10A NCAC 13P .0903 LEVEL III TRAUMA CENTER CRITERIA

To receive designation as a Level III Trauma Center, a hospital shall have the following:

(1) A trauma program and a trauma service that have been operational for at least 12 months prior to application for designation;

(2) Membership in and inclusion of all trauma patient records in the North Carolina Trauma Registry for at least 12 months prior to submitting a Request for Proposal application;

(3) A trauma medical director who is a board-certified general surgeon. The trauma medical director must:
   (a) Serve on the center's trauma service;
   (b) Participate in providing care to patients with life-threatening or urgent injuries;
   (c) Participate in the North Carolina Chapter of the ACS' Committee on Trauma; and
   (d) Remain a provider in the ACS' ATLS Course in the provision of trauma-related instruction to other health care personnel;

(4) A hospital designated trauma nurse coordinator TNC/TPM who is a registered nurse, licensed by the North Carolina Board of Nursing;

(5) A TR who has a working knowledge of medical terminology, is able to operate a personal computer, and has the ability to extract data from the medical record;

(6) A hospital department/division/section for general surgery, emergency medicine, anesthesiology, and orthopaedic surgery, with designated chair or physician liaison to the trauma program for each;

(7) Clinical capabilities in general surgery with a written posted call schedule that indicates who is on call for both trauma and general surgery. If a trauma surgeon is simultaneously on call at more than one hospital, there must be a defined, posted trauma surgery back-up call schedule composed of surgeons credentialed to serve on the trauma panel. The trauma service director shall specify, in writing, the specific credentials that each back-up surgeon must have. These must state that the back-up surgeon has surgical privileges at the trauma center and is boarded or eligible in general surgery (with board certification in general surgery within five years of completing residency);

(8) Response of a trauma team to provide evaluation and treatment of a trauma patient 24 hours per day that includes:
   (a) A trauma attending whose presence at the patient's bedside within 30 minutes of notification is documented and who participates in therapeutic decisions and is present at all operative procedures;
   (b) An emergency physician who is present in the ED 24 hours per day who is either board-certified or prepared in emergency medicine (by the American Board of Emergency Medicine or the American Osteopathic Board of Emergency Medicine) or board-certified or eligible by the American Board of Surgery, American Board of Family Practice, or American Board of Internal Medicine and practices emergency medicine as his primary specialty. This emergency physician if prepared or eligible must be board-certified within five years after successful completion of the residency and serve as a hospital designated member of the trauma team to ensure immediate care for the trauma patient until the arrival of the trauma surgeon; and
   (c) An anesthesiologist who is on-call and promptly available after notification by the trauma team leader or an in-house CRNA under physician supervision, practicing in accordance with G.S. 90-171.20(7)e, pending the arrival of the anesthesiologist within 30 minutes of notification;

(9) A credentialing process established by the Department of Surgery to approve mid-level practitioners and attending general surgeons covering the trauma service. The surgeons must have board certification in general surgery within five years of completing residency;

(10) Board certification or eligibility of orthopaedists and neurosurgeons (if participating),with board certification within five years after successful completion of residency;

(11) Written protocols relating to trauma care management formulated and updated. Activation guidelines shall reflect criteria that ensures patients receive timely and appropriate treatment including stabilization, intervention and transfer. Documentation of effectiveness of variances from activation criteria addressed in Items (12), (13), and (14) of this Rule must be available for review;

(12) Criteria to ensure team activation prior to arrival of trauma and burn patients that include the following conditions:
   (a) Shock;

(b) Respiratory distress;
(c) Airway compromise;
(d) Unresponsiveness (GSC less than nine) with evidence for multiple injuries;
(e) Gunshot wound to neck, or torso; or
(f) ED physician's decision to activate;

(13) Trauma Treatment Guidelines based on facility capabilities that ensure surgical evaluation or appropriate transfer, based upon the following criteria, by the health professional who is promptly available:
(a) Proximal amputations;
(b) Burns meeting institutional transfer criteria;
(c) Vascular compromise;
(d) Crush to chest or pelvis;
(e) Two or more proximal long bone fractures;
(f) Spinal cord injury; and
(g) Gunshot wound to the head;

(14) Surgical consults or appropriate transfers determined by Trauma Treatment Guidelines based on facility capabilities, based upon the following criteria, by the health professional who is promptly available:
(a) Falls greater than 20 feet;
(b) Pedestrian struck by motor vehicle;
(c) Motor vehicle crash with:
(i) Ejection (includes motorcycle);
(ii) Rollover;
(iii) Speed greater than 40 mph; or
(iv) Death of another individual in the same vehicle; and
(d) Extremes of age, less than five or greater than 70 years;

(15) Clinical capabilities (promptly available if requested by the trauma team leader, with a posted on-call schedule) that include individuals credentialed in the following:
(a) Orthopaedics;
(b) Radiology; and
(c) Neurosurgery, if actively participating in the acute resuscitation and operative management of patients managed by the trauma team;

(16) An Emergency Department that has:
(a) A physician director who is board-certified or prepared in emergency medicine (by the American Board of Emergency Medicine or the American Osteopathic Board of Emergency Medicine);
(b) 24-hour-per-day staffing by physicians physically present in the Emergency Department who:
(i) Are either board-certified or prepared in emergency medicine (by the American Board of Emergency Medicine or the American Osteopathic Board of Emergency Medicine) or board-certified or eligible by the American Board of Surgery, American Board of Family Practice, or American Board of Internal Medicine. These emergency physicians must be board-certified within five years after successful completion of a residency;
(ii) Are designated members of the trauma team to ensure immediate care to the trauma patient; and
(iii) Practice emergency medicine as their primary specialty;
(c) Nursing personnel with experience in trauma care who continually monitor the trauma patient from hospital arrival to disposition to an intensive care unit, operating room, or patient care unit;
(d) Resuscitation equipment for patients of all ages that includes:
(i) Airway control and ventilation equipment (laryngoscopes, endotracheal tubes, bag-mask resuscitators, pocket masks, and oxygen);
(ii) Pulse oximetry;
(iii) End-tidal carbon dioxide determination equipment;

(iv) Suction devices;
(v) An Electrocardiograph-oscilloscope-defibrillator with internal paddles;
(vi) Apparatus to establish central venous pressure monitoring;
(vii) Intravenous fluids and administration devices that include large bore catheters and intraosseous infusion devices;
(viii) Sterile surgical sets for airway control/cricothyrotomy, thoracotomy, vascular access, thoracostomy, peritoneal lavage, and central line insertion;
(ix) Apparatus for gastric decompression;
(x) 24-hour-per-day x-ray capability;
(xi) Two-way communication equipment for communication with the emergency transport system;
(xii) Skeletal traction devices;
(xiii) Thermal control equipment for patients;
(xiv) Thermal control equipment for blood and fluids;
(xv) A rapid infuser system;
(xvi) A dosing reference and measurement system to ensure appropriate age related medical care; and
(xvii) A Doppler;

(17) An operating suite that has:
(a) Personnel available 24 hours a day, on-call, and available within 30 minutes of notification unless in-house;
(b) Age-specific equipment that includes:
(i) Thermal control equipment for patients;
(ii) Thermal control equipment for blood and fluids;
(iii) 24-hour-per-day x-ray capability, including c-arm image intensifier;
(iv) Endoscopes and bronchoscopes;
(v) Equipment for long bone and pelvic fracture fixation; and
(vi) A rapid infuser system;

(18) A postanesthetic recovery room or surgical intensive care unit that has:
(a) 24-hour-per-day availability of registered nurses within 30 minutes from inside or outside the hospital;
(b) Equipment for patients of all ages that includes:
(i) The capability for resuscitation and continuous monitoring of temperature, hemodynamics, and gas exchange;
(ii) Pulse oximetry;
(iii) End-tidal carbon dioxide determination;
(iv) Thermal control equipment for patients; and
(v) Thermal control equipment for blood and fluids;

(19) An intensive care unit for trauma patients that has:
(a) A trauma surgeon who actively participates in the committee overseeing the ICU;
(b) A physician on duty in the intensive care unit 24-hours-per-day or immediately available from within the hospital (which may be a physician who is the sole physician on-call for the ED);
(c) Equipment for patients of all ages that includes:
(i) Airway control and ventilation equipment (laryngoscopes, endotracheal tubes, bag-mask resuscitators and pocket masks);
(ii) An oxygen source with concentration controls;
(iii) A cardiac emergency cart;
(iv) A temporary transvenous pacemaker;
(v) An electrocardiograph-oscilloscope-defibrillator;
(vi) Cardiac output monitoring capability;
(vii) Electronic pressure monitoring capability;
(viii) A mechanical ventilator;
(ix) Patient weighing devices;
(x) Pulmonary function measuring devices; and

(xi) Temperature control devices; and

(d) Within 30 minutes of request, the ability to perform blood gas measurements, hematocrit level, and chest x-ray studies;

(20) Acute hemodialysis capability or utilization of a written transfer agreement;

(21) Physician-directed burn center staffed by nursing personnel trained in burn care or a written transfer agreement with a burn center;

(22) Acute spinal cord management capability or transfer agreement with a hospital capable of caring for a spinal cord injured patient;

(23) Acute head injury management capability or transfer agreement with a hospital capable of caring for a head injury;

(24) Radiological capabilities that include:

(a) Radiology technologist and computer tomography technologist available within 30 minutes of notification or documentation that procedures are available within 30 minutes;

(b) Computed Tomography;

(c) Sonography; and

(d) Resuscitation equipment that includes airway management and IV therapy;

(25) Respiratory therapy services on-call 24 hours per day;

(26) 24-hour-per-day clinical laboratory service that must include:

(a) Analysis of blood, urine, and other body fluids, including micro-sampling when appropriate;

(b) Blood-typing and cross-matching;

(c) Coagulation studies;

(d) Comprehensive blood bank or access to a community central blood bank with storage facilities;

(e) Blood gases and pH determination; and

(f) Microbiology;

(27) In-house rehabilitation service or transfer agreement with a rehabilitation facility accredited by the Commission on Accreditation of Rehabilitation Facilities;

(28) Physical therapy and social services;

(29) A performance improvement program, as outlined in the North Carolina Chapter of the American College of Surgeons Committee on Trauma document "Performance Improvement Guidelines for North Carolina Trauma Centers," incorporated by reference in accordance with G.S. 150B-21.6, including subsequent amendments and editions. This document is available from the OEMS, 2707 Mail Service Center, Raleigh, North Carolina 27699-2707, at no cost. This performance improvement program must include:

(a) The state Trauma Registry whose data is submitted to the OEMS at least weekly and includes all the center's trauma patients as defined in Rule .0102(68) of this Subchapter who are either diverted to an affiliated hospital, admitted to the trauma center for greater than 24 hours from an ED or hospital, die in the ED, are DOA or are transferred from the ED to the OR, ICU, or another hospital (including transfer to any affiliated hospital);

(b) Morbidity and mortality reviews including all trauma deaths;

(c) Trauma performance committee that meets at least quarterly and includes physicians, orthopaedics and neurosurgery if participating in trauma service, nurses, pre-hospital personnel, and a variety of other healthcare providers, and reviews policies, procedures, and system issues and whose members or designee attends at least 50 percent of the regular meetings;

(d) Multidisciplinary peer review committee that meets at least quarterly and includes physicians from trauma, emergency medicine, and other specialty physicians as needed specific to the case, and the trauma nurse coordinator/program manager and whose members or designee attends at least 50 percent of the regular meetings;

(e) Identification of discretionary and non-discretionary audit filters;

(f) Documentation and review of times and reasons for trauma-related diversion of patients from the scene or referring hospital;

(g) Documentation and review of response times for trauma surgeons, airway managers, and orthopaedists. All must demonstrate 80 percent compliance;

(h) Monitoring of trauma team notification times;

(i) Documentation (unless in-house) and review of Emergency Department response times for anesthesiologists or airway managers and computerized tomography technologist;
(j) Documentation of availability of the surgeon on-call for trauma, such that compliance is 90 percent or greater where there is no trauma surgeon back-up call schedule;
(k) Trauma performance and multidisciplinary peer review committees may be incorporated together or included in other staff meetings as appropriate for the facility performance improvement rules;
(l) Review of pre-hospital trauma care including dead-on-arrivals; and
(m) Review of times and reasons for transfer of injured patients;

(30) An outreach program that includes:
(a) Transfer agreements to address the transfer and receipt of trauma patients; and
(b) Participation in a RAC;

(31) Coordination or participation in community prevention activities; and

(32) A written continuing education program for staff physicians, nurses, allied health personnel, and community physicians that includes:
(a) 20 hours of Category I or II trauma-related continuing medical education (as approved by the Accreditation Council for Continuing Medical Education) every two years for all attending general surgeons on the trauma service, orthopaedists, and neurosurgeons if participating in trauma service, with at least 50 percent of this being external education including conferences and meetings outside of the trauma center or visiting lecturers or speakers from outside the trauma center. Continuing education based on the reading of content such as journals or other continuing medical education documents is not considered education outside of the trauma center;
(b) 20 hours of Category I or II trauma-related continuing medical education (as approved by the Accreditation Council for Continuing Medical Education)every two years for all emergency physicians, with at least 50 percent of this being external education including conferences and meetings outside of the trauma center or visiting lecturers or speakers from outside the trauma center. Continuing education based on the reading of content such as journals or other continuing medical education documents is not considered education outside of the trauma center;
(c) ATLS completion for general surgeons on the trauma service and emergency physicians. Emergency physicians, if not boarded in emergency medicine, must be current in ATLS;
(d) 20 contact hours of trauma-related continuing education (beyond in-house in- services) every two years for the TNC/TPM;
(e) 16 hours of trauma-registry-related or trauma-related continuing education every two years, as deemed appropriate by the TNC/TPM, for the trauma registrar;
(f) At least an 80 percent compliance rate for 16 hours of trauma-related continuing education (as approved by the trauma nurse coordinator/program manager) every two years related to trauma care for RN's and LPN's in transport programs, Emergency Departments, primary intensive care units, primary trauma floors, and other areas deemed appropriate by the trauma nurse coordinator/program manager; and
(g) 16 hours of trauma-related continuing education every two years for mid-level practitioners routinely caring for trauma patients.

History Note: *Authority G.S. 131E-162;*
Temporary Adoption Eff. January 1, 2002;
Eff. April 1, 2003;
Amended Eff. January 1, 2009; January 1, 2004.