

Level II Trauma Center

Designation Criteria for Level II Trauma Center

Criteria for designation of Level II Trauma Centers are based upon Resources for Optimal Care of the Injured Patient, COT/American College of Surgeons, 2006. The criteria defined in that document are designed to verify that the services and systems are in place to ensure optimal care of the trauma patient. The following elements must be met for designation as a Level II Trauma Center in Idaho.

1. Trauma System
Time Sensitive Emergencies (TSE)
1.1 The center's trauma program staff has sufficient involvement in national, state, and regional trauma system planning, development, and operation.
Center Mission
1.2 There is a current resolution supporting the trauma center from the medical staff.
1.3 There is a current resolution supporting the trauma center from the hospital board.
1.4 There is sufficient infrastructure, staff, equipment, and support to the trauma program to provide adequate provision of care.
1.5 The trauma program has adequate administrative support and defined lines of authority that ensure comprehensive evaluation of all aspects of trauma care.
2. Description of Trauma Center
Description of the Trauma Center
2.1 All trauma facilities are on the same campus.
2.2 The trauma program is empowered to address issues that involve multiple disciplines.
2.3 The adult trauma center that treats more than 100 injured children annually has a pediatric ED area, a pediatric intensive care area, appropriate resuscitation equipment, and pediatric-specific trauma Performance Improvement and Patient Safety (PIPS) program.
2.4 The center provides some means of referral and access to trauma center resources.
2.5 Center provides initial resuscitation of the trauma patient and immediate intervention to control hemorrhage and to assure maximum stabilization prior to referral to an appropriate higher level of care.
Trauma Leadership
Trauma Medical Director
2.6 The trauma program has a Trauma Medical Director with the authority and administrative support to lead the program.
2.7 The Trauma Medical Director is a board-certified surgeon or an American College of Surgeons (ACS) Fellow.
2.8 The Trauma Medical Director is current in Advanced Trauma Life Support (ATLS).

2.9 The Trauma Medical Director has accrued an average of 12 hours annually or 36 hours in 3 years of external** trauma-related Continuing Medical Education (CME).
2.10 The Trauma Medical Director participates in trauma call.
2.11 The Trauma Medical Director is a member of and participates in regional or national trauma organizations.
2.12 The Trauma Medical Director has sufficient authority to set qualifications for the trauma servicemembers.
2.13 The roles of emergency physicians and trauma surgeons are defined, agreed on, and approved by the Trauma Medical Director.
2.14 The Trauma Medical Director has the authority to correct deficiencies in trauma care or to exclude from trauma call the trauma team members who do not meet specified criteria.
2.15 The Trauma Medical Director has the authority to recommend changes for the trauma team based on performance review.
2.16 The Trauma Medical Director has the responsibility and authority to determine each general surgeon's ability to participate on the trauma team through the trauma Process Improvement and Patient Safety (PIPS) program and hospital policy.
2.17 The Trauma Medical Director has the responsibility and authority to ensure compliance with verification requirements.
2.18 The Trauma Medical Director is involved in the development of the center's bypass protocol.
2.19 The Trauma Medical Director documents the dissemination of information to the PIPS committee.
2.20 In circumstances when attendance is not mandated (noncore members) the Trauma Medical Director ensures and documents dissemination of information from the PIPS program.
2.21 The Trauma Medical Director ensures and documents dissemination of information and findings from the Trauma Program Operational Process Performance Committee (TPOPPC) to the noncore surgeons on the trauma team.
2.22 The Trauma Medical Director is accountable for all trauma care and exercises administrative authority for the trauma program.
Trauma Program Manager
2.23 The Trauma Program Manager has clinical experience caring for injured patients and a minimum of 16 hours of trauma-related continuing education per year.
3. Clinical Functions
3.1 The criteria for graded activation is clearly defined by the center and continuously evaluated by the PIPS program.
3.2 The criteria for the highest level of activation is clearly defined and evaluated by the PIPS program.
3.3 The trauma service retains responsibility for its patients and coordinates all therapeutic decisions.



- 3.4 The trauma surgeon is kept informed of and concurs with major therapeutic and management decisions made by the Intensive Care Unit (ICU) team.
- 3.5 There is a method to identify injured patients, monitor the provision of health care services, make periodic rounds, and hold formal and informal discussions with individual practitioners.
- 3.6 The center must be the local trauma authority and assume the responsibility for providing training for prehospital and hospital-based providers.
- 3.7 The center has established protocols to ensure immediate and appropriate care of the adult and pediatric trauma patient.

Trauma Team

- 3.8 Criteria for all levels of Trauma Team Activation (TTA) must be defined and reviewed annually.
- 3.9 All trauma/general surgeons, emergency providers, and midlevel providers on the Trauma Team have completed ATLS at least once.
- 3.10 Trauma Team members participate in PIPS & TPOPPC.
- 3.11 Trauma Team physicians and midlevel providers are credentialed by the medical staff and governing board.

Emergency Department (ED)

- 3.12 The ED has a designated Emergency Physician Director supported by an appropriate number of additional physicians to ensure immediate care for injured patients.
- 3.13 Emergency physicians cover in-house emergencies with a PIPS program demonstrating the efficacy of this practice.
- 3.14 Coverage of emergencies in the ICU leaves the ED with appropriate physician coverage.
- 3.15 Each emergency physician is board-certified or meets the Alternate Pathway*.
- 3.16 Physicians who are not board-certified in emergency medicine who work in the ED are current in ATLS.
- 3.17 Emergency physicians on the call panel are regularly involved in the care of injured patients.
- 3.18 Emergency physicians who take trauma call have the documented 12 hours annually or 36 hours in three years of trauma-related CME and participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program. Staying current with their board certification satisfies the CME requirement.
- 3.19 An emergency physician participates in the trauma PIPS program and the TPOPPC.
- 3.20 A representative from the ED participated in the prehospital PIPS program.
- 3.21 The PIPS liaison has accrued an average of 12 hours annually or 36 hours in 3 years of external** trauma-related CME.
- 3.22 The emergency medicine representative or designee to the TPOPPC attends a minimum of 50% of these meetings.

3.23 A designated emergency physician is available to the Trauma Medical Director for PIPS issues that occur in the ED.

General Surgery

3.24 All trauma surgeons must have privileges in general surgery.

3.25 The trauma surgeon responds promptly to activations, remain knowledgeable in trauma care principles whether treating locally or transferring to a center with more resources, and participate in PIPS activities.

3.26 Trauma surgeons in adult trauma centers that treat more than 100 injured children annually are credentialed for pediatric trauma care by the center's credentialing body.

3.27 The center has general surgical coverage 24/7.

3.28 The trauma surgeon on call is dedicated to the trauma center while on duty.

3.29 A published backup call schedule for trauma surgery is available.

3.30 Seriously injured patients are admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers.

3.31 The trauma surgeon is on site in the ED within 15 minutes of patient arrival 24/7 with an achievement rate of 80% as monitored by the PIPS program.

3.32 The trauma surgeon on call is involved in the decisions regarding diversion.

3.33 The trauma surgeon core group is adequately defined by the Trauma Medical Director.

3.34 The general surgery core group takes at least 60% of the total trauma call hours each month.

3.35 The core trauma surgeon attendance at the PIPS meetings is at least 50%.

3.36 Surgeons who take trauma call have the documented 12 hours annually or 36 hours in 3 years of trauma-related CME and an internal educational process conducted by the trauma program base on the principles of practice-based learning and the PIPS program. Staying current with their board certification satisfies the CME requirement.

3.37 All general surgeons are board-certified, meet the Alternate Pathway*, or are ACS Fellows.

3.38 Adequate (at least 50%) attendance by trauma surgery core group at the TPOPPC is documented.

Orthopedic Surgery

3.39 The center has orthopedic surgery available.

3.40 The orthopedic surgeon has privileges in general orthopedic surgery.

3.41 Orthopedic surgeons who care for injured patients are board-certified or meet the Alternate Pathway*.

3.42 Orthopedic team members have dedicated call at their institution and a backup call system, or documentation from the PIPS program that delays are not occurring.

3.43 An orthopedic team member is present in the ED within 30 minutes of consultation by the surgical trauma team leader for multiple injured patients 24/7 with an 80% achievement rate.

3.44 Orthopedic surgeons who take trauma call have documented 12 hours annually or 36 hours in 3 years of verifiable, external** trauma-related CME and participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program. Staying current with their board certification satisfies the CME requirement.

3.45 An orthopedic surgeon is designated to and participates in the PIPS program and TPOPPC. The orthopedic surgeon attends a minimum of 50% of these meetings.

3.46 The design of the backup call system, the responsibility of the orthopedic trauma team liaison, has been approved by the Trauma Medical Director.

3.47 The PIPS liaison has accrued an average of 12 hours annually or 36 hours in 3 years of external** trauma-related CME.

Neurosurgery

3.48 The neurosurgeons that care for trauma patients are board-certified or meet the Alternate Pathway*.

3.49 Neurotrauma care is promptly and continuously available for severe traumatic brain injury and spinal cord injury and for less severe head and spine injuries when necessary.

3.50 Qualified neurosurgeons are regularly involved in the care of head- and spinal-cord injured patients and are credentialed by the hospital with general neurosurgical privileges.

3.51 An attending neurosurgeon is present in the ED within 30 minutes of consultation by the surgical trauma team leader for multiple injured patients 24/7 with an 80% achievement rate.

3.52 The center provides an on-call neurosurgical schedule, with formally arranged contingency plans, that can be fulfilled with a backup call schedule in case the capability of the neurosurgeon, hospital, or system to care for neurotrauma patients is overwhelmed.

3.53 Neurosurgeons who take trauma call have the documented 12 hours annually or 36 hours in 3 years of verifiable trauma-related CME and participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program. Staying current with their board certification satisfies the CME requirement.

3.54 There is a dedicated neurosurgeon representative that attends a minimum of 50% of the multidisciplinary peer review committee meetings.

3.55 A neurosurgeon is designated to and participates in the PIPS program and TPOPPC. The neurosurgeon attends a minimum of 50% of these meetings.

3.56 The neurosurgeon liaison representative has the documented 12 hours annually or 36 hours in 3 years of verifiable, external** trauma-related CME.

Collaborative Clinical Services

Anesthesia

3.57 Anesthesia services are available 24/7.

3.58 Anesthesia services are on-site within 15 minutes of notification for emergency operations and airway problems 24/7 with an 80% achievement rate as monitored by the PIPS program.

- 3.59 Anesthesia services are available 24/7 and present for all operations.
- 3.60 Anesthesia services are promptly available for airway problems.
- 3.61 All anesthesiologists taking call have successfully completed a residency program.
- 3.62 When anesthesiology chief residents or Certified Registered Nurse Anesthetists (CRNA) are used to fulfill availability requirement, the staff anesthesiologist on call is (1) advised, (2) promptly available at all times, and (3) present for all operations, if requested by CRNA.
- 3.63 An anesthesiologist is designated to and participates in the PIPS program and the TPOPPC. The anesthesiologist attends a minimum of 50% of these meetings.

Operating Room (OR)

- 3.64 The OR is adequately staffed and immediately available.
- 3.65 Operating rooms are promptly available to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization and compartment decompression.
- 3.66 There is a mechanism for providing additional staff for a second operating room when the first operating room is occupied.
- 3.67 The OR has the all of the following essential equipment:
 - a. Rapid infusers;
 - b. Thermal control equipment for patients and resuscitation fluids;
 - c. Intraoperative radiologic capabilities;
 - d. Equipment for fracture fixation;
 - e. Equipment for endoscopic evaluation (bronchoscopy and gastrointestinal endoscopy);
 - f. Equipment necessary for craniotomy;
 - g. Cardiopulmonary bypass available 24/7; and
 - h. An operating microscope available 24/7.

- 3.68 A mechanism to ensure OR availability without undue delay for patients with semi-urgent orthopedic injuries.
- 3.69 A mechanism for documenting trauma surgeon presence in the OR for all trauma operations is in place.

Post-Anesthesia Care Unit (PACU)

- 3.70 The PACU has the necessary equipment to monitor and resuscitate patients.
- 3.71 The PACU has qualified nurses available 24/7 as needed during the patient's post anesthesia recovery phase.
- 3.72 The PACU is covered by a call team from home with documentation by the PIPS program that nurses are available and delays are not occurring.

Radiology

- 3.73 Conventional radiography and CT are available 24/7.

3.74 MRI capability is available 24/7.
3.75 Conventional catheter angiography and sonography are available 24/7.
3.76 If there is not an in-house CT technologist, the PIPS program documents response time.
3.77 The center has staff available on-site or via telemedicine within 30 minutes of notification for the interpretation of radiographs 24/7 with an 80% achievement rate.
3.78 The center has staff available on-site within 30 minutes of notification for the performance of complex imaging studies or interventional procedures 24/7 with an 80 % achievement rate.
3.79 Critical information is verbally communicated to the trauma team.
3.80 Diagnostic information is communicated in a written form and in a timely manner.
3.81 Changes in interpretation are monitored by the PIPS program.
3.82 Final reports accurately reflect communications, including changes between preliminary and final interpretations.
3.83 The center has policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transportation to and while in the radiology department.
3.84 A radiologist is designated to and participates in the PIPS program and TPOPPC. The radiologist attends a minimum of 50% of these meetings.
Intensive Care Unit (ICU)
3.85 The ICU has the necessary equipment to monitor and resuscitate patients.
3.86 Intracranial pressure monitoring equipment is available.
3.87 A qualified nurse is available 24/7 to provide care during the ICU phase.
3.88 The patient/nurse ratio does not exceed 2:1 for critically ill patients in the ICU.
3.89 The center has physician coverage for ICU in-house within 15 minutes of notification.
3.90 Physician coverage of critically ill trauma patients is available 24/7.
3.91 Physicians covering critically ill trauma patients respond rapidly to urgent problems as they arise.
3.92 The trauma surgeon remains in charge of patients in the ICU.
3.93 The trauma surgeon is kept informed of and concurs with major therapeutic and management decisions made by the ICU team.
3.94 The center has a surgical director or co-director for the ICU who is responsible for setting policies and administration related to trauma ICU patients.
3.95 The surgical director of the ICU has obtained critical care training during residency or fellowship and has expertise in perioperative and post-injury care of injured patients.
Other Surgical Specialists
3.96 The center has the following surgical specialists:
a. Orthopedic surgery;
b. Neurosurgery;

c. Cardiac surgery;
d. Thoracic surgery;
e. Hand surgery;
f. Plastic surgery;
g. Obstetric and gynecological surgery;
h. Ophthalmology;
i. Otolaryngology; and
j. Urology.
Medical Consultants
3.97 Specialty consultations for problems related to internal medicine, pulmonary medicine, cardiology, gastroenterology, and infectious disease are available.
Respiratory Therapy
3.98 A respiratory therapist is available to care for trauma patients 24/7.
Laboratory
3.99 Laboratory services are available 24/7 for the standard analysis of blood, urine, and other body fluids, including microsampling when appropriate.
3.100 The center has the capability for coagulation studies, blood gases, and microbiology.
3.101 The blood bank is capable of blood typing and cross-matching.
3.102 The blood bank has an adequate amount of red blood cells, fresh frozen plasma, platelets, cryoprecipitate, or appropriate coagulation factors to meet the needs of injured patients.
3.103 The center must have a transfusion protocol developed collaboratively between the trauma service and the blood bank.
Nutrition
3.104 Nutrition support services are available.
Social Services
3.105 The hospital has social services.
3.106 The center must screen all trauma patients for alcohol use and provide a brief intervention if appropriate.
Dialysis
3.107 The center has either dialysis capabilities or a transfer agreement with a facility that has dialysis capabilities.
Rehabilitation
3.108 Rehabilitation consulting services, occupational therapy, speech therapy, physical therapy, and social services are available during the acute phase of care.
3.109 The center has either rehabilitation services within its facility or a transfer agreement to a freestanding rehabilitation hospital.

4. Prehospital Trauma Care

4.1 The trauma program participates in prehospital care protocol development.

5. Interhospital Transfer

5.1 The decision to transfer an injured patient to a specialty care facility in an acute situation is based solely on the needs of the patient.

5.2 There are transfer agreements in place with higher level trauma centers as well as specialty referral centers (e.g. burn, pediatric, and rehabilitation centers).

5.3 A mechanism for direct physician-to-physician contact is present for arranging patient transfer.

5.4 Centers that refer burn patients to a designated burn center must have in place written transfer protocols with a referral burn center.

5.5 The center must have guidelines addressing which patients (including pediatric patients) should be transferred and the safe transport of those patients.

6. PIPS

6.1 The center demonstrates a clearly defined PIPS program for the trauma population.

6.2 The PIPS program is supported by a reliable method of internal data collection that consistently gathers valid and objective information necessary to analyze and identify opportunities for improvement.

6.3 System and process issues (such as documentation and communication), clinical care issues (including identification and treatment of immediate life-threatening injuries), and transfer decisions must be reviewed by the PIPS program.

6.4 All trauma centers must use a risk stratified benchmarking system to measure performance and outcomes.

6.5 The trauma program must use clinical practice guidelines, protocols, and algorithms derived from evidence-based validation resources to achieve benchmark goals.

6.6 All process and outcome measures must be documented in a written PIPS plan and updated annually.

6.7 The trauma center demonstrates a clearly defined PIPS program for the trauma population. All process and outcome measures must be documented in a written PIPS plan and updated annually.

6.8 The process of analysis occurs at regular intervals to meet the needs of the program.

6.9 The process of analysis includes multidisciplinary review.

6.10 The process demonstrates problem resolution (loop closure).

6.11 The center is able to separately identify the trauma patient population for review.

6.12 The PIPS program must have audit filters to review and improve pediatric and adult patient care.

6.13 The center uses the registry to support its PIPS program.

6.14 Deaths are categorized as unanticipated mortality with opportunity for improvement, anticipated mortality with opportunity for improvement, or mortality without opportunity for improvement.

6.15 The PIPS program reviews the organ donation rate.
6.16 The PIPS program has defined conditions requiring the surgeon's immediate hospital presence.
6.17 The PIPS program ensures that the PACU has the necessary equipment to monitor and resuscitate patients.
6.18 All Trauma Team Activations must be categorized by the priority of response and quantified by number and percentage.
6.19 The center's PIPS program must work with receiving facilities to provide and obtain feedback on all transferred patients.
6.20 The PIPS program evaluates OR availability and delays when an on-call team is used.
6.21 The PIPS program documents the appropriate timeliness of the arrival of the MRI technologist.
6.22 The availability of the anesthesia services and the absence of delays in airway control or operations are documented in the PIPS program.
6.23 The 80% compliance of the surgeon's presence in the ED is confirmed and monitored by PIPS (15 minutes).
6.24 Programs that admit more than 10% of injured patients to nonsurgical services demonstrate the appropriateness of that practice through the PIPS program.
6.25 The adult trauma center that treats children reviews the care of injured children through the PIPS program.
6.26 In centers with ICUs, transfers to a higher level of care must be reviewed to determine the rationale for transfer, adverse outcomes, and opportunities for improvement.
6.27 If the center has an ICU, the PIPS program must document that timely and appropriate care and coverage are being provided.
6.28 The PIPS program reviews transfers to ensure appropriateness.
6.29 The PIPS program reviews the appropriateness of the decision to transfer or retain major orthopedic trauma.
6.30 There is a PIPS review of all neurotrauma patients who are diverted or transferred.
6.31 The center must have a policy to notify dispatch and Emergency Medical Services (EMS) agencies when on divert status.
6.32 The center must have a diversion policy and track the occurrence of diversion through the PIPS program.

7. Trauma Program Operational Process Performance Committee (TPOPPC)

7.1 There is a TPOPPC. This multidisciplinary committee addresses, assesses, and corrects global trauma program and system issues. This committee handles process, includes all program-related services, meets regularly, takes and requires attendance of medical staff involved in trauma care, has minutes, and works to correct all overall program deficiencies to continue to optimize patient care.

7.2 There is TPOPPC participation from general surgery, orthopedic surgery, neurosurgery, emergency medicine, and anesthesia.

7.3 The TPOPPC is chaired by the Trauma Medical Director or designee.

7.4 Identified problem trends undergo multidisciplinary peer review by the TPOPPC.

7.5 There is documentation reflecting the review of operational issues and, when appropriate, the analysis and proposed corrective actions.

8. Time Sensitive Emergency (TSE) Registry

8.1 Data is submitted to the Idaho TSE Registry (Idaho Trauma Registry). At least 80% of cases must be entered into the registry within 180 days of treatment.

8.2 There is a process in place to verify that TSE Registry data is accurate and valid.

8.3 The trauma program ensures that registry data confidentiality measures are in place.

9. Outreach & Education

9.1 The center is engaged in trauma and injury prevention related public and professional education.

9.2 The center provides a mechanism for trauma-related education for nurses involved in trauma care.

10. Prevention

10.1 The center participates in traumatic injury prevention and bases activities on local data. It is recommended to have a fall prevention program, but not required.

10.2 The center has a prevention coordinator with a demonstrated job description and salary support.

10.3 The center demonstrates collaboration with or participation in national, regional, or state injury prevention programs.

11. Disaster Planning and Management

11.1 The center meets the disaster-related requirements of the Joint Commission.

11.2 A trauma surgeon is a member of the center's disaster committee.

11.3 Center drills that test the individual hospital's disaster plan are conducted at least every 6 months.

11.4 The center has a disaster plan described in its Disaster Manual.

12. Organ Procurement

12.1 The center has an established relationship with a recognized Organ Procurement Organization (OPO).

12.2 There are written policies for triggering notification of the OPO.

12.3 The center has written protocols for declaration of brain death.

*Alternate Pathway

Emergency Physicians

In rare circumstances a non-board-certified emergency physician may be included in the trauma service. This situation may arise when a limited number of qualified emergency physicians are available to a hospital that wants to establish a verified trauma program. To assist these programs in providing optimal care to injured patients with existing physician resources, the following alternative to board certification is available. All of the following criteria must be met:

1. A letter by the trauma medical director indicating this critical need in the trauma program because of the physician's experience or the limited physician resources in emergency medicine within the hospital trauma program;
2. Evidence that the emergency physician completed an accredited residency training program in that specialty. This completion must be certified by a letter from the program director;
3. Documentation of current status as a provider or instructor in ATLS;
4. A list of the 36 hours of trauma-related continuing medical education (CME) during the past three years;
5. Documentation that the emergency physician is present for at least 50% of the trauma performance improvement and educational meetings;
6. Documentation of membership or attendance at local and regional or national trauma meetings during the last three years; and
7. Performance improvement assessment by the trauma medical director and the director of the emergency department demonstrating that care provided by the emergency physician compares favorably with care of the other members of the emergency department on the trauma call panel.

General Surgery

In rare circumstances a non-board-certified surgeon may be included in the trauma service. This situation may arise when a limited number of qualified surgeons are available to a hospital that desires to establish a verified trauma program. To assist these programs in providing optimal care to injured patients with existing surgical resources, the following alternative to board certification is available. This option cannot be used for the director of a trauma program. All of the following must be met:

1. A letter by the trauma medical director indicating this critical need in the trauma program because of the physician's experience or the limited physician resources in general surgery within the hospital trauma program;
2. Evidence that the surgeon completed an accredited residency training program in that specialty. This completion must be certified by a letter from the program director;
3. Documentation of current status as a provider or instructor in ATLS;
4. A list of the 36 hours of trauma-related continuing medical education (CME) during the past three years;
5. Documentation that the surgeon is present for at least 50% of the trauma performance improvement and educational meetings;
6. Documentation of membership or attendance at local and regional or national trauma meetings during the last three years;
7. A list of patients treated during the past year with accompanying Injury Severity Score and outcome data;
8. Performance improvement assessment by the Trauma Medical Director demonstrating that the morbidity and mortality results for patients treated by the surgeon compare favorably with the morbidity and mortality results for comparable patients treated by other members of the trauma call panel; and

Licensed to practice medicine and approved for full and unrestricted surgical privileges by the hospital's credentialing committee.

Neurosurgery

In rare circumstances a non-board-certified neurosurgeon may be included in the trauma service. This situation may arise when a limited number of qualified neurosurgeons are available to a community that desires to establish a verified trauma program. To assist these programs providing optimal care to injured patients with existing neurosurgical resources, the following alternative to board certification is available. All of the following criteria must be met:

1. A letter by the trauma medical director indicating this critical need in the trauma program because of the physician's experience or the limited physician resources in general surgery within the hospital trauma program;
2. Evidence that the neurosurgeon completed an accredited residency training program in that specialty. This completion must be certified by a letter from the Trauma Medical Director;
3. Documentation of current status as a provider or instructor in the Advanced Trauma Life Support (ATLS) program;
4. A list of the 36 hours of trauma-related continuing medical education (CME) during the past three years;
5. Documentation that the neurosurgeon is present for at least 50% of the trauma performance improvement and educational meetings;
6. Documentation of membership or attendance at local, regional, and national trauma meetings during the past 3 years;
7. A list of patients treated during the past year with accompanying Injury Severity Score and outcome data;
8. Performance improvement assessment by the Trauma Medical Director demonstrating that the morbidity and mortality results for patients treated by the neurosurgeon compare favorably with the morbidity and mortality results for comparable patients treated by other members of the trauma call panel; and
9. Licensed to practice medicine and approved for full and unrestricted surgical privileges by the hospital's credentialing committee.

Orthopedic Surgery

In rare circumstances a non-board-certified orthopedic surgeon may be included in the trauma service. This situation may arise when a limited number of qualified orthopedic surgeons are available to a community that desires to establish a verified trauma program. To assist these programs in providing optimal care to injured patients with existing surgical resources, the following alternative to board certification is available. All of the following criteria must be met:

1. A letter by the Trauma Medical Director indicating this critical need in the trauma program because of the physician's experience or the limited physician resources in general surgery within the hospital trauma program;
2. Evidence that the orthopedic surgeon completed an accredited residency training program in that specialty. This completion must be certified by a letter from the Trauma Medical Director;
3. Documentation of current status as a provider or instructor in the Advanced Trauma Life Support (ATLS) program;
4. A list of the 36 hours of trauma-related continuing medical education (CME) during the past three years;
5. Documentation that the orthopedic surgeon is present for at least 50% of trauma performance improvement and educational meetings;
6. Documentation of membership or attendance at local, regional, and national trauma meetings during the past 3 years;
7. A list of patients treated during the past year with accompanying Injury Severity Score and outcome data;
8. Performance improvement assessment by the Trauma Medical Director demonstrating that the morbidity and mortality results for patients treated by the orthopedic surgeon compare favorably with the morbidity and mortality results for comparable patients treated by other members of the trauma call panel; and
9. Licensed to practice medicine and approved for full and unrestricted surgical privileges by the hospital's credentialing committee.

** External continuing education does not include: in-service, case-based learning; grand rounds; internal trauma symposia; and in-house publications disseminating information gained from a local conference.