California Trauma Regulations (Title 22) versus
ACS RESOURCES FOR OPTIMAL CARE OF THE INJURED PATIENT 2014 (Orange Book)

(Level III Trauma Centers only)

Requirement	TITLE 22	ACS ORANGE BOOK®
Requirements of a Level III Trauma Center	Section 100263: Level III Trauma Center: ▪ Licensed hospital ▪ Designated by the local EMS Agency as a Level III ▪ Has equipment and resources necessary for initial stabilization and personnel knowledgeable in the treatment of adult and pediatric trauma. Section 100248 Designated trauma center is a licensed hospital, accredited by The Joint Commission, which has been designated as a Level I, II, III, of IV trauma center by the local EMS agency.	Level III Trauma Center: Chapter 2, page 17 ▪ ACS CD 2-3 TYPE II: Provide necessary human and physical resources (physical plant and equipment) to properly administer acute care. Additional ACS Requirements: Chapter 5, pages 35-36, Chapter 2, pages 17-21 ▪ **ACS CD 5-1 TYPE I: Decision to become a trauma center requires commitment of the institutional governing body and the medical staff. Documentation of the support from both the governing body and the medical staff.** ▪ ACS CD 5-2, 5-3 TYPE II: Administrative and medical staff must be reaffirmed continually (every 3 years) and current at time of verification. ▪ ACS CD 5-4 TYPE II: The trauma program must involve multiple disciplines and transcend normal departmental hierarchies. ▪ **ACS CD 2-1 TYPE I: Must have an integrated, concurrent performance improvement and patient safety (PIPS) program to ensure optimal care and continuous improvement in care.**

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		▪ **ACS CD 2-2 TYPE I: Surgical commitment is essential for a properly functioning trauma center**. ▪ ACS CD 2-5 TYPE II, Through the PIPS program and hospital policy, the trauma director must have responsibility and authority for determining each general surgeon's ability to participate on the trauma panel based on an annual review. ▪ ACS CD 2-8 TYPE I: **The surgeon will be in the emergency department on patient arrival, with adequate notification from the field. Maximum acceptable response time for the highest activation tracked from patient arrival is 30 minutes. The program must demonstrate the surgeon's presence is in compliance at least 80% of the time.** ▪ ACS CD 2-12 TYPE II. Must have continuous general surgical coverage. ▪ ACS CD 2-13 TYPE II: Well-defined transfer plans are essential. ▪ ACS CD 2-17 TYPE II: A trauma medical director and trauma program manager knowledgeable and involved in trauma care must work together with guidance from the trauma peer review committee to identify events, develop correction action plans and ensure methods of monitoring, reevaluation, and benchmarking. ▪ ACS CD 2-18 TYPE II: The multidisciplinary trauma peer review committee must meet regularly, with required attendance of medical staff active in trauma resuscitation, to review systemic and care provider issue, as well as proposed improvements to the care of the injured.

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		▪ ACS CD 2-19 TYPE II: A PIPS program must have audit filters to review and improve pediatric and adult patient care. ▪ ACS CD 2-22 TYPE II: Must participate in regional disaster management plans and exercises. ▪ ACS CD 2-23 TYPE II: Any adult trauma center that annually admits 100 or more injured children younger than 15 years must demonstrate capability to care for injured children. Trauma surgeons must be credentialed for pediatric trauma care by the hospital's credentialing body. ▪ ACS CD 2-24 TYPE II: (Any adult trauma center that annually admits 100 or more injured children younger than 15 years), must have a pediatric emergency department area, a pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma PIPS program. ▪ ACS CD 2-25 TYPE II: For adult centers annually admitting fewer than 100 injured children younger than 15 years, these resources are desirable. These hospitals however must review the care of their injured children through their PIPS program.
Trauma System	Section 100247 A trauma system means a system that is designed to meet the needs of all injured patients. The system shall be defined by the local EMS Agency in its trauma care system plan.	Regional Trauma Systems: Chapter 1, page 14 ▪ ACS CD 1-1 TYPE II: Trauma center and their health care providers are essential system resources and must be active and engaged participants. ▪ ACS CD 1-2 TYPE II: Must function in a way that pushes trauma center-based standardization, integration, and PIPS out to the region while engaging in inclusive trauma system planning and development.

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		▪ ACS CD 1-3 TYPE II: Meaningful involvement in state and regional trauma system planning, development, and operation is essential for all trauma centers participating within a region.
Helicopter Landing Site	Section 100254 (c) A local EMS Agency may require trauma centers to have helicopter landing sites. If helicopter landing sites are required, then they shall be approved by the Division of Aeronautics, Department of Transportation.	Chapter 3, page 26 Air medical transportation has become an important method of rapidly transporting injured patients from the scene or the transferring facility to a trauma center. Criteria and procedures for requesting air medical transport should be developed and monitored as part of the trauma performance improvement.
Trauma Medical Director	Section 100263 A qualified surgical specialist, whose responsibilities include, but not limited to factors that affect all aspects of trauma care. Qualified surgical specialist (Section 100242) ▪ Physician licensed in CA ▪ Board certified in a specialty by the American Board of Medical Specialties, or a board approved by the American Board of Medical Specialties. Responsibilities, not limited to (Section 100263 (a) (1-6)) ▪ Recommend trauma team physician privileges ▪ Work with nursing administration to support the nursing needs of trauma patients ▪ Develop trauma treatment protocols ▪ Authority and accountability for quality improvement peer review process ▪ Correcting deficiencies in trauma care or excluding from trauma call team members who no longer meet the standards of the quality improvement program ▪ Assisting with the budgetary process for the trauma program	Trauma Medical Director: Chapter 5: pages 36-37 ▪ **ACS CD 5-5 TYPE I: Current board certified general surgeon, (or a general surgeon eligible for certification by the American Board of Surgery according to current requirements), or a general surgeon who is an ACS Fellow with an interest in trauma care and must participate in trauma call.** ▪ ACS CD 5-6 TYPE II: Must be current in ATLS ▪ ACS CD 5-8 TYPE II: Desirable to have membership and be active in regional or national trauma organizations ▪ ACS CD 5-9 TYPE II: Have authority to manage all aspects of trauma care. ▪ ACS CD 5-10, 5-25, TYPE II: Must chair and attend a minimum of 50% of the multidisciplinary trauma peer review committee meetings. ▪ ACS CD 5-11 TYPE II: In collaboration with the TPM, have authority to correct deficiencies in trauma care

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		and exclude from trauma call list team members who don't meet specified criteria ▪ ACS CD 5-11 TYPE II: Performs annual assessments of trauma panel providers in the form of Ongoing Professional Practice Evaluation (OPPE) and Focused Professional Practice Evaluation (FPPE) when indicated by findings of the PIPS process. ▪ ACS CD 5-12 TYPE II: Have responsibility and authority to ensure compliance with above requirements and cannot direct more than one trauma center. ▪ ACS CD 2-5 TYPE II: The trauma director (through the PIPS program and hospital policy) must have responsibility and authority for determining each general surgeon's ability to participate on the trauma panel based on an annual review. ▪ ACS CD 2-17 TYPE II: A TMD (and trauma program manager) knowledgeable and involved in trauma care must work together with guidance from the trauma peer review committee to identify events, develop corrective action plans, and ensure methods of monitoring, reevaluation, and benchmarking.
Trauma Program Manager	Section 100263 (b) (1-3) Registered Nurse with qualifications including evidence of education preparation and clinical experience in the care of the adult and/or pediatric trauma patient, administrative ability, and the responsibilities that include, but are not limited to: ▪ Organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient ▪ Coordinating day-to-day clinical process s and PI as pertains to nursing and ancillary personnel ▪ Collaborating with Trauma Medical Director in carrying out	Trauma Program Manager: Chapter 5, pages 41-43 ▪ ACS CD 5-22 TYPE II: The trauma program manager must show evidence of educational preparation and clinical experience in the care of injured patients in addition to administrative ability. ▪ ACS CD 2-17 TYPE II: A TPM (and trauma medical director) knowledgeable and involved in trauma care must work together with guidance from the trauma peer review committee to identify events, develop corrective

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	the educational, clinical, research, administrative and outreach activities of trauma program.	action plans, and ensure methods of monitoring, reevaluation, and benchmarking.
Trauma Service	Section 100250 A trauma service is a clinical service established by the organized medical staff of a trauma center that has oversight and responsibility of the care of the trauma patient. It includes, but is not limited to; direct patient care services, administration, and as needed, support function to provide medical care to injured persons. Section 100263 (c) The trauma service will provide for the implementation of the requirements in Section 100263 and provide coordination with the local EMS Agency.	Trauma service represents the primary structure for providing care: Chapter 5, page 40-41 ▪ ACS CD 5-17 TYPE II: Injured patients may be admitted to individual surgeons, but the trauma director must be allowed to have oversight authority for the care of these patients. ▪ ACS CD 5-18 TYPE II: Programs that admit more than 10% of injured patients to non-surgical services must review all non-surgical admissions through the trauma PIPS process. ▪ **ACS CD 5-21 TYPE I: Have a method to identify the injured patients, monitor the provision of health care services, make periodic rounds, and hold formal and informal discussions with practitioners.**
Trauma Team	Section 100251 A trauma team is the multidisciplinary group of personnel who have been designated to collectively render care for trauma patients at a designated trauma center. The trauma team consists of physicians, nurses, allied health personnel. The composition of the trauma team may vary in relationship to trauma center designation level and severity of injury which leads to trauma team activation. Section 100263 (d), (e), (h) A multidisciplinary team for initial resuscitation and management of trauma patient. ▪ Provide prompt assessment, resuscitation, and stabilization to trauma patients. ▪ Ability to provide treatment or arrange for transportation to a higher level trauma center.	The trauma team: Chapter 5, pages 37-40 ▪ **ACS CD 2-8 TYPE I: The surgeon will be in the emergency department on patient arrival, with adequate notification from the field. The maximum acceptable response time for the highest activation is 30 minutes. The program must demonstrate the surgeon's presence is in compliance at least 80% of the time.** ▪ ACS CD 5-15 TYPE II: Trauma team must be fully assembled within 30 minutes. ▪ ACS CD 5-16 TYPE II: Other potential criteria for trauma team activation that have been determined by the trauma program to be included in the various levels

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		of trauma activation must be evaluated on an ongoing basis in the PIPS process to determine their positive predictive value in identifying patients who require the resources of the full trauma team. ▪ ACS CD 5-16 TYPE II: The emergency physician may initially evaluate the limited-tier trauma patient. The trauma center must have a clearly defined response expectation for the trauma surgical evaluation for patients requiring admission.
Trauma Activation	Section 100251 The composition of the trauma team may vary in relationship to trauma center designation level and severity of injury which leads to trauma team activation.	Trauma team activation: Chapter 5, pages 37-40 ▪ **ACS CD 2-8 TYPE I: The surgeon will be in the emergency department on patient arrival, with adequate notification from the field. The maximum acceptable response time for the highest activation is 30 minutes. The program must demonstrate the surgeon's presence is in compliance at least 80% of the time.** ▪ ACS CD 5-13 TYPE II - The criteria for a graded activation must be clearly defined by the trauma center, with the highest level of activation including the six required criteria listed in Chapter 5, page 38,Table 2: ○ Confirmed blood pressure less than 90 mm Hg at any time in adults and age-specific hypotension in children; ○ Gunshot wounds to the neck, chest, or abdomen or extremities proximal to the elbow/knee; ○ Glasgow Coma Scale less than 9 with mechanism attributed to trauma; ○ Transfer patients from other hospitals receiving blood to maintain vital signs; ○ Intubated patients transferred from the scene, - OR – ○ Patients who have respiratory compromise or

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		are in need of an emergent airway • Includes intubated patients who are transferred from another facility with ongoing respiratory compromise (does not include patients intubated at another facility who are now stable from a respiratory standpoint) ◦ Emergency physician's discretion ▪ ACS CD 5-15 TYPE II: The team must be fully assembled within 30 minutes. ▪ ACS CD 5-16 TYPE II: The criteria for trauma team activations determined by the trauma center must be evaluated on an ongoing basis through PIPS to determine positive predictive value in identifying patients who require the full trauma team. ▪ ACS CD 5-16 TYPE II: The emergency physician may initially evaluate the limited-tier trauma patient, but the center must have a clearly defined response expectation for the trauma surgical evaluation of those patients requiring admission.
Emergency Department	Section 100263 (f) An emergency department, division, service, or section staffed to assure trauma patients of immediate and appropriate initial care.	Emergency Department: Chapter 7, page 49, Chapter 11, page 78 ▪ ACS CD 7-1 TYPE I: Must have a designated emergency physician director supported by an appropriate number of physicians to ensure immediate care of injured patients. ▪ ACS CD 7-3 TYPE II: Occasionally it is necessary for the physician to leave the emergency department for short periods to address in-house emergencies. Such cases and their frequency must be reviewed by the PIPS program to ensure that this practice does not adversely affect the care of patients in the emergency

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		department. ▪ ACS CD 11-28 TYPE II: Must 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.
Intensive Care Service	Section 100263 (g), (1-3) The ICU shall: ▪ Have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and trauma program medical director; ▪ Have a qualified specialist promptly available to care for trauma patients in the ICU. The qualified specialist may be a resident with 2 years of training who is supervised by the staff intensivist or attending surgeon who participated in all critical decision making. ▪ The qualified specialist shall be a member of the trauma team. Section 100242 Qualified surgical specialist ▪ Physician licensed in CA ▪ Board certified in a specialty by the American Board of Medical Specialties, or a board approved by the American Board of Medical Specialties Section 100241 Promptly or promptly available means: ▪ Responding without delay when notified and requested to respond to the hospital; and ▪ Being physically available to the specified area of the trauma center within a period of time that is medical prudent and in accordance with the local EMS agency policies and procedures.	The ICU: Chapter 11, pages 81-83 ▪ ACS CD 11-53 TYPE II: A surgeon must serve as co-director or director, and actively involved in and responsible for setting policies and administrative decisions related to trauma ICU patients. ▪ ACS CD 11-54 TYPE II: The ICU director or co-director must be a surgeon who is currently board certified or eligible for certification by the current standard requirements. ▪ **ACS CD 11-56 TYPE I: Physician coverage must be available within 30 minutes with a formal plan in place for emergency coverage.** ▪ ACS CD 11-57 TYPE II: The PIPS program must review all ICU admissions and transfers or ICU patients to ensure that appropriate patients are being selected to remain at the Level III vs being transferred to a higher level of care. ▪ **ACS CD 11-58 TYPE I: The trauma surgeon must retain responsibility for the patient and coordinate all therapeutic decisions.** ▪ **ACS CD 11-59 TYPE I: Daily care requirements can be managed by a dedicated ICU team, but the trauma surgeon must be kept informed and concur with therapeutic and management decisions.**

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		▪ ACS CD 11-60 TYPE II: The PIPS program must document that timely and appropriate care and coverage are being provided. The timely response of credentialed providers must be continuously monitored as part of the PIPS program. ▪ ACS CD 11-61 TYPE II: There must be a designated ICU liaison to the trauma service. ▪ ACS CD 11-62 TYPE II: The ICU liaison must attend at least 50% of the multidisciplinary peer review meetings with documentation by the trauma PIPS program. ▪ **ACS CD 11-65 TYPE I: Qualified critical care nurses must be available 24 hours a day to provide care during the ICU phase.** ▪ ACS CD 11-66 TYPE II: Patient nurse ratio must not exceed two to one. ▪ **ACS CD 11-67 TYPE I: Must have necessary equipment to monitor and resuscitate patients.** ▪ **ACS CD 11-68 TYPE I: Intracranial pressure monitoring equipment must be available in trauma centers with neurosurgical coverage that admit neurotrauma patients.** ▪ ACS CD 11-69 TYPE II: Trauma patients must not be admitted or transferred by a primary physician without the knowledge and consent of the trauma service. The PIPS program should monitor adherence to this guideline.

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Qualified Surgical Specialist(s)	Section 100263 (i), (1-3) Qualified surgical specialist(s) who shall be promptly available: ▪ General ▪ Orthopedic ▪ Neurosurgery (can be provided through a transfer agreement) Section 100242 Qualified surgical specialist ▪ Physician licensed in CA ▪ Board certified in a specialty by the American Board of Medical Specialties, or a board approved by the American Board of Medical Specialties Section 100241 Promptly or promptly available means: ▪ Responding without delay when notified and requested to respond to the hospital; and ▪ Being physically available to the specified area of the trauma center within a period of time that is medical prudent and in accordance with the local EMS agency policies and procedures.	General Surgery: Chapter 6, pages 45-47, Chapter 11, page 84 ▪ ACS CD 2-5 TYPE II: The trauma director (through the PIPS program and hospital policy) must have responsibility and authority for determining each general surgeon's ability to participate on the trauma panel based on an annual review. ▪ **ACS CD 2-8 TYPE I: Expected that the surgeon will be in the ED on patient arrival, with adequate notification from the field. Maximum acceptable response time for the highest-level activation tracked from patient arrival is 30 minutes. Compliance must be demonstrated 80% of the time.** ▪ ACS CD 2-12 TYPE II: Must have continuous general surgical coverage. ▪ ACS CD 6-1 TYPE II: General surgeons caring for trauma patients must meet requirements in four categories: current board certification, clinical involvement, performance improvement and patient safety, and education. ▪ ACS CD 6-2 TYPE II: Board certification or eligible for certification; by the American Board of Surgery according to current requirements or the alternate pathway is essential for general surgeons who take trauma call. ▪ ACS CD 6-3 TYPE II: For surgeons trained outside of the US or Canada may be eligible to participate in the trauma program through an alternate pathway for non-Board Certified Surgeons, see www.facs.org/quality-programs/trauma/vrc/resources. ▪ ACS CD 6-4 TYPE II: Trauma surgeons must have privileges in general surgery.

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		▪ ACS CD 6-7 TYPE II: The attending surgeon is expected to be present in the OR for all operations. Documentation of presence is essential. ▪ ACS CD 6-8 TYPE II: There must be a multidisciplinary trauma peer review committee chaired by the trauma medical director and representatives from general surgery. Each member of the group of general surgeons must attend at least 50% pf the multidisciplinary trauma peer review committee meetings. ▪ ACS CD 6-9 TYPE II: All general surgeons on the trauma team must have successfully completed the ATLS course at least once. ▪ ACS CD 8-5 TYPE II: A formal, published contingency plan must be in place for times in which a neurosurgeon is encumbered upon the arrival of a neurotrauma case. The contingency plan must include the following: ○ A credentialing process to allow the trauma surgeon to provide initial evaluation and stabilization of the patient. ○ Transfer agreements with similar or higher verified trauma centers. ○ Direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. ○ Monitoring of the efficacy of the process by the PIPS programs. Orthopaedic: Chapter 9, pages 58-63 • **ACS CD 11-72 TYPEI: Must have the availability and commitment of orthopaedic surgeons.** ▪ **ACS CD 9-2 TYPE I: Operating rooms must be promptly available to allow for emergency**

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		operations on musculoskeletal injuries, such as open fracture debridement and stabilization, external fixator placement, and compartment decompression. ▪ **ACS CD 9-4 TYPE I: Must have an orthopaedic surgeon identified as the liaison to the trauma program.** ▪ ACS CD 9-11 TYPE II: Must have orthopaedic surgeon on call and promptly available 24 hours a day. ▪ ACS CD 9-12 TYPE II: A published backup schedule is required if the orthopaedic surgeon on call is not dedicated to one facility while on call. ▪ ACS CD 9-13 TYPE II: The appropriateness of the decision to transfer or retain major orthopaedic trauma cases must be reviewed by the PIPS process. ▪ ACS CD 9-15 TYPE II: The orthopaedic service must participate actively with the overall PIPS process and the multidisciplinary trauma peer review committee. ▪ ACS CD 9-16 TYPE II: The orthopaedic liaison to the trauma PIPS program must attend a minimum of 50% of the multidisciplinary trauma peer review committee meetings. ▪ ACS CD 9-17 TYPE II: Board certification or eligibility for certification by an appropriate orthopaedic board according to current requirements, or alternate pathway is essential for orthopaedic surgeons taking trauma call. ▪ ACS CD 6-3 TYPE II: Orthopaedic surgeons trained outside of the US or Canada may be eligible to participate in a trauma program through an alternate pathway for non-Board Certified Orthopaedic Surgeons

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		available, see www.facs.org/quality-programs/trauma/vrc/resources. Neurosurgery: Chapter 8, pages 54-56 ▪ ACS CD 8-5 TYPE II: A formal, published contingency plan must be in place for times in which a neurosurgeon is encumbered upon arrival of a neurotrauma case. The plan must include: ○ A credentialing process to allow the trauma surgeon to provide initial evaluation and stabilization of the neurotrauma patient. ○ Transfer agreements with a similar or higher-level verified trauma center. ○ Direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. ○ Monitoring of the efficacy of the process by the PIPS program. ▪ ACS CD 8-6 TYPE II: If one neurosurgeon covers two centers within the same limited geographic area, there must be a published backup schedule. The PIPS process must demonstrate appropriate and timely care provided. ▪ ACS CD 8-7 TYPE II: Must have a plan approved by the trauma medical director that determines which types of neurosurgical injuries may stay and which should be transferred. ▪ ACS CD 8-8 TYPE II: Transfer agreements must exist with appropriate Level I and Level II trauma centers. ▪ **ACS CD 8-9 TYPE I: In all cases whether patients are admitted or transferred, the care must be timely, appropriate and monitored through the PIPS program.**

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		▪ ACS CD 8-10 TYPE II: Board certification or eligibility for certification by the appropriate neurosurgical board according to the current requirements or the alternate pathway is essential for neurosurgeons taking trauma call. ▪ ACS CD 6-3 TYPE II: Neurosurgeons trained outside of the US or Canada may be eligible to participate in a trauma program through an alternate pathway for Non-Board Certified Neurosurgeons, see www.facs.org/quality-programs/trauma/vrc/resources. ▪ ACS CD 8-13 TYPE II: Centers with any emergent neurosurgical cases must also have participation of neurosurgery on the multidisciplinary trauma peer review committee. --- **Level III trauma centers that have Neurosurgeons who treat and retain the neurotrauma patients must meet the same standards as a Level I or II, except CD 8-15. The additional required standards are:** • **ACS CD 8-1 TYPE I: Neurotrauma care should be led by a neurosurgeon highly experienced and devoted to neurosurgical care of injured patients. If this surgeon is not the director of the neurosurgery service, a neurologic surgeon must be designated.** • **ACS CD 8-2 TYPE II: Neurotrauma care must be continuously available for all TBI and spinal cord injury patients and must be present and respond within 30 minutes based on institutional-specific criteria.** • **ACS CD 8-3 TYPE I: Trauma center must provide a reliable, published neurotrauma call schedule with formally arranged contingency plans in case the capability of the neurosurgeon, hospital or system to care for neurotrauma patients is overwhelmed.**

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		• ACS CD 8-4 TYPE II: Must have a predefined and thoroughly developed neurotrauma diversion plan that is implemented when the neurosurgeon on call becomes encumbered. A pre-defined, thoroughly developed neurotrauma diversion plan must include the following: ○ Emergency medical services notification of neurosurgery advisory status/diversion. ○ A thorough review of each instance by the PIPS program ○ Monitoring of the efficacy of the process of the PIPS program. ▪ **ACS CD 8-11 TYPE I: Qualified neurosurgeons should be regularly involved in the care of patients with head and spinal cord injuries and must be credentialed by the hospital with general neurosurgical privileges.** ▪ ACS CD 8-12 TYPE II: The neurosurgery service must participate actively in the overall trauma PIPS program. ▪ ACS CD 8-13 TYPE II: The neurosurgery liaison on the multidisciplinary trauma peer review committee must attend a minimum or 50 percent of the committee's meetings. ▪ ACS CD 8-14 TYPE II: The liaison representative from neurosurgery must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external trauma-related CME.
Non-Surgical Specialties include the following Departments:	Section 100263 (j), (1-3) Qualified non-surgical specialist(s) or specialty availability, which shall be available as follows: ▪ Emergency medicine, in-house and immediately available ▪ Anesthesiology, on-call and promptly available with a mechanism established to ensure that the anesthesiologist	Emergency Medicine: Chapter 7, pages 49-52 ▪ **ACS CD 7-1 TYPE I: Must have a designated emergency physician director supported by an appropriate number of physicians to ensure immediate care of injured patients.**

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	is in the operating room when the patient arrives. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergency situations in trauma patients and of providing any indicated emergency anesthesia treatment and are supervised by the staff anesthesiologist. The staff anesthesiologist on-call shall be advised about the patient, be promptly available at all times, and be present for all operations. ▪ The following services shall be in-house or may be provided through a written transfer agreement: ○ Burn care ○ Pediatric care ○ Rehabilitation services <u>Section 100237</u> Immediately or immediately available means: ▪ Unencumbered by conflicting duties or responsibilities; ▪ Responding without delay when notified; and ▪ Being physically available to the specified area of the trauma center when the patient is delivered in accordance with the local EMS agency policies and procedures. <u>Section 100241</u> Promptly or promptly available means: ▪ Responding without delay when notified and requested to respond to the hospital; and ▪ Being physically available to the specified area of the trauma center within a period of time that is medical prudent and in accordance with the local EMS agency policies and procedures. <u>Section 100242</u> Qualified surgical specialist ▪ Physician licensed in CA ▪ Board certified in a specialty by the American Board of Medical Specialties, or a board approved by the American Board of Medical Specialties	▪ ACS CD 7-3 TYPE II: Occasionally it is necessary for the physician to leave the emergency department for short periods to address in-house emergencies. Such cases and their frequency, must be reviewed through the PIPS program to ensure that this practice does not adversely affect the care of patients in the emergency department. ▪ ACS CD 7-4 TYPE II: Trauma centers with emergency residency training programs, must provide supervision by an in-house attending physician 24 hours per day. ▪ ACS CD 7-5 TYPE II: The roles, responsibilities of the emergency physicians must be defined and approved by the director of trauma service. ▪ ACS CD 7-6 TYPE II: Board certification or eligibility for certification by appropriate emergency medicine board to current requirements or alternate pathway for physicians staffing the emergency department and caring for trauma patients. ▪ ACS CD 6-3 TYPE II: : Emergency physicians trained outside of the US or Canada may be eligible to participate in a trauma program through an alternate pathway for Non-Board Certified Emergency Medicine Physicians, see www.facs.org/quality-programs/trauma/vrc/resources ▪ ACS CD 7-7 TYPE II: Emergency physicians on the call panel must be regularly involved in the care of injured patients. ▪ ACS CD 7-8 TYPE II: A representative from the emergency department must participate in the prehospital PIPS program. ▪ ACS CD 7-9 TYPE II: A designated emergency

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		physician liaison must be available to the trauma director for PIPS issues that occur in the emergency department. ▪ ACS CD 7-10 TYPE II: Emergency physicians must participate actively in the trauma PIPS program and multidisciplinary trauma peer review committee. ▪ ACS CD 7-11 TYPE II: The emergency medicine liaison on the multidisciplinary trauma peer review must attend a minimum of 50% of the meetings. ▪ ACS CD 7-14 TYPE II: All board certified emergency physicians or those eligible for certification must have successfully completed the ATLS course at least once. ▪ ACS CD 7-15 TYPE II: Physicians certified by boards other than emergency medicine who treat trauma patients in the emergency department are required to have current ATLS status. Anesthesiology: Chapter 11, pages 76-77 ▪ **ACS CD 11-1 TYPE I: Services are critical in the management of severely injured patients and must be available within 30 minutes for emergency operations.** ▪ **ACS CD 11-2 TYPE I: Services are critical in the management of severely injured patients and must be available within 30 minutes for managing airway problems.** ▪ **ACS CD 11-3 TYPE I: A qualified and dedicated physician anesthesiologist must be designated as the liaison to the trauma program.** ▪ ACS CD 11-6 TYPE II: Availability of anesthesia services and delays in airway control or operations

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		must be documented by the hospital PIPS program. ▪ **ACS CD 11-7 TYPE I: In-house anesthesia services are not required, but anesthesiologists or CRNA's must be available within 30 minutes.** ▪ **ACS CD 11-8 TYPE I: In trauma centers without in-house anesthesia services, protocols must be in place to ensure the timely arrival at the bedside by the anesthesia provider within 30 minutes of notification and request.** ▪ **ACS CD 11-9 TYPE I: Trauma center without in-house anesthesia, the presence of a physician skilled in emergency airway management must be documented.** ▪ ACS CD 6-3 TYPE II: Anesthesiologist not currently board certified in the US or Canada may be eligible to participate in a trauma program through an alternate pathway for Non-Board Certified Anesthesiologists, see www.facs.org/quality-programs/trauma/vrc/resources ▪ ACS CD 11-12 TYPE II: Trauma center participation in the trauma PIPS program by the anesthesia liaison is essential. ▪ ACS CD 11-13 TYPE II: The anesthesiology liaison to the trauma program must attend at least 50% of the multidisciplinary peer review meetings, with documentation by the trauma PIPS program Burn Care: Chapter 14, page 100 ▪ ACS CD 14-1 TYPE II: Trauma centers that refer burn patients to a designated burn center must have in place written agreements with the referral burn center.

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		Pediatric Care: Chapter 2, page 21 ▪ ACS CD 2-23 TYPE II: Any adult trauma center that annually admits 100 or more injured children younger than 15 years must demonstrate capability to care for injured children. Trauma surgeons must be credentialed for pediatric trauma care by the hospital's credentialing body. ▪ ACS CD 2-24 TYPE II: (Any adult trauma center that annually admits 100 or more injured children younger than 15 years), must have a pediatric emergency department area, a pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma PIPS program. ▪ ACS CD 2-25 TYPE II: For adult centers annually admitting fewer than 100 injured children younger than 15 years, these resources are desirable. These hospitals must review the care of their injured children through the PIPS program. Rehabilitation Services: Chapter 12, page 92 ▪ ACS CD 12-3 TYPE II: Physical therapy must be provided. ▪ ACS CD 12-4 TYPE II: Social services must be provided.
Service Capabilities	Section 100263 (k), (1-3) The following service capabilities: ▪ Radiological service. The radiological service shall have a radiological technician promptly available. ▪ Clinical laboratory service. A clinical laboratory service shall include: ○ A comprehensive blood bank or access to a community central blood bank; and ○ Clinical laboratory services promptly available. ▪ Surgical Service. A surgical service shall have an	Radiological Services: Chapter 11, pages 78-80 ▪ ACS CD 11-28 TYPE II: Must 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. ▪ **ACS CD 11-29 TYPE I: Conventional radiography must be available 24 hours a day.**

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	operating suite that is available or being utilized for trauma patients and that has: ○ Operating staff who are promptly available; and ○ Appropriate surgical equipment and supplies requirement which have been approved by the local EMS Agency. Sections 100241 Promptly or promptly available means: ▪ Responding without delay when notified and requested to respond to the hospital; and ▪ Being physically available to the specified area of the trauma center within a period of time that is medical prudent and in accordance with the local EMS agency policies and procedures	▪ **ACS CD 11-30 TYPE I: Computed tomography (CT) must be available 24 hours a day.** ▪ **ACS CD 11-32 TYPE I: Qualified radiologists must be available within 30 minutes in person or by teleradiology for the interpretation of radiographs.** ▪ ACS CD 11-34 TYPE II: Diagnostic information must be communicated in a written or electronic form and in a timely manner. ▪ ACS CD 11-35 TYPE II: Critical information deemed to immediately affect patient care must be verbally communicated to the trauma team in a timely manner. ▪ ACS CD 11-36 TYPE II: The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretations. ▪ ACS CD 11-37 TYPE II: Changes in the interpretation between preliminary and final reports, as well as missed injuries, must be monitored through the PIPS program. ▪ ACS CD 11-47 TYPE II: If the CT technologist takes call from outside the hospital, the PIPS program must document the technologist's time of arrival at the hospital. Clinical Laboratory Service: Chapter 11, page 85 ▪ **ACS CD 11-80 TYPE I: Laboratory services must be available 24 hours per day for the standard analyses of blood, urine, and other body fluids, including microsampling.** ▪ **ACS CD 11-81 TYPE I: Blood band must be capable**

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		of blood typing and cross-matching. ▪ **ACS CD 11-83 TYPE I: Blood bank must have an adequate supply of packed red blood cells and fresh frozen plasma available within 15 minutes.** ▪ **ACS CD 11-84 TYPE I: Must have a massive transfusion protocol developed collaboratively between the trauma service and the blood bank.** ▪ **ACS CD 11-85 TYPE I: Coagulation studies, blood gas analysis, and microbiology studies must be available 24 hours per day.** Surgical Service: Chapter 11, pages 77-78 ▪ **ACS CD 11-7 TYPE I: An operating room must be adequately staffed and available within 30 minutes.** ▪ ACS CD 11-18 TYPEII: If an on-call team is used, the availability and timeliness of starting operations must be continuously evaluated by the trauma PIPS process, and measure must be implemented to ensure optimal care. ▪ **ACS CD 11-19 TYPE I: Must have rapid fluid infusers, thermal control equipment for patients and resuscitation fluids, intraoperative radiologic capabilities, equipment for fracture fixation, equipment for bronchoscopy, gastrointestinal endoscopy.** ▪ **ACS CD 11-20 TYPE I: If neurosurgery services are offered, must have necessary equipment to perform a craniotomy.** ▪ **ACS CD 11-24 TYPE I: Must have a PACU with qualified nurses available 24 hours a day to provide**

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		care for the patient needed during the recovery phase. ▪ ACS CD 11-25 TYPE II: If on-call team used for the PACU, availability of the PACU nurses and compliance with this requirement must be documented by the PIPS program. ▪ **ACS CD 11-26 TYPE I: PACU must have the necessary equipment to monitor and resuscitate patients, consistent with the process of care designated by the institution.** ▪ ACS CD 11-27: The PIPS program, at a minimum, must address the need for pulse oximetry, end-tidal carbon dioxide detection, arterial pressure monitoring, pulmonary artery catheterization, patient rewarming, and intracranial pressure monitoring.
	Not required in Title 22	Additional Collaborative Services: Chapter 11, pages 84-86 Medical Consultants: ▪ ACS CD 11-74 TYPE II: Internal medicine specialist must be available on the medical staff. Table 2, Chapter 11, page 84 Support Services: ▪ **ACS CD 11-76 TYPE I: Must have a respiratory therapist on call 24 hours a day.** ▪ ACS CD 11-78 TYPE II: Must have a transfer agreement for dialysis if hospital doesn't have dialysis capabilities. Advanced Practitioners: ▪ ACS CD 11-86 TYPE II: Advanced practitioners who participate in the initial evaluation of trauma patients

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		must demonstrate current verification as an Advanced Trauma Life Support provider. ▪ ACS CD 11-87 TYPE II: Must demonstrate appropriate orientation, credentialing processes, and skill maintenance for advanced practitioners, as witnessed by an annual review by the trauma medical director.
Transfer of patients	Section 100263 (l) Written transfer agreements with Level I or II trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for immediate transfer of those patients for whom the most appropriate medical care requires additional resources. Section 100266, (a) (1, 2), (b), (c), (d) Interfacility Transfer of Trauma Patients • Patients may be transferred between and from trauma centers providing that: ○ Any transfer shall be, as determined by the trauma center surgeon of record, medically prudent and, ○ In accordance with local EMS agency interfacility transfer policies. • Hospitals shall have written transfer agreements with trauma centers. Hospitals shall develop written criteria for consultation and transfer of patients needing a higher level of care. • Hospitals which have repatriated trauma patients from a designated trauma center shall provide the information required by the system trauma registry, as specified by local EMS agency policies, to the transferring trauma center for inclusion in the system trauma registry. • Hospitals receiving trauma patients shall participate in system and trauma center quality improvement activities for those trauma patients who have been transferred.	Interhospital Transfers: Chapter 2, page 20, Chapter 4, pages 30-34, Chapter 11, page 84 ▪ ACS CD 2-13 TYPE II: Well-defined transfer plans are essential. ▪ ACS CD 4-1 TYPEII: Direct physician to physician contact is essential. ▪ ACS CD 4-2 TYPE II: Decision to transfer an injured patient to a specialty care facility in an acute situation must be based solely on the needs of the patient and not the specific provider network or the patient's ability to pay. ▪ ACS CD 4-3 TYPE II: An effective PIPS program that includes evaluating transport activities is a very important aspect of interhospital transfer. Perform a PIPS review of all transfers. ▪ ACS CD 8-5 TYPE II: All patients being transferred for specialty care (burn care, microvascular surgery, cardiopulmonary bypass capability, complex ophthalmologic surgery, high complexity pelvic fractures) agreements with a similar or higher qualified trauma center should be in place. A clear plan for expeditious critical care transport, follow-up, and performance monitoring is required. If complex cases are being transferred out, a contingency plan should be in place and include the following:

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		○ A credentialing process to allow the trauma surgeon to provide initial evaluation and stabilization of the patient. ○ Transfer agreements with similar or higher verified trauma centers. ○ Direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. ○ Monitoring of the efficacy of the process by the PIPS programs.
Outreach	Section 100263, (m) (1-2) An outreach program, to include: • Capability to provide both telephone and on-site consultations with physicians in the community and outlying areas; and • Trauma prevention for the general public.	Outreach and Education: Chapter 17, pages 134-138 ▪ ACS CD 17-1 TYPE II: All verified trauma centers must engage in public and professional education.
Continuing Education	Section 100263, (n) (1-5) Continuing education in trauma care, shall be provided for: • Staff physicians • Staff nurses • Staff allied health personnel • EMS personnel • Other community physicians and health care personnel	Outreach and Education: Chapter 17, pages 134-138, Chapter 3, page 23 ▪ ACS CD 17-4 TYPE II: Must provide a mechanism to offer trauma-related education to nurses involved in trauma care. ▪ ACS CD 6-9, 7-14, 11-86, 7-14, 11-86, 17-5 TYPE II: Successful completion of the ATLS course, at least once, is required for all general surgeons, emergency physicians, and midlevel providers on the trauma team. ▪ ACS CD 3-1 TYPE II: Must participate in the training of prehospital personnel.

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Quality Improvement Process	Section 100265 (a-e) Shall have a quality improvement process to include structure, process, and outcome evaluations which focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process. In addition the process shall include: A detailed audit of all trauma-related deaths, major complications and transfers (including interfacility transfer); • A multidisciplinary trauma peer review committee that includes all member of the trauma team, • Participation in the trauma system data management system, • Participation in the local EMS agency trauma evaluation committee, and • Have a written system in place for patients, parents of minor children who are patients, legal guardian(s) of children who are patients, and/or primary caretaker(s) of children who are patients to provide input and feedback to hospital staff regarding the care provided to the child. • Following of applicable provisions of Evidence Code Section 1157.7 to ensure confidentiality.	Performance Improvement and Patient Safety: Chapter 16, pages 114-132 ▪ **ACS CD 2-1 TYPE I: Must have an integrated, concurrent performance improvement and patient safety (PIPS) program to ensure optimal care and continuous improvement in care.** ▪ ACS CD 16-1 TYPE II: Must have a PIPS program that includes a comprehensive written plan outlining the configuration and identifying adequate personnel to implement that plan and an operational data management system. ▪ ACS CD 15-1 TYPE II: PIPS must be supported by a reliable method of data collection that consistently obtains information necessary to identify opportunities for improvement. ▪ ACS CD 2-17 TYPE II: Processes of event identification and levels of review must result in the development of corrective action plans, and methods of monitoring, reevaluation, and benchmarking must be present. ▪ ACS CD 16-2 TYPE II: Problem resolution, outcome improvements, and assurance of safety (“loop closure”) must be readily identifiable through methods of monitoring, reevaluation, benchmarking, and documentation. ▪ ACS CD 2-18 TYPE II: Peer review to occur at regular intervals to ensure that the volume of cases is reviewed in a timely fashion. ▪ ACS CD 16-3 TYPE II: Integrate with the hospital quality and patient safety effort and have a defined reporting structure and method for provision of feedback.

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		▪ **ACS CD 5-1 TYPE I: Be empowered to address events that involve multiple disciplines and be endorsed by hospital governing body as its commitment to optimal care.** ▪ **ACS CD 5-1 TYPE I: Must have adequate administrative support to ensure evaluation of all aspects of trauma care.** ▪ **ACS CD 5-1 TYPE I: The trauma medical director and trauma program manager must have the authority and be empowered by the hospital governing body to lead the program.** ▪ ACS CD 5-11 TYPE II: The trauma medical director must have sufficient authority to set the qualifications for the trauma service members, including individuals in the specialties that are routinely involved with the care of trauma patients. The TMD must have the authority to recommend changes for the trauma panel based on performance review. ▪ ACS CD 5-25 TYPE II: The peer review committee must be chaired by the TMD. ▪ ACS CD 6-8, 7-11, 9-16, 11-13, 11-62 TYPE II: Representation from general surgery and liaisons to the trauma program from emergency medicine, orthopaedics, anesthesiology, and critical care must be identified and participate actively in the trauma PIPS program with at least 50% attendance at multidisciplinary trauma peer review committee. ▪ ACS CD 8-13 TYPE II: Centers with any emergent neurosurgical cases must have the participation of neurosurgery on the multidisciplinary trauma peer review committee.

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		▪ ACS CD 15-1 TYPE II: Must demonstrate all trauma patients can be identified for review. ▪ ACS CD 15-2 TYPE II: The trauma registry must submit the required data elements to the NTDB. ▪ ACS CD 15-3 TYPE II: PIPS program must be supported by a registry and a reliable method of concurrent data collection that consistently obtains information necessary to identify opportunities. ▪ ACS CD 15-5 TYPE II: Must use a risk adjusted benchmarking system to measure performance and outcomes. ▪ ACS CD 16-4 TYPE II: The trauma program must use clinical practice guidelines, protocols, and algorithms derived from evidences-based validated resources to reduce unnecessary variation in the care of trauma patients. ▪ ACS CD 16-5 TYPE II: All process and outcomes measures must be documented within the trauma PIPS program's written plan and reviewed and updated at least annually. ▪ ACS CD 16-6 TYPE II: Mortality Review. All trauma-related mortalities must be systematically reviewed and mortalities with opportunities for improvement identified for peer review. ○ Total trauma-related mortality rates. Outcome measures for total, pediatric (younger than 15 years of age), and geriatric (older than 64 years) trauma encounters should be categorized as follows: • DOA (pronounced dead on arrival with no additional resuscitation efforts initiated in the emergency department)

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		• DIED (died in the emergency department despite resuscitation efforts). • In-hospital (including operating room). ○ Mortality rates by Injury Severity Scale (ISS) subgroups using Table 1. Page 116. ▪ ACS CD 2-9 TYPE II: Trauma surgeon on-call response for the highest level of activation must be continuously monitored, variances documented and reviewed for reason for delay, opportunities for improvement, and corrective actions. The minimum threshold is within 30 minutes of patient arrival. ▪ ACS CD 5-13 TYPE II: Criteria for all levels of TTA must be defined and reviewed annually. Minimum criteria for the highest level activation included Table 2, page 120. Additional institutional criteria may be added. ▪ ACS CD 5-15 TYPE II: All TTA must be categorized by the level of response and quantified by number and percentage as shown in Table 2, page 120. ▪ ACS CD 5-16 TYPE II: Trauma surgeon response time to other levels of TTA, and for back-up call response, should be determined and monitored. Variances (criteria added by the trauma program) should be documented and reviewed for reason for delay, opportunities for improvement, and corrective actions. ▪ ACS CD 5-16 TYPE II: Response parameters for consultants addressing time-critical injuries (epidural hematoma, open fractures, and hemodynamically unstable pelvic fractures) must be determined and monitored. ▪ ACS CD 16-7 TYPE II: Rates of undertriage and

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		overtriage must be monitored and reviewed quarterly. ▪ ACS CD 5-18 TYPE II: Trauma patient admissions (NTDB definition) to a nonsurgical service is higher than 10%. ▪ ACS CD 9-14, 3-4, 4-3 TYPE II: All trauma patients who are diverted or transferred during the acute phase of hospitalization to another trauma center, acute care hospital, or specialty hospital (burn center, re-implantation center or pediatric trauma center) or patients requiring cardiopulmonary bypass or when specialty personnel are unavailable must be subjected to individual case review to determine the rationale for transfer, appropriateness or care, and opportunities for improvement. Follow up from the center to which to patient was transferred should be obtained as part of the review. ▪ ACS CD 8-5 TYPEII: Patients being transferred out for specialty care, such as burn or replantation, a four step contingency plan must be in place. ▪ ACS CD 7-3 TYPE II: Any instance in which the emergency department is left uncovered must be reviewed for timeliness of response and appropriateness of care for trauma patients in the emergency department at that time. ▪ ACS CD 3-6 TYPE II: Trauma center diversion-bypass hours must be routinely monitored, documented, and reported, including the reason for initiating the diversion policy and must not exceed 5%. ▪ ACS CD 8-9 TYPE II: All cases with neurologic injury must be routinely monitored, and any case not transferred to a higher level of care must be subjected to individual case review for timeliness of response and

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		appropriateness of care. ▪ ACS CD 11-4, 11-7, 11-6,11-16,11-18 TYPE II: ○ In-house anesthesia service (emergency department, intensive care unit, floor, and post-anesthesia care unit) must be available for the care of trauma patients. ○ Operating room delays involving trauma patient because of lack of anesthesia support services must be identified and reviewed to determine the reason for delay, adverse outcomes, and opportunities for improvement. ▪ ACS CD 11-16, 11-18, TYPE II: Delay in operating room availability must be routinely monitored. Any case that is associated with a significant delay or adverse outcome must be reviewed for reason for delay and opportunities for improvement. ▪ ACS CD 11-16, 11-18, 11-25, TYPE II: Response times of operating room and post-anesthesia care unit personnel when responding from outside the trauma center must be routinely monitored. ▪ **ACS CD 11-32, 11-37 TYPE I: Rate of change in interpretation of radiologic studies should be categorized by RADPEER or similar criteria (describe process/scoring metric used).** ▪ **ACS CD 11-29,11-30, 11-31, 11-32, 11-33, 11-34,11-35,11-36,11-37, 11-46 TYPE I: Response times of CT technologist (30 minutes), magnetic resonance imaging (60 minutes), interventional radiology team (30 minutes) when responding from outside the trauma center.** ▪ ACS CD 16-8 TYPE II: Transfers to a higher level of care within the institution must be routinely monitored

Requirement	TITLE 22	ACS ORANGE BOOK®
		and cases identified must be reviewed to determine the rationale for transfer, adverse outcomes, and opportunities for improvement. ▪ ACS CD 16-9 TYPE II: Solid organ donation rate must be routinely monitored and reviewed annually. All trauma patients determined brain dead according to the institution's policy should be referred to the local/regional organ procurement agency. ▪ ACS CD 15-6 TYPE II: The percentage of completed trauma registry record within 2 months of discharge should be determined. The threshold is 80%. ▪ ACS CD 5-10,6-8,7-11,9-16,11-13,11-62, TYPE II: Multi trauma peer review committee attendance should be 50% or greater for the liaison and may not be met by attendance of multiple different providers in a specialty. ▪ ACS CD 16-10 TYPE II: Sufficient mechanisms must be available to identify events for review by the trauma PIPS program. ▪ ACS CD 16-11 TYPE II: Once an event is identified, the trauma PIPS program must be able to verify and validate that event. ▪ ACS CD 16-12 TYPE II: There must be a process to address trauma program operational events. ▪ ACS CD 6-13 TYPE II: Documentation (minutes) reflects the review of operational events and, when appropriate, the analysis and proposed corrective actions. ▪ ACS CD 16-14 TYPE II: Mortality data, adverse events and problem trends, and selected cases involving multiple specialties must undergo multidisciplinary

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		trauma peer review. ▪ ACS CD 5-10, 6-8,7-11,9-16,11-13,11-62 TYPE II: This may be accomplished in a variety of formats, must involve the participation and leadership of the trauma medical director; the group of general surgeons on the call panel; and the liaisons from emergency medicine, orthopaedics, neurosurgery, anesthesia, critical care, and radiology. ▪ ACS CD 16-15 TYPE II: Each member of the committee must attend at least 50% of all multidisciplinary trauma peer review committee meetings. ▪ ACS CD 16-16 TYPE II: When general surgeons cannot attend the multidisciplinary trauma peer review meeting, the trauma medical director must ensure that they receive and acknowledge the receipt of critical information generated at the meeting to close the loop. ▪ ACS CD 16-17 TYPE II: The multidisciplinary trauma peer review committee must systemically review mortalities, significant complications, and process variances associated with unanticipated outcomes and determine opportunities for improvement. ▪ ACS CD 16-18 TYPE II: When an opportunity for improvement is identified, appropriate corrective actions to mitigate or prevent similar future adverse events must be developed, implemented, and clearly documented by the trauma PIPS program. ▪ ACS CD 16-19 TYPE II: An effective performance improvement program demonstrates through clear documentation that identified opportunities for improvement lead to specific interventions that result in an alteration in conditions such that similar adverse

Requirement	TITLE 22	ACS ORANGE BOOK®
		events are less likely to occur.
Trauma Registry	Section 100257, (a) (1-3), (b), (c) (1-4) Data Collection: ▪ Local EMS Agency shall develop and implement a standard data collection instrument and implement a data management system for trauma care. ○ The system shall include the collection of both prehospital and hospital patient care data, as determined by the local EMS agency; ○ Trauma data shall be integrated into the local EMS agency and State EMS Authority management system; and ○ All hospitals that receive trauma patients shall participate in the local EMS agency data collection effort in accordance with local EMS agencies policies and procedures. ▪ Prehospital data shall include at least those data elements on the EMT-P Patient Care Record, as specified in Section 100176 of the EMT-P regulations. ▪ Hospital data should include at least the following, when applicable: ○ Time of arrival and patient treatment in : • Emergency department or trauma receiving area; and • Operating room. ○ Dates for: • Initial admission, • Intensive care, and • Discharge. ○ Discharge data, including: • Total hospital charges (aggregate dollars only) • Patient destination; and • Discharge diagnosis. ▪ The local EMS agency shall provide periodic reports to all	Trauma Registry: Chapter 15, pages 107-113 ▪ ACS CD 15-1 TYPE II: Trauma registry data must be collected and analyzed by every trauma center. ▪ ACS CD 15-2 TYPE II: Data must be collected in compliance with the National Trauma Data Standard (NTDS) and submitted to the National Trauma Data Base (NTDB) every year in a timely fashion so they can be aggregated and analyzed at the national level. ▪ ACS CD 15-3 TYPE II: The trauma registry is essential to the performance improvement and patient safety (PIPS) program and must be used to support the PIPS process. ▪ ACS CD 15-4 TYPE II: PIPS findings must be used to identify injury prevention priorities that are appropriate for local implementation. ▪ ACS CD 15-5 TYPE II: All trauma centers must use a risk adjusted benchmarking system to measure performance and outcome. ▪ ACS CD 15-6 TYPE II: Trauma registries should be concurrent. At a minimum, 80% of cases entered within 60 days of discharge. ▪ ACS CD 15-7 TYPE II: Registrars must attend or have previously attended two courses within 12 months of being hired: ○ American Trauma Society's Trauma Registrar Course or equivalent provided by a state trauma program; ○ Association of the Advancement of Automotive

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	hospitals participating in the trauma system.	Medicine's Injury Scaling Course. ▪ ACS CD 15-8 TYPE II: The trauma program must ensure that appropriate measures are in place to meet the confidentiality requirements of the data. ▪ ACS CD 15-9 TYPE II: One full-time equivalent employee dedicated to the registry must be available to process the data capturing the NTDS set for each 500-750 admitted patients annually. ▪ ACS CD 15-10 TYPE II: Strategies for monitoring data validity are essential.
Prehospital	Section 100263, (n) (1-5) Continuing education in trauma care, shall be provided for: • Staff physicians • Staff nurses • Staff allied health personnel • EMS personnel • Other community physicians and health care personnel	Prehospital Trauma Care: Chapter 3, pages 23-28 ▪ ACS CD 3-1 TYPE II: Trauma program must participate in the training of prehospital personnel, the development and improvement of prehospital care protocols, and performance improvement and patient safety programs. ▪ ACS CD 3-2 TYPE II: Protocols that guide prehospital trauma care must be established by the trauma health care team, including surgeons, emergency physicians, medical directors for EMS agencies, and basic and advanced prehospital personnel. ▪ ACS CD 3-3 TYPE II: Rigorous multidisciplinary performance improvement is essential to evaluate overtriage and undertriage rates to attain the optimal goal of less than 5% undertriage. ▪ ACS CD 3-4 TYPE II: The trauma director must be involved in the development of the trauma center's bypass (diversion) protocol. ▪ ACS CD 3-5 TYPE II: The trauma surgeon must be involved in the decision regarding bypass (diversion)

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		each time the center goes on bypass. ▪ ACS CD 3-6 TYPE II: The trauma center must not be on bypass (diversion) more than 5% of the time. ▪ ACS CD 3-7 TYPE II: When a center is required to go on bypass or to divert, the center must have a system to notify dispatch and EMS agencies. Must do the following: ○ Prearrange alternative destinations with transfer agreements in place ○ Notify other centers of divert or advisory status ○ Maintain a divert log ○ Subject all diverts and advisories to performance improvement procedures
Trauma System Evaluation	Section 100258 (a), (b, (c), (d) ▪ The local EMS agency shall be responsible for the development and ongoing evaluation of the trauma system. ▪ The local EMS agency shall be responsible for the development of a process to receive information from EMS providers, participating hospitals and the local medical community on the evaluation of the trauma system, including but not limited to: ○ Trauma plan ○ Triage criteria ○ Activation of trauma team ○ Notification of specialists ▪ The Local EMS Agency shall be responsible for periodic performance evaluation of the trauma system, which shall be conducted at least every two (2) years. Results to be made available to system participants. ▪ The Local EMS Agency shall be responsible for ensuring	Regional Trauma Systems: Chapter 1, pages 8-14, Chapter 22, Pg. 158 ▪ ACS CD 1-1 TYPE II: Trauma center and their health care providers are essential system resources and must be active and engaged participants. ▪ ACS CD 1-2 TYPE II: Must function in a way that pushes trauma center-based standardization, integration, and PIPS out to the region while engaging in inclusive trauma system planning and development. ▪ ACS CD 1-3 TYPE II: Meaningful involvement in state and regional trauma system planning, development, and operation is essential for all trauma centers participating within a region. ▪ ACS CD 15-1 TYPE II: The foundation for evaluation of a trauma system is the establishment and maintenance of a trauma registry.

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	that trauma centers and other hospitals that treat trauma patients participate in the quality improvement process.	
Prevention	Not included in Title 22 for a Level III	Prevention: Chapter 18, pages 139-142 ▪ ACS CD 18-1 TYPE II: Trauma centers must have an organized and effective approach to injury prevention, must prioritize those efforts based on local trauma registry and epidemiologic data. ▪ ACS CD 18-2 TYPE II: Each trauma center must have someone in a leadership position that has injury prevention as part of his or her job description. ▪ ACS CD 18-3 TYPE II: Universal screening for alcohol use must be performed for all injured patients and must be documented.
Rural Trauma Care	Not included in Title 22 for a Level III	Rural Trauma Care: Chapter 13, pages 94-98 ▪ ACS CD 4-1 TYPE II: Direct contact of the physician or midlevel provider with a physician at the receiving hospital is essential. ▪ ACS CD 2-13 TYPE II: Transfer guidelines and agreements between facilities are crucial and must be developed after evaluating the capabilities of rural hospitals and medical transport agencies. ▪ ACS CD 4-3 TYPE II: All transfers must be evaluated as part of the receiving trauma center's PIPS process, and feedback should be provided to the transferring center. ▪ ACS CD 15-1 TYPE II: The foundation for evaluation of a trauma system is the establishment and maintenance of a trauma registry.

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		▪ ACS CD 6-10 TYPE II: Issues that must be reviewed will revolve predominately around: ○ System and process issues such as documentation and communication; ○ Clinical care, including identification and treatment of immediate life-threatening injuries (ATLS); and ○ Transfer decisions ▪ ACS CD 1-1 TYPE II: the best possible care for patients must be achieved with a cooperative and inclusive program that clearly defines the role of each facility within the system.
Disaster Planning	Not included in Title 22 for a Level III	Disaster Planning: Chapter 20, pages 149-153 ▪ ACS CD 20-1 TYPE II: Trauma centers must meet the disaster-related requirement of the Joint Commission. ▪ ACS CD 20-2 TYPE II: A surgeon from the trauma panel must be a member of the hospital's disaster committee. ▪ ACS CD 20-3 TYPE II: Hospital drills that test the individual hospital's disaster plan must be conducted at least twice a year, including actual plan activations that can substitute for drills. ▪ ACS CD 20-4 TYPE II: All trauma centers must have a hospital disaster plan described in the hospital's policy and procedure manual or equivalent.
Solid Organ Procurement Activities	Not included in Title 22 for a Level III	Solid Organ Procurement Activities: Chapter 21, pages 155-156 ▪ ACS CD 21-1 TYPE II: Must have an established relationship with a recognized organ procurement organization (OPO).

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		▪ ACS CD 21-2 TYPE II: A written policy must be in place for triggering notification of the regional OPO. ▪ ACS CD 16-9 TYPE II: The trauma center must review its solid organ donation rate annually. ▪ ACS CD 21-3 TYPE II: It is essential to have written protocols defining the clinical criteria and confirmatory tests for the diagnosis of brain death.

Requirements specific ONLY to Title 22 and not found specifically in ACS Orange Book are in Red
Orange = ACS Orange Book Level III criteria
ACS Type I CD's are underlined and in Bold
ACS Type II CD's are not underlined