

ACS CRITERIA CROSSWALK

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
Chapter 1: Trauma Systems	
I, II	1.1 There is insufficient involvement by the hospital trauma program staff in state/regional trauma system planning, development, and/or operation.
Chapter 2: Description of Trauma Centers and Their Roles in a Trauma System	
I, II	2.1 There is lack of surgical commitment to the trauma center.
I, II	2.2 All trauma facilities are not on the same campus.
I	2.3 The Level I trauma center does not meet admission volume performance requirements.
I, II	2.4 The trauma director does not have the responsibility or authority for determining each general surgeon's ability to participate on the trauma panel through the trauma PIPS program and hospital policy.
I	2.5 General surgeon or appropriate substitute (PGY-4-5 resident) is not available for major resuscitations in house 24 hours a day.
I, II	2.6 The PIPS program has not defined conditions requiring surgeon's immediate hospital presence.
I, II	2.7 The 80% compliance of the surgeon's presence in the emergency department is not confirmed or monitored by PIPS (15 minutes).
I, II	2.8 The trauma surgeon on call is not dedicated to the trauma center while on duty.
I, II	2.9 A published backup call schedule for trauma surgery is not available.
I, II	2.14 Trauma surgeons in adult trauma centers

Trauma Cntr Level	CO Deficiencies
I, II	The trauma program members or a representative of the program shall participate in state and regional trauma system planning, development and operation.
I	An adult trauma facility shall demonstrate an annual volume of at least 400 trauma patients with an ISS of 16 or greater.
	See "Facility Organization and Trauma Program: Trauma Medical Director"
I, II	A resident in postgraduate year four or five may begin resuscitation while awaiting arrival of the attending surgeon based on facility-defined criteria.
I, II	The peer review/performance improvement program shall demonstrate that each Surgeon's presence complies with required response times at least 80% of the time.
	See "Clinical Functions: General Surgery"
	See "Clinical Functions: General Surgery"
	See "Pediatric Trauma Care"

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	that treat more than 100 injured children annually are not credentialed for pediatric trauma care by the hospital's credentialing body.
I, II	2.15 The adult trauma center that treats more than 100 injured children annually does not have a pediatric emergency department area, a pediatric intensive care area, appropriate resuscitation equipment, and pediatric-specific trauma PIPS program.
I, II	2.16 The adult trauma center that treats children does not review the care of injured children through the PIPS program.
Chapter 3: Prehospital Trauma Care	
I, II	3.1 The trauma director is not involved in the development of the trauma center's bypass protocol.
I, II	3.2 The trauma surgeon is not involved in the decisions regarding bypass.
I, II	3.3 The trauma program does not participate in prehospital care protocol development and the PIPS program.
Chapter 4: Interhospital Transfer	
I, II	4.1 A mechanism for direct physician-to-physician contact is not present for arranging patient transfer.
I, II	4.2 The decision to transfer an injured patient to a specialty care facility in an acute situation is not based solely on the needs of the patient, for example, payment method is considered.

Trauma Cntr Level	CO Deficiencies
	See "Pediatric Trauma Care"
	See "Pediatric Trauma Care"
Prehospital Trauma Care Integration	
I, II	The trauma medical director shall be involved in the development of the trauma facility's bypass protocol as it affects the trauma service.
I, II	A trauma surgeon shall be involved in any decision regarding bypass as it affects the care of the trauma patient.
I, II	The trauma facility shall participate in the development and improvement of prehospital care protocols and patient safety programs.
Interfacility Consultation and Transfer Requirements	
I, II	Provisions for direct physician-to-physician contact shall be included in the process of transferring a patient between facilities.
I, II	A decision to transfer a patient shall be based solely on the clinical needs of the patient and not on the requirements of the patient's specific provider network or the patient's ability to pay.
I, II	If the facility does not have a burn service, a reimplantation service, a pediatric trauma service or an acute rehabilitation service, the facility shall have written transfer guidelines for patients in these

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	The facility exceeds the maximum divert time. The maximum amount of time a hospital can be on divert is 5 percent.
Chapter 5: Hospital Organization and the Trauma Program	
I, II	5.1 The hospital does not have the commitment of the institutional governing body and the medical staff to become a trauma center.
I, II	5.2 There is not a current resolution supporting the trauma center from the hospital board.
I, II	5.3 There is not a current resolution supporting the trauma center from the medical staff.
I, II	5.4 The multidisciplinary trauma program does not continuously evaluate its processes and outcomes to ensure optimal and timely care.
I, II	5.5 The trauma medical director is neither a board-certified surgeon nor an ACS Fellow.
I, II	5.6 The trauma medical director does not participate in trauma call.
I, II	5.7 The trauma medical director is not current in ATLS.
I, II	5.8 The trauma director is neither a member nor an active participant in any national or regional trauma organizations.

Trauma Cntr Level	CO Deficiencies
	categories.
	Facility Organization and the Trauma Program
I, II	The trauma facility shall demonstrate the commitment of the facility's governing body and medical staff through a written document. The document shall be reaffirmed every three years and be current at the time of the site review.
I, II	The administrative structure of the hospital/trauma facility shall include, at a minimum, an administrator, a trauma medical director and a trauma program manager.
I, II	A multidisciplinary trauma program shall continuously evaluate its processes and outcomes.
I, II	The trauma medical director shall be a board-certified surgeon, as those boards are defined under the "clinical Requirements for General Surgery" or Fellow of the American College of Surgeons with special interest in trauma care, shall take trauma call and shall have successfully completed an ATLS course .
I, II	The trauma medical director shall demonstrate membership and active participation in state and either regional or national trauma organizations.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	5.9 The trauma director does not have the authority to correct deficiencies in trauma care or exclude from trauma call the trauma team members who do not meet specified criteria.
I, II	5.10 The criteria for graded activation are not clearly defined by the trauma center and continuously evaluated by the PIPS program.
I, II	5.11 Programs that admit more than 10% of injured patients to nonsurgical services do not demonstrate the appropriateness of that practice through the PIPS process. (General surgery, neurosurgery, ortho, urology, plastics, ENT, Ophthalmology, burns, vascular, surgical critical care, ped surgery, trauma, emergency general surgery)
I, II	5.12 Seriously injured patients are not admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers.
I, II	5.13 There is insufficient infrastructure and support to the trauma service to ensure adequate provision of care.
I, II	5.14 In teaching facilities, the requirements of the Residency Review Committee are not met.

Trauma Cntr Level	CO Deficiencies
I, II	The trauma medical director shall have the authority to correct deficiencies in trauma care and exclude from taking trauma call all trauma team members who do not meet required criteria. Through the performance improvement program and hospital policy, the trauma medical director shall have the responsibility and authority to determine each general surgeon's ability to participate on the trauma panel based on an annual review.
I, II	The trauma facility shall define trauma resuscitation team activation criteria.
I, II	The criteria for a graded activation shall be clearly defined and continuously evaluated by the performance improvement program.
I, II	A trauma service admission is a patient who is admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers.
I, II	The trauma facility shall demonstrate or provide documentation that the trauma service has sufficient infrastructure and support to ensure the adequate provision of care.
I, II	The trauma program manager shall, at a minimum, be a registered nurse and demonstrate:

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	5.17 The trauma program manager does not show evidence of educational preparation (a minimum of 16 hours of trauma-related continuing education per year) and clinical experience in the care of injured patients.
I, II	5.18 There is no multidisciplinary peer review committee chaired by the trauma medical director or designee, with representatives from appropriate subspecialty services.
I, II	5.19 Adequate (>50%) attendance by general surgery (core group) at the multidisciplinary peer review committee is not documented.
I, II	5.20 The core group is not adequately defined by the trauma medical director.
I, II	5.21 The core group does not take at least 60% of the total trauma call hours each month.

Trauma Cntr Level	CO Deficiencies
	administrative ability.
I, II	The trauma program manager shall, at a minimum, demonstrate: Evidence of educational preparation.
I, II	The trauma program manager shall, at a minimum, demonstrate: Documented clinical experience.
I, II	A minimum of 16 hours of trauma-related continuing education per year or 48 hours in the three years prior to the designation site review including no less than one national trauma meeting per three years.
I, II	The trauma facility shall have a Peer Review/Performance Improvement Committee chaired by the trauma medical director or physician designee, with representatives at a minimum from neurosurgery, orthopedic surgery, emergency medicine and anesthesia.
I, II	General surgery shall attend the Peer Review/Performance Improvement Committee meetings. The surgeons who constitute the core of trauma call coverage shall each attend at least 50% of these meetings. The trauma medical director shall identify this core group of surgeons. This core group shall take at least 60% of the total trauma call hours each month. Documentation of participation and attendance shall be maintained and available for inspection.
I, II	This Committee (Peer Review/Performance Improvement) shall review the overall quality of care for the trauma service.
I, II	The facility shall also, in this committee (Peer Review/Performance Improvement) or in another appropriate forum, provide for morbidity and mortality review of complications and mortality for trauma cases.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	5.22 The trauma medical director does not ensure and document dissemination of information and findings from the peer review meetings to the noncore surgeons on the trauma call panel.
I, II	5.23 There is no Trauma Program Operational Process Performance Improvement Committee.
Chapter 6: Clinical Functions: General Surgery	
I, II	6.1 The trauma medical director lacks responsibility and authority to ensure compliance with verification requirements.
I, II	6.2 The general surgeon is not board-certified and does not meet the Alternate Pathway and is not an ACS Fellow.
I, II	6.3 The trauma surgeon does not have

Trauma Cntr Level	CO Deficiencies
I, II	Information from the Peer Review/Performance Improvement Committee meetings shall be provided to all non-core surgeons.
I, II	The trauma facility shall have a Multidisciplinary Trauma Committee that addresses trauma operational process performance.
I, II	The exact format of this committee (Multidisciplinary Trauma Committee) may be hospital specific, but this committee shall be multidisciplinary and consist of hospital and medical staff members who work to identify and correct trauma program system issues.
	Clinical Requirements for General Surgery
I, II	The trauma facility shall provide all of the necessary resources, including instruments, equipment and personnel, for current surgical trauma care.
I, II	All general surgeons on the trauma panel shall be fully credentialed in critical care and board certified by the American Board of Surgery, the Bureau of Osteopathic Specialists and Boards of Certification, or the Royal College of Physicians and Surgeons of Canada; or shall be board qualified, working toward certification and less than five years out of residency.
I, II	A foreign-trained, non-ABS boarded surgeon shall have the foreign equivalent of ABS certification in general surgery, clinical expertise in trauma care, and unrestricted credentials in critical care and surgery at the facility.
I, II	The performance of all surgeons on the trauma panel shall be reviewed annually by the trauma medical director.
I, II	All general surgeons on the trauma panel shall have

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	privileges in general surgery.
I, II	6.4 The trauma surgeon on call is not dedicated to the trauma center while on duty.
I, II	6.5 A published backup call schedule for trauma surgery is not available.
I, II	6.6 An attendance threshold of 80% is not met for trauma surgeon presence in the emergency department.
I, II	6.7 The criteria for the highest level of activations are not clearly defined and evaluated by the PIPS program.
I, II	6.8 A mechanism for documenting trauma surgeon presence in the operating room for all trauma operations is not in place.
I, II	6.9 There is not a multidisciplinary peer review committee with participation from general surgery, orthopaedic surgery, neurosurgery, emergency medicine, and anesthesia.
I, II	6.10 Adequate (at least 50%) attendance by general surgery (core group) at the multidisciplinary peer review committee is not documented.
I, II	6.11 All general surgeons on the trauma team have not successfully completed the ATLS course at least once.
I, II	6.12 The trauma medical director has not documented 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.

Trauma Cntr Level	CO Deficiencies
	general surgical privileges.
I, II	The general surgeon on-call shall be dedicated to one trauma facility when taking trauma call.
I, II	A published general surgery back-up call schedule shall be available with the back-up surgeon present within 30 minutes of being requested to respond.
I, II	The on-call attending trauma surgeon shall be in the emergency department on patient arrival for the highest level of activation, with adequate notification from the field. The maximum response time is 15 minutes, tracked from patient arrival, 80% of the time. The Multidisciplinary Trauma Committee shall monitor compliance of the attending surgeon's arrival times.
I, II	The criteria for a graded activation shall be clearly defined and continuously evaluated by the performance improvement program.
I, II	An attending surgeon shall be present at all trauma operations. The surgeon's presence shall be documented.
I, II	See "Performance Improvement"
I, II	See "Performance Improvement"
I, II	All general surgeons on the trauma panel shall have successfully completed the American College of Surgeons ATLS course at least once.
I, II	The trauma medical director shall accrue an average of 16 hours verifiable, external trauma-related CME annually or 48 hours in the three years prior to the designation site review, including no less than one national meeting.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	6.13 Other trauma surgeons who take trauma call do not have the documented 16 hours annually or 48 hours in 3 years of trauma-related CME or an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program.
I, II	6.14 The trauma medical director is not a member of and does not participate in regional or national trauma organizations.
Chapter 7: Clinical Functions: Emergency Medicine	
I, II	7.1 The emergency department does not have a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients.
I	7.2 Emergency department physicians are not present in the emergency department at all times.
II	7.3 Emergency physicians cover in-house emergencies without a PIPS process demonstrating the efficacy of this practice.
I, II	7.4 In institutions in which there are emergency medicine residency training programs, supervision is not provided by an in-house attending emergency physician 24 hours per day.
I, II	7.5 The roles of emergency physicians and trauma surgeons are not defined, agreed on,

Trauma Cntr Level	CO Deficiencies
I, II	All general surgeons who take trauma call shall acquire an average of 16 hours annually of verifiable external trauma-related CME or be able to demonstrate participation in an internal educational process conducted by the trauma program based on the peer review/performance improvement program and the principles of practice-based learning.
I, II	See "Facility Organization and the Trauma Program"
I, II	Each level I and II trauma facility shall provide a qualified surgeon as a state reviewer a minimum of one day per year if requested by the State trauma program.
	Clinical Requirements for Emergency Medicine
I, II	The trauma facility shall have a designated emergency department physician director supported by additional physicians to ensure immediate care for injured patients.
I, II	A physician shall be present in the emergency department at all times.
I, II	In facilities with emergency medicine residents, an in-house attending emergency physician shall provide supervision of the residents 24 hours per day.
I, II	The trauma facility shall provide all of the necessary resources, including instruments, equipment and personnel, for current emergency trauma care.
I, II	The roles and responsibilities of the emergency physician shall be defined, agreed on and approved

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	and approved by the director of the trauma services.
I, II	7.6 An emergency physician is not board-certified and does not meet the Alternate Pathway.
I, II	7.7 Emergency physicians on the call panel are not regularly involved in the care of injured patients.
I, II	7.8 A representative from the emergency department does not participate in the prehospital PIPS program.
I, II	7.9 A designated emergency physician is not available to the trauma director for PIPS issues that occur in the emergency department.

Trauma Cntr Level	CO Deficiencies
	by the trauma medical director.
I	Except as provided below, all emergency physicians on the trauma panel shall be board certified in emergency medicine by the American Board of Medical Specialties, the Bureau of Osteopathic Specialists and Boards of Certification, or the Royal College of Physicians and Surgeons of Canada: or shall be board qualified, working on certification and less than five years out of residency.
II	Except as provided below, all emergency physicians hired or contracted on or after the effective date of these rules to participate on the trauma panel shall be board certified in emergency medicine by the American Board of Medical Specialties, the Bureau of Osteopathic Specialists and Boards of Certification, or the Royal College of Physicians and Surgeons of Canada: or shall be board qualified, working on certification and less than five years out of residency.
I, II	A foreign-trained, non ABS boarded emergency physician shall have the foreign equivalent of ABS certification in emergency medicine, clinical expertise in trauma care, an unrestricted Colorado license, and unrestricted credentials at the facility.
I, ii	The performance of all emergency physicians on the trauma panel shall be reviewed annually by the liaison or designated representative.
I, II	Emergency physicians on the call panel shall be regularly involved in the care of the injured patient.
I, II	A representative from the emergency department shall participate in prehospital peer review/ performance improvement.
I, II	A designated emergency physician shall be available to the trauma medical director for peer review/ performance improvement issues that occur in the

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	7.10 There is no emergency physician participation with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee (dealing with systems issues).
I, II	7.11 The emergency medicine representative or designee to the multidisciplinary peer review committee does not attend a minimum of 50% of these meetings.
I, II	7.12 The emergency physician liaison representative does not have the documented 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.
I, II	7.13 Other emergency physicians who take trauma call do not have the documented 16 hours annually or 48 hours in 3 years of trauma-related CME and do not participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program.
I, II	7.14 There are emergency physicians who have never successfully completed the ATLS course.
I, II	7.15 Physicians who are not board-certified in emergency medicine who work in the emergency department are not current in ATLS.
Chapter 8: Clinical Functions: Neurosurgery	
I, II	8.1 A neurosurgical liaison is not designated.
I, II	8.2 Neurotrauma care is not promptly and continuously available for severe traumatic brain injury and spinal cord injury and for less severe head and spine injuries when necessary.

Trauma Cntr Level	CO Deficiencies
	emergency department.
I, II	Emergency physicians shall actively participate with the Multidisciplinary Trauma Committee and the peer review/performance improvement process.
I, II	The emergency medicine representative(s) to the Multidisciplinary Trauma Committee shall attend a minimum of 50% of those meetings.
I, II	The trauma service emergency medicine liaison shall accrue an average of 16 hours annually of verifiable external trauma-related CME or 48 hours in the three years before the designation site review.
I, II	All other emergency physicians on the trauma panel shall be reviewed annually by the liaison or designated representative to assure compliance with the facility's CME policy.
I, II	All emergency physicians on the trauma panel shall have successfully completed the ACS ATLS course at least once.
II	Physicians certified by boards other than emergency medicine who treat trauma patients in the emergency department shall remain current in ATLS.
Clinical Requirements for Neurosurgery	
I, II	A neurosurgeon shall be the neurological surgeon liaison to the trauma service.
I, II	Neurotrauma care shall be promptly available as defined by the facility. For less severe head injuries or injuries of the spine, neurotrauma care shall be available when necessary. When requested, an attending neurosurgeon shall be promptly available

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	8.3 The hospital does not provide an on-call neurosurgical backup schedule with formally arranged contingency plans in case the capability of the neurosurgeon, hospital, or system to care for neurotrauma patients is overwhelmed.
I, II	8.4 There is no PIPS review of all neurotrauma patients who are diverted or transferred.
I, II	8.5 An attending neurosurgeon is not promptly available to the hospital's trauma service when neurosurgical consultation is requested.
I, II	8.9 The neurosurgeons who care for trauma patients are not board-certified and do not meet the Alternate Pathway.

Trauma Cntr Level	CO Deficiencies
	as defined by the facility to the trauma service. Availability shall be monitored by the peer review/performance improvement program.
I	The trauma facility shall provide a neurotrauma on-call schedule dedicated only to that facility available 24 hours per day and either a posted second call or a contingency plan that includes transfer agreements with another designated Level I facility.
II	The facility shall define criteria for neurosurgical (attending and resident) activation.
II	If neurosurgeons take call at more than one institution (either trauma or non-trauma) at a time, written primary and back-up call schedules are required unless the combined volume of trauma-related emergency neurosurgical operative procedures in those institutions is less than an average of 25 per year over the last three calendar for which data are available.
I, II	The trauma facility shall provide all of the necessary resources, including instruments, equipment and personnel, for current neurosurgical care.
I, II	All neurosurgeons who take trauma call shall be board certified in neurosurgery by the American Board of Surgery, the Bureau of Osteopathic Specialists and Boards of Certification, or the Royal College of Physicians and Surgeons of Canada; or shall be board qualified, working on certification and less than five years out of residency, except as provided by the following: a foreign-trained, non-ABS boarded neurosurgeon shall have the foreign equivalent of ABS certification in neurosurgery,

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	8.10 Qualified neurosurgeons are not regularly involved in the care of head- and spinal cord-injured patients and are not credentialed by the hospital with general neurosurgical privileges.
I, II	8.11 The neurosurgery service does not participate actively with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee.
I, II	8.12 The neurosurgeon representative does not attend a minimum of 50% of the multidisciplinary peer review committee meetings.
I, II	8.13 The neurosurgeon liaison representative does not have the documented 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.
I, II	8.14 Other neurosurgeons who take trauma call do not have the documented 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME and do not participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program.
Chapter 9: Clinical Functions: Orthopaedic Surgery	
I, II	9.1 Physical and occupational therapists and rehabilitation specialists are not present.
I, II	9.2 Operating rooms are not promptly available to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization and compartment decompression.
I, II	9.3 A mechanism to ensure operating room availability without undue delay for patients with

Trauma Cntr Level	CO Deficiencies
	clinical expertise in trauma care, an unrestricted Colorado license and unrestricted credentials in neurosurgery at the facility.
I, II	Neurosurgeons shall be credentialed by the hospital with general neurosurgical privileges.
I, II	Qualified neurosurgeons shall be regularly involved in the care of the head and spinal cord injured patients.
I, II	The neurosurgery service shall actively participate with the Multidisciplinary Trauma Committee and the peer review/performance improvement process.
I, II	The neurosurgery representative(s) to the Multidisciplinary Trauma Committee shall attend a minimum of 50% of those meetings.
I, II	The trauma service neurosurgery liaison shall accrue an average of 16 hours annually of verifiable external trauma-related CME or 48 hours in the three years before the designation site review.
I, II	All other neurosurgeons on the trauma panel shall be reviewed annually by the liaison or designated representative to assure compliance with the facility's CME policy.
Clinical Requirements for Orthopedic Surgery	

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	semiurgent orthopaedic injuries is not present.
I, II	9.4 There is no orthopaedic surgeon who is identified as the liaison to the trauma program.
I	9.5 Plastic surgery, hand surgery, and spinal injury care capabilities are not present at Level I trauma centers.
I, II	9.6 Orthopaedic team members do not have dedicated call at their institution and lack a backup call system.
I, II	9.7 An orthopaedic team member is not promptly available in the trauma resuscitation area when consulted by the surgical trauma team leader for multiply injured patients.
I, II	9.8 The design of the backup call system, the responsibility of the orthopaedic trauma liaison, has not been approved by the trauma program director.
I, II	9.9 Level I and II centers do not provide sufficient resources, including instruments, equipment, and personnel, for modern

Trauma Cntr Level	CO Deficiencies
I, II	The trauma facility shall have an orthopedic surgeon identified as the liaison to the trauma program.
I, II	Plastic surgery, hand surgery and treatment of spinal injuries shall be available to the orthopedic patient.
I, II	The trauma facility shall have a dedicated call system or have an effective back-up call system. If the on-call orthopedic surgeon is not promptly available, a back-up, on-call orthopedic surgeon shall be available. The call system shall require prompt availability in the resuscitation area when consulted by the trauma team leader for multiply injured patients. The design of this system shall be the responsibility of the orthopedic trauma liaison and shall be approved by the trauma program medical director. Availability shall be monitored by the peer review/performance improvement program.
I	At least one orthopedic traumatologist with a minimum of six to twelve months of fellowship training (or equivalent) should be a part of the trauma team.
I, II	The trauma facility shall have a dedicated call system or have an effective back-up call system. If the on-call orthopedic surgeon is not promptly available, a back-up, on-call orthopedic surgeon shall be available. The call system shall require prompt availability in the resuscitation area when consulted by the trauma team leader for multiply injured patients. The design of this system shall be the responsibility of the orthopedic trauma liaison and shall be approved by the trauma program medical director. Availability shall be monitored by the peer review/performance improvement program.
I, II	The trauma facility shall provide all of the necessary resources including instruments, equipment and personnel, for current musculoskeletal trauma care.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	musculoskeletal trauma care, with readily available operating rooms for musculoskeletal trauma procedures.
II	9.10 The PIPS process does not review the appropriateness of the decision to transfer or retain major orthopaedic trauma.
I, II	9.12 The orthopaedic service does not participate actively with the overall trauma PIPS program and the Trauma Program Operational Process Performance Committee.
I, II	9.13 The orthopaedic trauma liaison or representative does not attend a minimum of 50% of the multidisciplinary peer review meetings.
I, II	9.14 Orthopaedic surgeons who care for injured patients are not board-certified and do not meet the Alternate Pathway.
I, II	9.15 The orthopaedic surgeon does not have privileges in general orthopaedic surgery.
I, II	9.16 The orthopaedic surgical liaison to the trauma program at Level I and II centers has not documented at least 16 hours annually or 48 hours in 3 years of verifiable, external trauma-related CME.
I, II	9.17 The orthopaedic trauma team member does not have documentation of the acquisition of 16 hours of CME per year on average and

Trauma Cntr Level	CO Deficiencies
I, II	The orthopedic service shall actively participate with the multidisciplinary Trauma Committee and peer review/performance improvement process.
I, II	The orthopedic representative(s) to the Multidisciplinary Trauma Committee shall attend a minimum of 50% of those meetings.
I, II	All general surgeons on the trauma panel shall be fully credentialed in critical care and board certified in surgery by the American Board of Surgery, the Bureau of Osteopathic Specialists and Boards of Certification, or the Royal College of Physicians and Surgeons of Canada; or shall be board qualified, working toward certification and less than five years out of residency. A foreign-trained, non-ABS boarded surgeon shall have the foreign equivalent of ABS certification in general surgery, clinical expertise in trauma care, an unrestricted Colorado license and unrestricted credentials in critical care and surgery at the facility.
I, II	The trauma service orthopedic surgical liaison shall accrue an average of 16 hours annually of verifiable external trauma-related CME or 48 hours in the three years before the designation site review.
I, II	All other members of the orthopedic team on the trauma panel shall be reviewed annually by the liaison or designated representative to assure

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	has not participated in an internal educational process conducted by the trauma program and the orthopaedic liaison based on the principles of practice-based learning and the PIPS program.
Chapter 10: Pediatric Trauma Care	
I, II	10.1 Pediatric trauma centers do not meet the same resource requirements as adult trauma centers, in addition to pediatric resource requirements.
I	10.2 A Level I pediatric trauma center does not annually admit 200 or more injured children younger than 15 years.
II	10.3 A Level II pediatric trauma center does not annually admit 100 or more injured children younger than 15 years.
I, II	10.4 A pediatric trauma center does not have a pediatric trauma program manager or coordinator.

Trauma Cntr Level	CO Deficiencies
	compliance with facility CME policy.
Pediatric Trauma Care	
I, II	An adult trauma facility that annually admits 100 or more injured children who are age 14 or younger shall meet the following additional criteria: (1) Trauma surgeons shall be credentialed for pediatric trauma care by the hospital's credentialing body; (2) The facility shall provide a pediatric emergency department area; (3) The facility shall provide a pediatric intensive care area; (4) The facility shall provide appropriate pediatric resuscitation equipment; (5) The facility shall have a pediatric-specific peer review/performance improvement program; (6) The facility shall assure that the nursing staff providing care to the pediatric patient has specialized training in the care of the injured child; and (7) The facility shall assure that emergency physicians providing care to the pediatric patient are credentialed by the hospital's credentialing body or have specialized training in the care of the injured child.
I	A Level I adult trauma facility that annually admits fewer than 100 injured children who are age 14 or younger shall review the care of injured children through its peer review/performance improvement program.
II	A Level II adult trauma facility that annually admits fewer than 100 injured children who are age 14 or younger shall review the care of injured children through its peer review/performance improvement program.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	10.5 A pediatric trauma center does not have a pediatric trauma registrar.
I	10.6 The pediatric trauma program manager or coordinator is not dedicated to the pediatric trauma service.
I, II	10.7 A pediatric trauma center does not have a pediatric trauma PIPS program.
I, II	10.8 A pediatric trauma center does not have all of the following programs: pediatric rehabilitation; child life and family support programs; pediatric social work and child protective services; pediatric injury prevention and community outreach programs; and pediatric trauma education programs.
I	10.9 A pediatric trauma center does not have identifiable pediatric trauma research.
I	10.10 A Level I pediatric trauma center does not have at least 2 surgeons, board-certified or board-eligible in pediatric surgery by the American Board of Surgery.
I	10.11 A Level I pediatric trauma center does not have at least 1 board-certified or board-eligible orthopaedic surgeon who has had pediatric fellowship training.
I	10.12 A Level I pediatric trauma center does not have at least 1 board-certified or board-eligible neurosurgeon who has had pediatric fellowship training.
I	10.13 A Level I pediatric trauma center does not have at least 1 additional board-certified or board-eligible orthopaedic surgeon with demonstrated skills and interest in the care of pediatric trauma patients.

Trauma Cntr Level	CO Deficiencies
	An adult trauma facility that annually admits 100 or more injured children who are age 14 or younger shall meet the following additional criteria: (5) The facility shall have a pediatric-specific peer review/performance improvement program.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I	10.14 A Level I pediatric trauma center does not have at least 1 additional board-certified or board-eligible neurosurgeon with demonstrated skills and interest in the care of pediatric trauma patients.
I	10.15 A Level I pediatric trauma center does not have at least 2 physicians who are board-certified or board-eligible in pediatric critical care medicine (pediatric or surgical).
I	10.16 A Level I pediatric trauma center does not have at least 2 physicians board-certified or board-eligible in pediatric emergency medicine.
I, II	10.17 Individuals who provide pediatric care in the pediatric ICU are not credentialed by the hospital to provide pediatric trauma care in their respective trauma areas.
I, II	10.18 Individuals who provide pediatric care in the pediatric area of the emergency department are not credentialed by the hospital to provide pediatric care in the emergency department.
II	10.19 A Level II pediatric trauma center does not have at least 1 surgeon who is board-certified or board-eligible in pediatric surgery.
II	10.20 A Level II pediatric trauma center does not have at least 1 additional board-certified or board-eligible orthopaedic surgeon with interests and skills in pediatric surgery.
II	10.21 A Level II pediatric trauma center does not have at least 1 board-certified or board-eligible neurosurgeon with interests and skills in pediatric surgery.

Trauma Cntr Level	CO Deficiencies
	An adult trauma facility that annually admits 100 or more injured children who are age 14 or younger shall meet the following additional criteria: (1) Trauma surgeons shall be credentialed for pediatric trauma care by the hospital's credentialing body; and (7) The facility shall assure that emergency physicians providing care to the pediatric patient are credentialed by the hospital's credentialing body or have specialized training in the care of the injured child.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	all of the following: a pediatric emergency department area, a pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma PIPS program.
I, II	10.32 The adult trauma center that admits fewer than 100 injured children annually does not review the care of injured children through PIPS program.
I, II	10.33 There is no multidisciplinary peer review committee with participation by the trauma medical director or designee and representatives from pediatric/general surgery, orthopaedic surgery, neurosurgery, emergency medicine, critical care medicine, and anesthesia that reviews selected deaths, complications, and sentinel events to identify issues and appropriate responses.
I, II	10.34 Attendance by the required representatives to at least 50% of the multidisciplinary peer review meetings is not documented.
I, II	10.35 The pediatric trauma medical director and the liaisons from neurosurgery, orthopaedic surgery, emergency medicine, and critical care medicine do not have adequate

Trauma Cntr Level	CO Deficiencies
	shall meet the following additional criteria: (1) Trauma surgeons shall be credentialed for pediatric trauma care by the hospital's credentialing body; (2) The facility shall provide a pediatric emergency department area; (3) The facility shall provide a pediatric intensive care area; (4) The facility shall provide appropriate pediatric resuscitation equipment; (5) The facility shall have a pediatric-specific peer review/performance improvement program; (6) The facility shall assure that the nursing staff providing care to the pediatric patient has specialized training in the care of the injured child; and (7) The facility shall assure that emergency physicians providing care to the pediatric patient are credentialed by the hospital's credentialing body or have specialized training in the care of the injured child.
I, II	The representatives from neurosurgery, orthopedic surgery, emergency medicine and anesthesia shall attend at least 50% of the Peer Review/Performance Improvement Committee meetings.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	pediatric trauma CME.
Chapter 11: Collaborative Clinical Services Anesthesiology	
I, II	11.1 Anesthesiology services are not promptly available for emergency operations.
I, II	11.2 Anesthesiology services are not promptly available for airway problems.
I, II	11.3 There is no anesthesiologist liaison designated to the trauma program.
I	11.4 Anesthesia services in Level I trauma centers are not available in-house 24 hours a day.
I, II	11.5 When anesthesiology chief residents or CRNAs are used to fulfill availability requirements, the staff anesthesiologist on call is (1) not advised, (2) not promptly available at all times, and (3) not present for all operations.
I, II	11.6 The availability of the anesthesia services and the absence of delays in airway control or operations is not documented by the hospital PIPS process.
II	11.7 Anesthesia services are not available 24 hours a day and present for all operations.
II	11.8 In trauma centers without in-house anesthesia services, no protocols are in place to ensure the timely arrival at the bedside of the anesthesia provider.
II	11.9 In a center without anesthesia services, there is not documentation of the presence of physicians skilled in emergency airway management.
I, II	11.11 All anesthesiologists taking call have not

Trauma Cntr Level	CO Deficiencies
Collaborative Clinical Services	
I, II	Anesthesiology services shall be promptly available as defined by the facility 24 hours per day for emergency operations and airway problems in the injured patient. Availability shall be monitored by the peer review/performance improvement program.
I, II	The trauma facility shall have an anesthesiologist identified as the liaison to the trauma program.
I, II	Anesthesiology services shall be promptly available as defined by the facility 24 hours per day for emergency operations and airway problems in the injured patient. Availability shall be monitored by the peer review/performance improvement program.
I, II	When anesthesiology residents or CRNAs are used to fulfill availability requirements, the staff anesthesiologist on call shall be advised and be present in the operating department. The process shall be monitored through the quality improvement process.
I, II	The availability of anesthesia service and the absence of delays in airway control or operations shall be monitored by the hospital peer review/performance improvement program.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
	successfully completed an anesthesia residency program.
I, II	11.12 The anesthesia liaison has not been identified.
I, II	11.13 The anesthesia representative does not participate in the trauma PIPS program.
I, II	11.14 The anesthesiology representative or designee to the trauma program does not attend at least 50% of the multidisciplinary peer review meetings.
Operating Room	
I	11.15 The operating room is not adequately staffed and immediately available.
I	11.16 The operating room team has functions requiring its presence outside the operating room.
I, II	11.17 There is no mechanism for providing additional staff for a second operating room when the first operating room is occupied.
II	11.18 The operating room is not adequately staffed and readily available.
II	11.19 The PIPS program does not evaluate operating room availability and delays when an on-call team is used.
I, II	11.20 The operating room does not have the essential equipment.
I, II	11.21 Trauma centers do not have the necessary equipment for craniotomy.

Trauma Cntr Level	CO Deficiencies
I, II	The anesthesiology representative shall actively participate with the Multidisciplinary Trauma Committee and peer review/performance improvement process.
I, II	The anesthesiology representative to the trauma program shall attend a minimum of 50% of the Multidisciplinary Trauma Committee meetings with documentation by the peer review/performance improvement program.
Operating Room	
I, II	A dedicated operating room team shall always be available.
I, II	If the primary operating room team is occupied, a mechanism to staff a second room shall be in place.
I, II	There shall be a facility-defined access policy for urgent trauma cases of all specialties.
I, II	The trauma facility shall have rapid infusers, thermal control equipment for patients and fluids, intraoperative radiological capabilities, equipment for fracture fixation, equipment for endoscopic evaluation (bronchoscopy and gastrointestinal endoscopy) and other equipment to provide operative care consistent with current practice.
I, II	The trauma facility shall have the necessary equipment for craniotomy.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I	11.23 The trauma center does not have cardiopulmonary bypass and an operating microscope available 24 hours per day.
Postanesthesia Care Unit (PACU)	
I, II	11.24 The PACU does not have qualified nurses available 24 hours per day as needed during the patient's postanesthesia recovery phase.
I, II	11.25 The PACU is covered by a call team from home without documentation by the PIPS program that PACU nurses are available and delays are not occurring.
I, II	11.26 The PACU does not have the necessary equipment to monitor and resuscitate patients.
I, II	11.27 The PIPS process does not ensure that the PACU has the necessary equipment to monitor and resuscitate patients.
Radiology	
I, II	11.28 Radiologists are not promptly available, in person or by teleradiology, when requested, for the interpretation of radiographs, performance of complex imaging studies, or interventional procedures.
I, II	11.29 Diagnostic information is not communicated in a written form and in a timely manner.
I, II	11.30 Critical information is not verbally communicated to the trauma team.

Trauma Cntr Level	CO Deficiencies
I	The trauma facility shall have cardiopulmonary bypass and an operating microscope available 24 hours per day.
Postanesthesia Care Unit (PACU)	
I, II	Qualified nurses shall be available 24 hours per day to provide care for the trauma patient, if needed, in the recovery phase.
I, II	If the availability of PACU nurses is met with an on-call team from outside the hospital, the availability of the PACU nurses and absence of delays shall be monitored by the peer review/performance improvement program.
I, II	The PACU shall provide all of the necessary resources including instruments, equipment and personnel to monitor and resuscitate patients consistent with the facility-defined process of care.
I, II	The peer review/performance improvement program shall review and address issues related to the availability of necessary personnel and equipment to monitor and resuscitate patients in the PACU.
Radiology	
I, II	Qualified radiologists shall be promptly available as defined by the facility for the interpretation of imaging studies and shall respond in person when requested.
I, II	Diagnostic information shall be communicated in written form in a timely manner as defined by the facility.
I, II	Critical information that is deemed to immediately affect patient care shall be promptly communicated to the trauma team.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	11.31 Final reports do not accurately reflect communications, including changes between preliminary and final interpretations.
I, II	11.32 Changes in interpretation are not monitored through the PIPS program.
I, II	11.33 There is not at least 1 radiologist appointed as liaison to the trauma program.
I, II	11.34 Radiology does not participate in the trauma PIPS program by at least being involved in protocol development and trend analysis that relate to diagnostic imaging.
I, II	11.35 The trauma center does not have 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.
I, II	11.36 Conventional radiography and CT are not available in all trauma centers 24 hours per day.
I, II	11.37 There is no in-house radiographer at Level I and II trauma centers.
I	11.38 There is no in-house CT technologist.
II	11.39 When the CT technologist responds from outside the hospital, the PIPS program does not document the response time.

Trauma Cntr Level	CO Deficiencies
I, II	The final report shall accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretation.
I, II	The peer review/performance improvement program shall monitor changes in interpretation of diagnostic information.
I, II	A radiologist shall be identified as the liaison to the trauma program.
I, II	Radiologists shall be involved in protocol development and trend analysis that relate to diagnostic imaging.
I, II	The trauma facility shall have policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transport to and while in the radiology department.
I, II	Personnel qualified in interventional procedures shall be promptly available as defined by the facility 24 hours per day and available in less than 30 minutes when requested by a trauma surgeon.
I, II	Conventional radiography and computed tomography shall be promptly available as defined by the facility 24 hours per day and available in less than 30 minutes when requested by a trauma surgeon.
I, II	An in-house radiographer and in-house CT technologist shall be promptly available as defined by the facility 24 hours per day and available in less than 30 minutes when requested by a trauma surgeon.
I, II	The peer review/performance improvement program shall review and address any variance from the facility-defined response time.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	11.40 Conventional catheter angiography and sonography are not available 24 hours per day.
I	11.41 MRI capability is not available 24 hours per day at Level I trauma centers.
I	11.42 The PIPS program does not document the appropriate timeliness of the arrival of the MRI technologist.
Critical Care	
I	11.43 There is no surgically directed ICU physician team.
I	11.44 The surgical director or codirector of the ICU does not have appropriate training and experience for the role.
II	11.45 The trauma center does not have a surgical director or codirector for the ICU who is responsible for setting policies and administration related to trauma ICU patients.
I, II	11.46 The trauma surgeon does not remain in charge of patients in the ICU.
I, II	11.47 Physician coverage of critically ill trauma patients is not promptly available 24 hours per day.
I, II	11.48 Physicians covering critically ill trauma patients do not respond rapidly to urgent problems as they arise.
I	11.50 The surgical director of the ICU has not obtained critical care training during residency or fellowship and does not have expertise in perioperative and postinjury care of injured patients.

Trauma Cntr Level	CO Deficiencies
I, II	Conventional catheter angiography and sonography shall be promptly available as defined by the facility 24 hours per day and available in less than 30 minutes when requested by a trauma surgeon.
I, II	Magnetic resonance imaging capability shall be promptly available as defined by the facility 24 hours per day and available in less than 30 minutes when requested by a trauma surgeon.
I, II	The peer review/performance improvement program shall review and address any variance from facility-defined response times.
Critical Care	
I, II	This service may be staffed by critical care trained physicians from different specialties.
I, II	The trauma surgeon shall retain oversight of the patient while in the ICU.
I, II	Physician coverage of critically ill trauma patients shall be promptly available as defined by the facility 24 hours per day. These physicians shall be capable of rapid response to deal with urgent problems as they arise. Availability shall be monitored by the peer review/performance improvement program.
I	This service shall be a qualified surgeon who is board certified in critical care by the American Board of Surgery. The surgical director shall have obtained critical care training during residency or fellowship and shall have expertise in the perioperative and post injury care of injured patients.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I	11.51 The surgical director or the surgical codirector is not a surgeon, is not credentialed by the hospital to care for ICU patients, and does not participate in the PIPS process.
I, II	11.53 The trauma service does not retain responsibility for patients and coordinate all therapeutic decisions appropriate for its level.
I, II	11.54 The trauma surgeon is not kept informed of and does not concur with major therapeutic and management decisions made by the ICU team.
I	11.55 The patients in Level I facilities do not have in-house physician coverage for ICU at all times.
II	11.56 Coverage of emergencies in the ICU leaves the emergency department without appropriate physician coverage.
I, II	11.58 A qualified nurse is not available 24 hours per day to provide care during the ICU phase.
I, II	11.59 The patient/nurse ration exceeds 2:1 for critically ill patients in the ICU.
I, II	11.60 The ICU does not have the necessary equipment to monitor and resuscitate patients.
I, II	11.61 Intracranial pressure monitoring equipment is not available.

Trauma Cntr Level	CO Deficiencies
I, II	All trauma surgeons shall be fully credentialed by the facility to provide all intensivists services in the ICU. There shall be full hospital privileges for critical care.
I, II	The trauma service shall maintain oversight of the patient throughout the course of hospitalization.
I, II	A qualified nurse shall be available 24 hours per day to provide care for patients during the ICU phase of care.
I, II	The nurse/patient ratio shall be appropriate for the acuity of the trauma patients in the ICU.
I, II	The ICU shall have the necessary resources including instruments and equipment to monitor and resuscitate patients consistent with the facility-defined process of care.
I, II	Arterial pressure monitoring, pulmonary artery catheterization, patient rewarming, intracranial pressure monitoring and other equipment to provide critical care consistent with current practice shall also be available.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
Other Surgical Specialists	
I	11.63 The Level I facility does not have available a full spectrum of specialists.
II	11.64 The Level II center lacks required surgical specialists.
Medical Consultants	
I	11.66 The trauma center does not include the following medical specialists: cardiology, infectious disease, pulmonary medicine, and nephrology and their respective support teams (for example, respiratory therapy, dialysis team, and nutrition support).
II	11.67 Specialists from internal medicine and pulmonary medicine are not available on staff.
II	11.68 Specialty consultations for problems related to internal medicine, pulmonary medicine, cardiology, gastroenterology, and infectious disease are not available.
I, II	11.70 A respiratory therapist is not available to care from trauma patients 24 hours per day.
I	11.72 Acute hemodialysis is not available.
II	11.73 A Level II center has neither dialysis capabilities nor a transfer agreement.
II	11.74 Nutrition support services are not available.

Trauma Cntr Level	CO Deficiencies
Other Surgical Specialists	
I	The trauma facility shall have a full spectrum of surgical specialists on staff including but not limited to the following surgical specialties: cardiac, thoracic, microvascular, peripheral vascular, obstetric, gynecological, otolaryngologic, urologic, ophthalmologic, facial trauma, hand and plastic.
II	The trauma facility shall have a full spectrum of surgical specialists on staff including but not limited to the following surgical specialties: thoracic, peripheral vascular, obstetric, gynecological, otolaryngologic, urologic, ophthalmologic, facial trauma, spine and plastic.
Medical Consultants	
I, II	The trauma facility shall have the following medical specialists on staff: cardiology, infectious disease, internal medicine, pulmonary medicine and nephrology and their respective support teams.
I, II	A respiratory therapist shall be promptly available to care for trauma patients.
I, II	Acute hemodialysis shall be promptly available for the trauma patient.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	11.75 Laboratory services are not available 24 hours per day for the standard analyses of blood, urine, and other body fluids, including microsampling when appropriate.
I, II	11.76 The blood bank is not capable of blood typing and cross-matching.
I, II	11.77 The blood bank does not have an adequate amount of red blood cells, fresh frozen plasma, platelets, cryoprecipitate, or appropriate coagulation factors to meet the needs of injured patients.
I, II	11.78 The capability for coagulation studies, blood gases, and microbiology is not present.
Chapter 12: Rehabilitation	
I, II	12.1 The hospital has neither rehabilitation services within its facility nor a transfer agreement to a freestanding rehabilitation hospital.
I, II	12.2 The hospital has no physical therapy services.
I, II	12.3 The hospital has no social services.
I, II	12.4 The hospital has no occupational therapy services.
I, II	12.5 The hospital has no speech therapy services.
I, II	12.6 Rehabilitation consultation services, occupational therapy, speech therapy, physical therapy, and social services are not available during the acute phase of care.
Chapter 13: Rural Trauma Care	
II	13.1 A rural Level II center does not provide the same level of care as a nonrural Level II trauma center.

Trauma Cntr Level	CO Deficiencies
I, II	Services shall be available 24 hours per day for the standard analyses of blood, urine and other body fluids, coagulation studies, blood gases and microbiology, including microsampling when appropriate.
I, II	The blood bank shall be capable of blood typing and cross-matching and shall have an adequate supply of red blood cells, fresh frozen plasma, platelets, cryoprecipitate and appropriate coagulation factors to meet the needs of injured patients.
Rehabilitation Requirements	
I, II	Rehabilitation services shall be available to the trauma patient within the hospital's physical facilities; or at a freestanding rehabilitation hospital. In this circumstance, the trauma facility shall have appropriate transfer agreements.
I, II	The following services shall be available during the trauma patient's acute and intensive care phases of care: physical, occupational and speech therapy, and social services.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
II	13.2 The PIPS process does not demonstrate the appropriate care or response by providers.
Chapter 15: Trauma Registry	
I, II	15.1 Trauma registry data are not collected and analyzed.
I, II	15.2 The data are not submitted to the National Trauma Data Bank.
I, II	15.3 The trauma center does not use the registry to support the PIPS program.
I, II	15.4 The trauma registry does not have at least 80% of the trauma cases entered within 60 days of discharge.
I, II	15.5 The trauma program does not ensure that trauma registry confidentiality measures are in place.
I, II	15.6 There are no strategies for monitoring data validity for the trauma registry.
Chapter 16: Performance Improvement and Patient Safety (PIPS)	
I, II	16.1 The trauma center does not demonstrate a clearly defined PIPS program for the trauma population.
I, II	16.2 The PIPS program is not supported by a reliable method of data collection that consistently gathers valid and objective information necessary to identify opportunities for improvement.
I, II	16.3 The program is not able to demonstrate that the trauma registry supports the PIPS process.
I, II	16.4 The process of analysis does not include multidisciplinary review.

Trauma Cntr Level	CO Deficiencies
Trauma Registry	
I, II	Trauma registry data shall be collected and analyzed by every trauma facility. It shall contain detailed, reliable and readily accessible information that is necessary to operate a trauma facility.
I, II	Trauma data shall be submitted to the National Trauma Data Bank on an annual basis.
I, II	The facility shall demonstrate that the trauma registry is used to support the performance improvement program.
I, II	Trauma data shall be submitted to the Colorado Trauma Registry within 60 days of the end of the month during which the patient was discharged.
I, II	The trauma program shall have in place appropriate measures to assure that trauma data remain confidential.
I, II	The facility shall monitor data validity.
Performance Improvement	
I, II	The trauma facility shall demonstrate a clearly defined performance improvement program that shall be coordinated with the hospital-wide program.
I, II	Performance improvement shall be supported by a reliable method of data collection that consistently obtains valid and objective information necessary to identify opportunities for improvement. At a minimum, the program shall be able to demonstrate that the trauma registry supports the performance improvement process. The process of analysis shall include multidisciplinary review and shall occur at regular intervals to meet the needs of the program. The results of analysis shall define corrective

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	16.5 The process of analysis does not occur at regular intervals to meet the needs of the program.
I, II	16.6 The results of analysis do not define corrective strategies.
I, II	16.7 The results of analysis and corrective strategies are not documented.
I, II	16.8 The trauma program is not empowered to address issues that involve multiple disciplines.
I, II	16.9 The trauma program has neither adequate administrative support nor defined lines of authority that ensure comprehensive evaluation of all aspects of trauma care.
I, II	16.10 The trauma program does not have a medical director with the authority and administrative support to lead the program.
I, II	16.11 The trauma medical director does not have sufficient authority to set the qualifications for the trauma service members.
I, II	16.12 The trauma director does not have the authority to recommend changes for the trauma panel based on performance review.
I, II	16.13 Identified problem trends do not undergo multidisciplinary peer review by the Trauma Peer Review Committee.
I, II	16.14 The trauma center is not able to separately identify the trauma patient population for review.
I, II	16.15 There is no process to address trauma program operational issues.

Trauma Cntr Level	CO Deficiencies
	strategies and shall be documented.
I, II	The trauma program shall have authority to address issues that involve multiple disciplines. The trauma medical director shall have the authority and administrative support to lead the program.
I, II	The trauma program shall have authority to address issues that involve multiple disciplines. The trauma medical director shall have the authority and administrative support to lead the program.
I, II	Identified problem trends shall undergo peer review by the Peer Review/Performance Improvement Committee.
I, II	The trauma facility shall be able to demonstrate that the trauma patient population can be identified for separate review regardless of the institutional performance improvement processes.
I, II	The trauma facility shall have a multidisciplinary committee to address trauma program operational issues.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	16.16 There is no documentation reflecting the review of operational issues and, when appropriate, the analysis and proposed corrective actions.
I, II	16.17 The process does not identify problems.
I, II	16.18 The process does not demonstrate problem resolution (loop closure).
I, II	16.19 There is no trauma multidisciplinary peer review committee with participation by the trauma medical director or designee and representatives from general surgery, orthopaedic surgery, neurosurgery, emergency medicine, and anesthesia.
I, II	16.20 The attendance by the trauma medical director and the specialty representatives is less than 50%.
I, II	16.21 The core general surgeon attendance at the trauma peer review committee is less than 50%.
I, II	16.22 In circumstances when attendance is not mandated (noncore members), the trauma medical director does not ensure dissemination of information from the trauma peer review committee.
I, II	16.23 The trauma medical director does not document the dissemination of information from the trauma peer review committee.
I, II	16.24 Evidence of appropriate participation and acceptable attendance is not documented in the PIPS process.
I, II	16.25 Deaths are not systematically categorized as preventable, nonpreventable, or potentially preventable.
I, II	16.26 When a consistent problem or inappropriate variation is identified, corrective actions are not taken and documented.

Trauma Cntr Level	CO Deficiencies
I, II	The committee minutes shall reflect the review of operational issues and, when appropriate, the analysis and proposed corrective actions. The process shall identify problems and shall demonstrate problem resolution.
I, II	Participation shall include attendance at a minimum of 50 percent of the time by representatives from the following areas: the trauma medical director or designee, general surgery, orthopedic surgery, neurosurgery, emergency medicine, and anesthesia.
I, II	Each member of the core group of general surgeons shall attend at least 50 percent of these meetings.
I, II	The trauma medical director shall ensure dissemination of information with documentation.
I, II	The Peer Review/Performance Improvement Committee shall document evidence of attendance and participation.
I, II	All deaths shall be systematically reviewed and categorized as preventable, nonpreventable, or potentially preventable.
I, II	When a consistent problem or inappropriate variation is identified, corrective actions shall be taken and documented.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
Chapter 17: Outreach and Education	
I, II	17.1 The trauma center is not engaged in public and professional education.
I, II	17.2 The trauma center does not provide some means of referral and access to trauma center resources.
I, II	17.3 The trauma center is not involved in prevention activities, including public educational activities.
I	17.4 The Level I trauma center neither provides nor participates in an ATLS course at least annually.
I	17.5 The Level I trauma center neither provides a continuous rotation in trauma surgery for senior residents that is part of an Accreditation Council for Graduate Medical Education – accredited program in any of the following disciplines: general surgery, orthopaedic surgery, or neurosurgery; nor supports an acute care surgery fellowship consistent with the educational requirements of the American Association for the Surgery of Trauma.
I, II	17.6 The hospital does not provide a mechanism for trauma-related education for nurses involved in trauma care.
I, II	17.7 All general surgeons and emergency medicine physicians on the trauma team have not successfully completed the ATLS course at least once.
I, II	17.8 The trauma director and the liaison representatives from neurosurgery, orthopaedic surgery, and emergency medicine have not accrued an average of 16 hours annually or 48 hours in 3 years of external trauma-related CME.

Trauma Cntr Level	CO Deficiencies
Outreach and Education	
I, II	The trauma facility shall engage in public education that includes prevention activities, referral and access to trauma facility resources.
I	The trauma facility shall engage in professional outreach and education that includes, at a minimum: providing or participating in one ATLS course annually.
	The trauma facility shall engage in professional outreach and education that includes, at a minimum: providing a continuous rotation in trauma surgery for senior residents that is part of a program accredited by the Accreditation Council for Graduate Medical Education in either general surgery, orthopedic surgery, neurosurgery, or family medicine; or support of an acute care surgery fellowship consistent with the educational requirements of the American Association for the Surgery of Trauma.
	The trauma facility shall engage in professional outreach and education that includes, at a minimum: providing a mechanism to offer trauma-related education to nurses involved in trauma care.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I, II	17.9 Other general surgeons, neurosurgeons, orthopaedic surgeons, and emergency medicine specialists who take trauma call have not acquired 16 hours of CME per year on average or participated in an internal educational process.
Chapter 18: Prevention	
I, II	18.1 The trauma center does not participate in injury prevention.
I, II	18.2 The trauma center does not have a prevention coordinator with a demonstrated job description and salary support.
I, II	18.3 The trauma center does not demonstrate the presence of prevention activities that center on priorities based on local data.
I, II	18.4 The trauma center does not demonstrate collaboration with or participation in national, regional, or state programs.
I, II	18.5 The trauma center does not have a mechanism to identify patients who are problem drinkers.
I	18.6 The trauma center does not have the capability to provide intervention or referral for patients identified as problem drinkers.

Trauma Cntr Level	CO Deficiencies
Prevention	
I, II	The trauma facility shall participate in injury prevention. The trauma facility shall provide documentation of the presence of prevention activities that center on priorities based on local data.
I	The trauma facility shall demonstrate evidence of a job description and salary support of an injury prevention coordinator who is a separate person from but collaborates with the trauma program manager.
II	The trauma facility shall demonstrate evidence of a job description and salary support for an injury prevention coordinator.
I, II	The trauma service shall develop an injury prevention program that, at a minimum, incorporates the following: select a target injury population, gather and analyze data, develop intervention strategies, formulate a plan, implement the program, and evaluate and revise the program as necessary.
I, II	The trauma facility shall demonstrate collaboration with or participation in national, regional or state injury prevention programs.
I, II	The trauma facility shall have a mechanism to identify patients who may have an alcohol addiction. The trauma facility shall also have the capability to provide an intervention for patients identified as potentially having an alcohol addiction.
I, II	The trauma facility shall collaborate and mentor lower level trauma centers regarding injury prevention.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
Chapter 19: Trauma Research and Scholarship	
I	19.1 The Level I trauma center meets neither the minimum of 20 peer-reviewed articles published in journals included in <i>Index Medicus</i> in 3 years nor the criterion of 4 of 7 scholarly activities as listed in the chapter and 10 peer-reviewed articles published in journals included in <i>Index Medicus</i> in 3 years.
I	19.2 The research did not result from work related to the trauma center.
I	19.3 The articles do not include authorship or coauthorship by a member of the general surgery trauma team.
I	19.4 Of the 20 articles, there is not at least 1 that includes authorship or coauthorship by members of the general surgery trauma team and at least 1 each from 3 of 6 disciplines: neurosurgery, emergency medicine, orthopaedics, radiology, anesthesia, and rehabilitation.

Trauma Cntr Level	CO Deficiencies
Research and Scholarship	
I	The trauma facility shall meet one of the following options: Twenty peer-reviewed articles published in journals included in <i>Index Medicus</i> in a three-year period. These articles shall result from work related to the trauma facility.
I	Of the 20 articles, there shall be at least one authored or coauthored by members of the general surgery trauma team, and there shall be at least one each from three of the following six disciplines: neurosurgery, emergency medicine, orthopedics, radiology, anesthesia, or rehabilitation.

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
I	<p>19.5 The trauma center does not meet the alternative criteria for research:</p> <ul style="list-style-type: none"> • 10 peer-reviewed articles published in journals included in <i>Index Medicus</i> resulting from work in the trauma center with at least 1 authored or coauthored by members of the general surgery trauma team and at least 1 each from 3 of 6 disciplines (neurosurgery, emergency medicine, orthopaedics, radiology, anesthesia, and rehabilitation) <p>AND</p> <ul style="list-style-type: none"> • 4 of 7 scholarly activities as stated in Chapter 19, Trauma Research and Scholarship.
I	<p>19.6 The administration of the trauma center does not demonstrate support of the research program.</p>

Trauma Cntr Level	CO Deficiencies
	<p>The trauma facility shall meet one of the following options: ten peer-reviewed articles published in journals included in <i>Index Medicus</i> in a three-year period. These articles shall result from work related to the trauma facility. Of the ten articles, there shall be at least on authored or coauthored by members of the general surgery team, and there shall be at least one each from three of the following six disciplines: neurosurgery, emergency medicine, orthopedics, radiology, anesthesia, or rehabilitation; and four of the following scholarly activities shall be demonstrated: leadership in major trauma organizations; peer-reviewed funding for trauma research; evidence of dissemination of knowledge to include review articles, book chapters, technical documents, Web-based publications, editorial comments, training manuals and trauma-related course materials; display or scholarly application of knowledge as evidenced by case reports or reports of clinical series in journals included in MEDLINE; participate as a visiting professor or invited lecturer at national or regional trauma conferences; support of resident participation in facility-focused scholarly activity, including laboratory experiences, clinical trials, or resident trauma paper competitions at the state, regional or national level; or mentorship of residents and fellows, as evidenced by the development of a trauma fellowship program or successful matriculation of graduating residents into trauma fellowship programs.</p>
I	<p>The trauma facility shall demonstrate support for the trauma research program by providing such items as basic laboratory space, sophisticated research equipment, advanced information systems, biostatistical support, salary support for basic and social scientists or seed grants for less experienced faculty.</p>

Trauma Cntr Lvl	ACS Deficiencies by Level and Chapter
Chapter 20: Disaster Planning and Management	
I, II	20.1 The hospital does not meet the disaster-related requirements of JCAHO.
I, II	20.2 A trauma panel surgeon is not a member of the hospital's disaster committee.
I, II	20.3 Hospital drills that test the individual hospital's disaster plan are not conducted at least every 6 months.
I, II	20.4 The trauma center does not have a hospital disaster plan described in the hospital disaster manual.
Chapter 21: Organ Procurement Activities	
I, II	21.1 The trauma center does not have an established relationship with a recognized OPO.
I, II	21.2 There are no written policies for triggering notification of the OPO.
I, II	21.3 The PIPS process does not review the organ donation rate.
I, II	21.4 There are no written protocols for declaration of brain death.

Trauma Cntr Level	CO Deficiencies
Disaster Planning and Management	
I, II	The facility shall meet the disaster-related requirements of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).
I, II	A surgeon from the trauma panel shall participate on the hospital's disaster committee.
I, II	Hospital drills that test the facility's preparedness plan shall be conducted no less than every six months.
I, II	The facility shall have a disaster preparedness plan in its policy and procedure manual or equivalent.
I, II	The facility preparedness plan shall be integrated into local, regional and state disaster preparedness plans.
Organ Procurement Activities	
I, II	The trauma facility shall have an established relationship with a recognized organ procurement organization (OPO).
I, II	The trauma facility shall have a written policy for triggering notification of the regional OPO.
I, II	The trauma facility shall have written protocols defining clinical criteria and confirmatory tests for the diagnosis of brain death.
RETAC Integration	
I, II	The facility shall demonstrate integration and cooperation with its Regional Emergency Medical and Trauma Advisory Council (RETAC). Evidence of such integration may include but is not limited to: attendance at periodic RETAC meetings, participation in RETAC injury prevention activities, participation in RETAC data and or quality improvement projects, etc.