical director must ensure and document dissemination of information and findings from the peer review meetings to the trauma care providers on the emergency department trauma call roster. (IV-R)

(E) There shall be a lighted designated helicopter landing area to accommodate incoming medical helicopters. (IV-R)

1. The landing area shall serve as the receiving and take-off area for medical helicopters and shall be cordoned off from the general public when in use to assure its continual availability and safe operation. (IV-R)

2. It is recommended that the landing area shall be no more than three (3) minutes from the emergency department. (IV-R)

(F) The hospital shall appoint a board-certified or board-admissible physician to serve as the trauma medical director. (IV-R)

1. There shall be a job description and organization chart depicting the relationship between the trauma medical director and other services. (IV-R)

2. The trauma medical director shall be a member of the emergency department trauma call roster. (IV-R)

3. The trauma medical director shall be responsible for the oversight of the education and training of the medical and nursing staff in trauma care. (IV-R)

4. The trauma medical director shall document a minimum average of sixteen (16) hours of continuing medical education (CME) in trauma care every year. (IV-R)

(G) The trauma program manager shall be a registered nurse or other qualified individual. (IV-R)

1. There shall be a job description and organization chart depicting the relationship between the trauma nurse coordinator/trauma program manager and other services. (IV-R)

2. The trauma nurse coordinator/trauma program manager shall document a minimum average of eight (8) hours of continuing education in trauma care every year. (IV-R)

(H) By the time of the initial review, all members of the licensed trauma care provider emergency department trauma call roster shall have successfully completed or be registered for a provider Advanced Trauma Life Support (ATLS) course or an Advanced Trauma Care for Nurses (ATCN) course. Each licensed trauma care provider on the emergency department trauma call roster shall maintain current certification in either ATLS or ATCN, except for physicians who are board-certified in emergency medicine [must remain current vs strongly encouraged to remain current]. (IV-R) ATLS is incorporated by reference in this rule as published by the American College of Surgeons in 2003 and is available at American College of Surgeons, 633 N. St. Clair St., Chicago, IL 60611. This rule does not incorporate any subsequent amendments or additions. ATCN is incorporated by reference in this rule as published in 2003 by the Society of Trauma Nurses and is available at the Society of Trauma Nurses, 1926 Waukegan Road, Suite 100, Glenview, Illinois 60025. This rule does not incorporate any subsequent amendments or additions. **Update reference** (IV-R)

(I) All members of the emergency department trauma call roster shall document a minimum average of eight (8) hours of continuing education in trauma care every year. Four (4) of the eight (8) hours of education per year must be applicable to pediatric trauma. (IV-R)

(J) The hospital shall demonstrate that there is a plan for adequate post-discharge follow-up on trauma patients. (IV-R)

(K) A Missouri trauma registry shall be completed on each patient who sustains a traumatic injury and meets the following criteria: Includes at least one (1) code within the range of the following injury diagnostic codes as defined in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9)-(CM) 800-959.9 which is incorporated by reference in this rule as published by the Centers for Disease Control and Prevention in 2006 and is available at National Center for Health Statistics, 1600 Clifton Road, Atlanta, GA 30333.update reference This rule does not incorporate any subsequent amendments or additions. Excludes all diagnostic codes within the following code ranges: 905–909.9 (late effects of injury), 910–924.9 (superficial injuries, including blisters, contusions, abrasions, and insect bites), 930–939.9 (foreign bodies), and must include one of the following criteria: hospital admission, patient transfer out of facility, or death resulting from the traumatic injury (independent of hospital admission or hospital transfer status). The registry shall be submitted electronically in a format defined by the Department of Health and Senior Services. Electronic data shall be submitted quarterly, ninety (90) days after the quarter ends. The trauma registry must be current and complete. A patient log with admission date, patient name, and injuries must be available for use during the site review process. Information provided by hospitals on the trauma registry shall be subject to the same confidentiality requirements and procedures contained in section 192.067, RSMo. The trauma care data elements shall be those identified and defined by the National Trauma Data Standard which is incorporated by reference in this rule as published by the American College of Surgeons in 2008 and is available at the American College of Surgeons, 633 N. St. Clair St., Chicago, IL 60611. This rule does not incorporate any subsequent amendments or additions. (IV-R)

(L) The hospital shall have a trauma team activation protocol that establishes the criteria used to rank trauma patients according to the severity and type of injury and identifies the persons authorized to notify trauma team members when a severely injured patient is en route or has arrived at the trauma center. (IV-R)

1. The trauma team activation protocol shall provide for immediate notification and response requirements for trauma team members when a severely injured patient is en route to the trauma center. (IV-R)

(M) The hospital shall have a plan to notify an organ or tissue procurement organization and cooperate in the procurement of anatomical gifts in accordance with the provisions in section 194.233, RSMo. (IV-R)

(N) A level IV trauma center shall be either a currently designated critical access hospital or be located in rural places of the state as of the effective date of these regulations. (IV-R)

(O) The hospital shall have ~~a~~ written transfer agreements and an expedited transfer processes to ~~a~~ higher levels of care for all ~~the severely~~ injured patients.

(2) **Medical Staffing Standards for Trauma Center Designation**

(A) There shall be a delineation of privileges for the trauma service staff made by the medical staff credentialing committee. (IV-R)

(B) All members of the emergency department trauma call roster shall comply with the availability and response requirements of this rule. If not on the hospital premises, trauma team members who are immediately available shall carry electronic communication devices at all times to permit contact by the hospital and shall respond immediately to a contact by the hospital. (IV-R IA)

(C) The level IV center shall have a mechanism for adequate pre-notification of the physician on-call for trauma coverage such that the physician on-call for trauma shall be present in the ED when the patient arrives.

(D) The level IV trauma center shall have someone available in the ED 24 (twenty-four) hours a day 7 (seven) days a week who can establish and manage an airway and manage respiratory and circulatory compromise.

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(3) **Standards for Hospital Resources and Capabilities for Trauma Center Designation**

(A) The hospital shall meet emergency department standards for trauma center designation.

1. The emergency department staffing shall ensure immediate and appropriate care of the trauma patient. (IV-R)

A. The physician director of the emergency department shall be a board-certified or board-admissable physician. (IV-R)

B. There shall be a physician trained in the care of the critically injured as evidenced by credentialing in ATLS and current in trauma CME as previously defined in the emergency department. ATLS is incorporated by reference in this rule as published by the American College of Surgeons in 2003 and is available at American College of Surgeons, 633 N. St. Clair St., Chicago, IL 60611. This rule does not incorporate any subsequent amendments or additions update reference. (IV-RIA)

C. All emergency department trauma care providers shall successfully complete the ATLS or ATCN courses. All nurses functioning as trauma care providers shall maintain current ATCN certification. Physicians, who are certified by boards other than emergency medicine and treat trauma patients in the emergency department, are required to complete the ATLS course and maintain current ATLS certification. (IV-R)

D. There shall be written policies defining the relationship of the emergency department physicians to other members of the trauma team. (IV-R)

E. All registered nurses assigned to the emergency department shall be credentialed in trauma nursing by the hospital within one (1) year of assignment. (IV-R)

(I) Registered nurses competent in trauma nursing shall document a minimum of eight (8) hours of trauma-related continuing nursing education per year. (IV-R)

(II) Registered nurses competent in trauma care shall obtain~~maintain~~ current provider status in the Trauma Nurse Core Curriculum or Advanced Trauma Care for Nurses and either Pediatric Advanced Life Support (PALS), Advanced Pediatric Life Support (APLS), or Emergency Nursing Pediatric Course (ENPC) within one (1) year of employment in the emergency department and maintain thereafter. The Trauma Nurse Core Curriculum is incorporated by reference in this rule as published in 2007 by the Emergency Nurses Association and is available at the Emergency Nurses Association, 915 Lee Street, Des Plaines, IL 60016-9659. This rule does not incorporate any subsequent amendments or additions. Advanced Trauma Care for Nurses is incorporated by reference in this rule as published in 2003 by the Society of Trauma Nurses and is available at the Society of Trauma Nurses, 1926 Waukegan Road, Suite 100, Glenview, IL 60025. This rule does not incorporate any subsequent amendments or additions. Pediatric Advanced Life Support is incorporated by reference in this rule as published in 2005 by the American Heart Association and is available at the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231. This rule does not incorporate any subsequent amendments or additions. Advanced Pediatric Life Support is incorporated by reference in this rule as published in 2007 by the American Academy of Pediatrics and the American College of Emergency Physicians and is available at the American Academy of Pediatrics, 141 Northwest Point Boulevard, Post Office Box 927, Elk Grove Village, Illinois 60009-0927 or the American College of Emergency Physicians, 1125 Executive Circle, Post Office Box 619911, Dallas, Texas 75261-9911 or Jones and Bartlett Publishers, 40 Tall Pine Drive, Sudbury, Massachusetts 01776. This rule does not incorporate any subsequent amendments or additions. The Emergency Nursing Pediatric Course is incorporated by reference in this rule as published by the Emergency Nurses Association in 2004 and is available at the Emergency Nurses Association, 915 Lee Street, Des Plaines, IL 60016-9659. This rule does not incorporate any subsequent amendments or additions. (IV-R) (verify most up-to-date reference)

2. Equipment for resuscitation and life support with age appropriate sizes for the critically or seriously injured shall include the following:

A. Airway control and ventilation equipment including laryngoscopes, endotracheal tubes, bag-mask resuscitator, sources of oxygen, and mechanical ventilator—(IV-R);

B. Suction devices—(IV-R);

C. Electrocardiograph, cardiac monitor, and defibrillator—(IV-R);

D. Central line insertion equipment—(IV-R);

E. All standard intravenous fluids and administration devices including intravenous catheters—(IV-R);

F. Sterile surgical sets for procedures standard for the emergency department—(IV-R);

G. Gastric lavage equipment—(IV-R);

H. Drugs and supplies necessary for emergency care—(IV-R);

I. Two-way communication link with emergency medical service (EMS) vehicles—(IV-R);

J. End-tidal carbon dioxide monitor—(IV-R);

K. Temperature control devices for patient and resuscitation fluids~~, parenteral fluids, and blood~~—(IV-R);

L. Rapid infusion system for parenteral infusion—(IV-R); and

M. Immobilization equipment including C-collars. (IV-R)

3. There shall be documentation that all equipment is checked according to the hospital preventive maintenance schedule. (IV-R)

4. There shall be a designated trauma resuscitation area in the emergency department. (IV-R)

5. There shall be X-ray capability with twenty-four (24)-hour coverage by technicians. (IV-R; IV-IA)

A. Resources shall include:

(I) Resuscitation equipment available to the radiology department (IV-R);

(II) Adequate physician and nursing personnel ~~present~~ available with monitoring equipment to fully support the trauma patient and provide documentation of care during the time the patient is physically present in the radiology department and during transportation to and from the radiology department; and (IV-R)

(III) The hospital shall have a mechanism for timely interpretation of radiology exams to aid in patient management. (IV-R; IV-PA)

(IV) There shall be documentation that all equipment is checked according to the hospital preventive maintenance schedule. (IV-R)

6. Nursing documentation for the trauma patient shall be on a trauma flow sheet approved by the trauma medical director and trauma nurse coordinator/trauma program manager. (IV-R)

(B) The hospital shall have written transfer agreements to higher levels of care for all injured patient. (IV-R)

~~(B) The hospital shall have acute hemodialysis capability or a written transfer agreement. (IV-R)~~

(D~~C~~) The hospital shall have a written transfer agreement for burn patients. (IV-R)

(E~~D~~) ~~The hospital shall have injury rehabilitation and spinal cord injury rehabilitation capability or a written transfer agreement. (IV-R)~~

(F~~E~~) The hospital shall have written transfer agreement for~~possess~~ pediatric trauma management ~~capability or maintain written transfer agreements~~. (IV-R)

~~(~~(G~~F~~) There shall be documentation of adequate support services in assisting the patient's family from the time of entry into the facility to the time of discharge. (IV-R)

~~(~~(H~~G~~) The following clinical laboratory services shall be available twenty-four (24) hours a day:

1. Standard analyses of blood, urine and other body fluids; (IV-R)

~~2. Blood typing and cross-matching; (IV-R)~~

3. Coagulation studies; (IV-R)

4. ~~Comprehensive~~ B~~b~~lood bank or access to a community central blood bank and adequate hospital blood storage facilities; (IV-R)

5. Blood gases and pH determinations; (IV-R)

~~6. Serum and urine osmolality; (IV-R)~~

7. Drug and alcohol screening; and (IV-R)

8. A written protocol that the trauma patient receives priority. (IV-R)

(4) **Standards for Hospital Performance Improvement, Patient Safety, Outreach, Public Education, and Training Programs for Trauma Center Designation**

(A) There shall be an ongoing performance improvement and patient safety program designed to objectively and systematically monitor, review, and evaluate the quality and appropriateness of patient care, pursue opportunities to improve patient care, and resolve identified problems. (IV-R)

(B) The following additional performance improvement and patient safety measures shall be required:

1. Regular reviews of all trauma patients including review of all trauma-related deaths—(IV- R);

2. A regular morbidity and mortality review, at least quarterly—(IV-R);

3. A regular multidisciplinary trauma conference that includes representation of all members of the trauma team, with minutes of the conferences to include attendance and findings—(IV-R);

4. Regular reviews of the reports generated by the Department from the Missouri trauma registry and the head and spinal cord injury registry—(IV-R);

5. Regular reviews of pre-hospital trauma care including inter-facility transfers ~~and~~

6. Review of all pediatric and adult patients who meet the severely injured patient criteria ~~patients~~ seen in level IV~~adult~~ centers—(IV-R);

7. All patients who meet the severely injured patient criteria who are not transferred to a higher level of care (IV-R);

8~~6~~. Participation in reviews of regional systems of trauma care as established by the Department— (IV-R); and

9~~7~~. Trauma patients remaining greater than sixty (60) minutes prior to transfer will be reviewed as a part of the performance improvement and patient safety program. (IV-R)

(C) The hospital shall be actively involved in local and regional emergency medical services systems by providing training and clinical resources. (IV-R)

(D) The receiving hospital shall provide and monitor timely feedback to the EMS providers ~~and referring hospital, if involved~~. This feedback shall include, but not be limited to, diagnosis, treatment and disposition. It is recommended that the feedback be provided within seventy-two (72) hours of admission or arrival at the hospital if not admitted and to the referring hospital if involved. (I-R, II-R, III-R, IV-R). When EMS does not provide patient care data on patient arrival or in a timely fashion (recommended within 3 hours of patient delivery), this time frame ~~paragraph~~ does not apply.

(E) There shall be a hospital-approved procedure for credentialing nurses in trauma care. (IV-R)

1. All nurses providing care to severely injured patients and assigned to the emergency department ~~–~~shall complete the~~a~~ minimum~~ of sixteen (16) hours of~~ trauma nursing courses described in section 3A1EII to become credentialed in trauma care within one (1) year of assignment and maintain 8 (eight) hours trauma continuing education per year thereafter. (IV-R)

2. The content and format of any trauma nursing courses developed and offered by a hospital in place of the courses listed in section 3A1EII shall be developed in cooperation with the trauma medical director. This course must provide 16 (sixteen) hours of CEU's. A copy of the course curriculum used shall be filed with the department. (IV-R)

3. Trauma nursing courses offered by~~ institutions of higher education in Missouri or other~~ level I and II centers~~–~~ or courses such as the Advanced Trauma Care for Nurses, Emergency Nursing Pediatric Course, or the Trauma Nurse Core Curriculum may be used to fulfill this requirement. To receive credit for this course, a nurse shall obtain advance approval for the course from the trauma medical director and trauma nurse coordinator/trauma program manager and shall present evidence of satisfactory completion of the course. (IV-R)

(F) Hospitals shall maintain a hospital trauma diversion protocol in order to allow best resource management within a given EMS region. Hospital diversion information must be maintained to include date, length of time, and reason for diversion. This must be monitored as a part of the Performance Improvement and Patient Safety program, and available when the hospital is site reviewed. (IV-R)

(G) Each trauma center shall have a disaster plan. A copy of this disaster plan must be maintained within the trauma center policies and procedures and should document the trauma services role in planning and response. (IV-R)

(5) Standards for the Programs in Trauma Research for Trauma Center Designation.

(A) The hospital shall agree to cooperate and participate with the Department in conducting epidemiological studies and individual case studies for the purpose of developing injury control and prevention programs. (IV-R)

*AUTHORITY: section 190.185, RSMo Supp. 200[7]***8** *and section 190.241, HB 1790, 94th General Assembly, Second Regular Session, 2008.* Emergency rule filed Aug. 28, 1998, effective Sept. 7, 1998, expired March 5, 1999. Original rule filed Sept. 1, 1998, effective Feb. 28, 1999. Amended: Filed Jan. 16, 2007, effective Aug. 30, 2007. Amended: Filed May 19, 2008, effective Jan. 30, 2009.*

**Original authority: 190.185, RSMo 1973, amended 1989, 1993, 1995, 1998, 2002 and 190.241, RSMo 1987, amended 1998, 2008.*

PUBLIC COST: This proposed amendment will cost state agencies or political subdivisions put in number in the aggregate.

PRIVATE COST: This proposed amendment will cost private entities put in number in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with Teresa Generous, Director, Department of Health and Senior Services, Division of Regulation and Licensure, PO Box 570, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. No public hearing is scheduled.