Chapter DHS 118

APPENDIX A

	Level	Criterion	Type
1.		Trauma Care Systems	
(a)	III, IV	TCFs and their health care providers must be active and engaged participants in the trauma care system and promote standardization, integration, and PIPS throughout the region and state. TCFs must be involved in state and regional trauma care system planning, development and operation and actively participate in regional and statewide trauma care system meetings and committees that provide oversight. The TPM, TMD or trauma registrar must attend at least 50% of the TCF's RTAC meetings annually. The TPM, TMD or trauma registrar may not represent more than three TCFs at any one RTAC meeting.	2
2.		Description of Trauma Care Facilities and Their Roles in a Trauma Care System	
(a)	III, IV	The TCF must have an integrated, concurrent trauma PIPS program.	1
(b)	III	The TCF must have surgical commitment. Surgical commitment may be demonstrated in a number of ways, including: (1) Having a surgeon who is the full-time director of the trauma program. (2) Having surgeons who take an active role in all aspects of caring for injured patients. (3) Having surgical participation in the trauma PIPS program. (4) Having surgeons who assume an advocacy role for injured patients. (5) Having surgical leadership promoting the trauma program to the community, hospital and other colleagues.	1
(c)	III, IV	The TCF must be able to provide the necessary human and physical resources including the physical plant and equipment as well as policies and procedures to properly administer acute care for all ages, consistent with their level of classification.	2
(d)	III, IV	To care for adult patients, the TCF must have emergency department policies, procedures, protocols, or guidelines for: (1) Sedation and analgesia. (2) Medical imaging. (3) Injury imaging. (4) Dosing for intubation medications, code drugs and neurologic drugs.	2

	Level	Criterion	Type
(e)	III, IV	The TCF must have the following medications and equipment readily available for emergency care: (1) Airway control and ventilation. (2) Pulse oximetry. (3) End tidal carbon dioxide determination. (4) Suction. (5) Electrocardiogram monitoring or defibrillation. (6) Fluid administration such as standard intravenous therapy or large-bor administration devices and catheters. (7) Cricothyrotomy, thorascostomy, vascular access and chest decompression. (8) Gastric decompression. (9) Conventional radiology. (10) Two-way radio communication with ambulance crew or rescue. (11) Skeletal and cervical immobilization. (12) Thermal control for patients and resuscitation fluids. (13) Rapid fluid infusion.	2
(f)	III	It is expected that the surgeon will be in the emergency department on patient arrival with adequate notification from the field. The maximum acceptable surgeon response time, with notification from the field and tracked from patient arrival, is 30 minutes for the highest level activation. The surgeon must be activated for all highest level activations regardless of impending transfer or other scenario. The TCF must demonstrate, through documentation in the medical record, that a surgeon is present within 30 minutes at least 80% of the time for all highest level activations. All activations and response times must be reviewed in the trauma PIPS program. For TCFs with less than six highest level activations annually, surgeon response time may be tracked over three years.	1
(g)	IV	It is expected that a physician, if available or APP/midlevel provider will be in the emergency department on patient arrival with adequate notification from the field. The maximum acceptable response time for a physician or APP/midlevel provider, with notification from the field and tracked from patient arrival, is 30 minutes for the highest level activation. The TCF must demonstrate, through documentation in the medical record, that a physician or APP/midlevel provider is present within 30 minutes at least 80% of the time for all highest level activations. All activations and response times must be reviewed in the trauma PIPS program. For TCFs with less than six highest level activations annually, physician and APP/midlevel provider response time may be tracked over three years.	1
(h)	III	The TCF must have continuous general surgical coverage. The TCF must have a back-up plan in place for when a surgeon is not available. The back-up plan may include activation of a back-up surgeon or transfer of the patient. A surgeon may be on-call at more than one TCF but each TCF must have a back-up plan. The TCF must monitor all the times that a surgeon is unable to respond through the trauma PIPS program.	2
(i)	III, IV	The TCF must have transfer plans that include a plan for expeditious critical care transport, follow-up and performance monitoring.	2

	Level	Criterion	Type
(j)	IV	The TCF must have collaborative treatment and transfer guidelines reflecting the TCF's capabilities. These treatment and transfer guidelines must be developed and regularly reviewed with input from higher-level TCFs in the region.	2
(k)	IV	The TCF must have 24-hour emergency coverage by a physician or APP/midlevel provider.	2
(l)	IV	The TCF's emergency department must: (1) Be continuously available for resuscitation. (2) Have continuous coverage by a registered nurse. (3) Have continuous coverage by a physician or APP/midlevel provider. (4) Have a physician as its medical director.	2
(m)	IV	Physicians licensed to practice medicine who treat trauma patients in the ED must be current in ATLS unless the physician is board-certified in emergency medicine. APPs/midlevel providers who participate in the initial evaluation of trauma patients must be current in ATLS. This may be fulfilled by the Comprehensive Advanced Life Support program if the program includes the mobile trauma module skills station and the provider is re-verified every four years. The Rural Trauma Team Development Course does not fulfill this requirement.	2
(n)	III, IV	A TMD and TPM knowledgeable and involved in trauma care must work together with guidance from the trauma multidisciplinary peer review committee to identify events, develop corrective action plans and ensure methods of monitoring, reevaluating and benchmarking.	2
(o)	III, IV	The trauma multidisciplinary peer review committee must: (1) Meet at least quarterly to ensure cases are being reviewed in a timely fashion. (2) Review systemic and care provider issues and propose improvements to the care of the injured patient. (3) Include the TPM, TMD and other key staff and departments involved with care of the trauma patient as members of the committee. (4) Have representation from general surgery, including all general surgeons taking trauma call. (5) Have liaisons from emergency medicine, orthopedics, anesthesiology, critical care and the ICU. (6) Have liaisons from all the specialty care services, such as neurosurgery and radiology, provided by the TCF. (7) Require 50% attendance of its continuous members and document attendance. (8) Systematically review mortalities, significant complications and process variances associated with unanticipated outcomes and determine opportunities for improvement, as evidenced by documented meeting minutes. (9) Review selected cases involving multiple specialties, mortality data, adverse events and problem trends. If a designated liaison is unable to attend, another representative from the same service team may participate in their place. The TCF may determine which members of the trauma multidisciplinary peer review committee are continuous versus ad-hoc.	2
(p)	III, IV	The TCF's trauma PIPS program must have audit filters to review and improve pediatric and adult patient care.	2

	Level	Criterion	Type
(q)	III, IV	If an adult TCF annually admits 100 or more injured patients younger than 15 years old, the TCF must: (1) Have trauma surgeons credentialed for pediatric trauma care by the facility's credentialing body. (2) Have a pediatric emergency department area. (3) Have a pediatric intensive care area. (4) Have appropriate resuscitation equipment. (5) Have a pediatric-specific trauma PIPS program.	2
(r)	III, IV	If an adult TCF annually admits fewer than 100 injured patients younger than 15 years old, the TCF must review the care of injured children as part of the trauma PIPS program. This review must include pediatric admissions and transfers.	2
3.		Prehospital Trauma Care	
(a)	III, IV	The TCF must participate in the training of prehospital care providers, the development and improvement of prehospital care protocols and the prehospital PIPS program. The TCF must review care and provide feedback to prehospital care providers. The TCF can participate in the training of prehospital care providers in a variety of ways including being involved in programs such as Prehospital Trauma Life Support (PHTLS), grand rounds, trauma conferences, and case reviews.	2
(b)	III, IV	The trauma health care team, including surgeons, emergency medicine physicians, medical directors for EMS agencies and basic and advanced prehospital personnel must actively participate in the development of protocols that guide prehospital care.	2
(c)	III	TCFs must evaluate over and under triage rates on a quarterly basis and perform rigorous multidisciplinary performance improvement to attain a goal of less than five percent under triage. If a TCF is not meeting this goal, the TCF must explain the variance and demonstrate that they are doing performance improvement work to reach this goal.	2
(d)	III, IV	A TCF must have a diversion protocol for trauma related occurrences, which includes a system to notify dispatch and EMS agencies.	2
(e)	III	The TMD must be involved in the development of the TCF's diversion protocol for trauma related occurrences.	2
(f)	III	A trauma surgeon must be involved in the decision each time the TCF goes on diversion for trauma related occurrences.	2
(g)	III	A TCF must not be on diversion for trauma related occurrences more than five percent of the time.	2
(h)	III, IV	When a TCF is required to divert for trauma related occurrences it must: (1) Notify other TCFs of divert or advisory status. (2) Maintain a divert log. (3) Review all diverts and advisories to the trauma PIPS program.	2
(i)	III, IV	The TCF must routinely document, report and monitor their diversion hours. This documentation must include the reason for initiating the diversion policy.	2
4.		Inter-hospital Transfer	
(a)	III, IV	When transferring a patient direct provider to provider contact is required.	2
(b)	III, IV	The TCF's 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 on the requirements of the patient's specific provider network or the patient's ability to pay.	2

	Level	Criterion	Type
(c)	III, IV	When a patient is being transferred out, the TCF must have a contingency plan that includes: (1) A credentialing process to allow the trauma surgeon or other physician to provide initial evaluation and stabilization of the patient. (2) A requirement for direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. (3) A review process through the trauma PIPS program to monitor the efficacy of the transfer process.	2
(d)	III, IV	The TCF must review all trauma patients who are transferred out during the acute care phase and all trauma patients transferred to a higher level of care within or outside of the TCF to review the rationale for transfer, appropriateness of care, adverse outcomes and opportunities for improvement. This case review should include evaluation of transport activities and follow-up from the TCF to which the patient was transferred.	2
5.	Hospital Organization and the Trauma Program		
(a)	III, IV	The decision of a hospital to become a TCF requires the commitment of the institutional governing body and the medical staff, and this administrative commitment must be documented. The TCF must have resolutions from both the institutional governing body and the medical staff acknowledging this commitment, and these resolutions must empower the trauma PIPS program to address events that involve multiple disciplines and to evaluate all aspects of trauma care.	1
(b)	III, IV	The TCF's administrative support must be current at the time of the site visit and must be reaffirmed every three years. The administrative support must be from the Board of Directors, Chief Executive Officer or Chief Administrator and the medical staff or medical executive committee.	2
(c)	III, IV	The trauma program must involve multiple disciplines and transcend normal department hierarchies by having appropriate specialty representation from all phases of care.	2
(d)	III, IV	The TMD must meet one of the following set of standards: (1) Be a current board-certified general surgeon, neurosurgeon or orthopedic surgeon and be actively involved in the care of trauma patients. (2) Be eligible for board certification in general surgery, neurosurgery or orthopedic surgery and be actively involved in the care of trauma patients. (3) Be approved to take trauma call through the alternate pathway requirements for general surgeons, neurosurgeons or orthopedic surgeons and be actively involved in the care of trauma patients. (4) Be a current board certified emergency medicine physician and staff the emergency department. (5) Be eligible for board certification as an emergency medicine physician and staff the emergency department. (6) Be approved to take trauma call through the alternate pathway for emergency medicine physicians and staff the emergency department.	1
(e)	III, IV	The TMD must be current in ATLS.	2
(f)	III, IV	The TMD must have the authority to manage all aspects of trauma care.	2
(g)	III	The TMD may not direct more than two trauma centers.	2
(h)	III, IV	The TMD must actively participate in the trauma multidisciplinary PIPS review committee.	2

	Level	Criterion	Type
(i)	III	The TMD, in collaboration with the TPM, must have the responsibility and authority to report any deficiencies in trauma care and any trauma team members who do not meet specified trauma call criteria to the appropriate person(s).	2
(j)	III	The TMD must conduct, and have the authority to conduct, an annual assessment of the trauma panel providers in the form of Ongoing Professional Practice Evaluation and Focused Professional Practice Evaluation when indicated by findings of the trauma PIPS process. The TMD must have the authority to recommend changes for the trauma panel based on performance review.	2
(k)	III, IV	The TMD and TPM must be granted authority by the hospital governing body to lead the trauma PIPS program. This authority must be evidenced in written job descriptions for both the TMD and TPM.	1
(l)	III, IV	The criteria for a graded activation must be clearly defined by the TCF. TCFs must have the highest level of activation. The highest level activation criteria must include the following criteria: (1) Confirmed blood pressure less than 90 millimeters of mercury at any time in adults and delineated by age range hypotension in children. (2) Gunshot wounds to the neck, chest, or abdomen or extremities proximal to the elbow/knee. (3) Glasgow coma scale score less than nine with mechanism attributed to trauma. (4) Transfer patients from other hospitals receiving blood to maintain vital signs. (5) Intubated patients transferred from the scene or patients who have respiratory compromise or are in need of an emergency airway. This includes intubated patients who are transferred from another facility with ongoing respiratory compromise. (6) Emergency medicine physician's discretion.	2
(m)	III, IV	The trauma team, as defined by the TCF, must be fully assembled within 30 minutes of trauma activation.	2
(n)	III, IV	The TCF's trauma PIPS program must evaluate on an ongoing basis the potential criteria for the various levels of trauma team activation to determine which patients require the resources of the full trauma team. Variances in trauma team activation must be documented and reviewed for reasons for delay, opportunities for improvement and corrective actions.	2
(o)	III required, IV if the TCF provides surgical services for trauma patients	An emergency medicine physician may initially evaluate the limited-tier trauma patient, but the TCF must have a clearly defined response expectation for the trauma surgical evaluation of those patients requiring admission.	2
(p)	III	The TCF may admit injured patients to individual surgeons, but the structure of the trauma program must allow the TMD to have oversight authority for the care of these patients. The TCF must have a process for the TMD and TPM to review inpatient cases through the trauma PIPS program.	2
(q)	III required, IV if the TCF provides surgical services for trauma patients	For TCFs that admit injured patients to individual surgeons or nonsurgical services, the TCF must have a method to identify injured patients, monitor the provision of health care services, make periodic rounds and hold discussions with individual practitioners. These activities may be carried out by the TPM in conjunction with the TMD at a frequency commensurate with the volume of trauma admissions.	1

	Level	Criterion	Type
(r)	III required, IV if the TCF provides surgical services for trauma patients	A TCF must have written guidelines for the care of non-surgically admitted patients. TCFs that admit more than 10% of injured patients to non-surgical services must review all non-surgical admissions through the trauma PIPS program. Care must be reviewed for appropriateness of admission, patient care, complications and outcomes. If a trauma patient is admitted by an internal medicine physician for medical comorbidities or medical management, a surgical consultation is required.	2
(s)	III, IV	The TPM must show evidence of educational preparation, relevant clinical experience in the care of injured patients and administrative ability. The TCF may determine who meets these requirements. Evidence that a TPM meets these requirements may include a copy of the trauma coordinator job description. The TPM may be a nurse, but does not have to be.	2
6.	Clinical Functions: General Surgery		
(a)	III	The TCF must have continuous general surgery capability.	1
(b)	III required, IV if the TCF provides general surgical services for trauma patients	General surgeons must meet one of the following set of standards in order to take trauma call: (1) Be board certified by the American Board of Surgery. (2) Be eligible for board certification by the American Board of Surgery according to current criteria. (3) Meet the general surgery alternate pathway requirements in 6.(c); or (4) Have completed an Accreditation Council for Graduate Medical Education or Canadian residency and be recognized by a major professional organization. *Note: An example of recognition by a major professional organization is being a fellow of the ACS.*	2
(c)	III required, IV if the TCF provides general surgical services for trauma patients	The alternate pathway requirements for general surgeons are: (1) Completion of a residency training program in general surgery, with the time period consistent with years of training in the United States. The completion of a residency training program must be evidenced by a certified letter from the program director. (2) Current certification as a provider or instructor of the ATLS program. (3) Completion of 36 hours of trauma continuing medical education within the last three years. (4) Attendance at educational meetings and at least 50% of all trauma PIPS meetings in the past three years. (5) Membership or attendance at local and regional or national meetings during the past three years. (6) Provision of a list of patients treated in the last three years with accompanying Injury Severity Score and outcome data. (7) Completion of a performance improvement assessment by the TMD demonstrating that the morbidity and mortality results for patients treated by the surgeon compare favorably with comparable patients treated by other members of the call panel. (8) License to practice medicine and approval for full and unrestricted surgical privileges by the facility's credentialing committee.	2
(d)	III required, IV if the TCF provides general surgical services for trauma patients	Trauma surgeons in a TCF must have privileges in general surgery.	2

	Level	Criterion	Type
(e)	III required, IV if the TCF provides general surgical services for trauma patients	The attending surgeon must be present in the operating room for all operations and the TCF must document the presence of the attending surgeon.	2
(f)	III required, IV if the TCF provides general surgical services for trauma patients	All general surgeons on the trauma team must have successfully completed the ATLS course at least once.	2
7.	Clinical Functions: Emergency Medicine		
(a)	III	The TCF's emergency department must have a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients.	1
(b)	III	When it is necessary for the physician to leave the emergency department for short periods to address in-house emergencies, these cases and their frequency must be reviewed by the trauma PIPS program for timeliness of response and appropriateness of care and to ensure that this practice does not adversely affect the care of patients in the emergency department.	2
(c)	III, IV	For TCFs with an emergency medicine residency training program, supervision must be provided by in-house attending emergency physicians 24 hours per day.	2
(d)	III, IV	Emergency medicine physicians must meet one of the following set of standards in order to take trauma call: (1) Be board certified in emergency medicine. (2) Be eligible for board certification by the appropriate emergency medicine board according to current criteria. (3) Be board certified in a specialty other than emergency medicine recognized by the American Board of Medical Specialties, the American Osteopathic Association, or the Royal College of Physicians and Surgeons of Canada. (4) Meet the emergency medicine alternate pathway requirements; or (5) Have completed an Accreditation Council for Graduate Medical Education or Canadian residency and be recognized by a major professional organization. *Note: An example of recognition by a major professional organization is being a fellow of the ACS.*	2

	Level	Criterion	Type
(e)	III, IV	The alternate pathway requirements for emergency medicine physicians are: (1) Completion of a residency training program in emergency medicine, with the time period consistent with years of training in the United States. The completion of a residency training program must be evidenced by a certified letter from the program director. (2) Current certification as a provider or instructor of the ATLS program. (3) Completion of 36 hours of trauma continuing medical education within the last three years. (4) Attendance at educational meetings and at least 50% of all trauma PIPS meetings in the past three years. (5) Membership or attendance at local and regional or national meetings during the past three years. (6) Provision of a list of patients treated in the last three years with accompanying Injury Severity Score and outcome data. (7) Completion of a performance improvement assessment by the TMD demonstrating that the morbidity and mortality results for patients treated by the emergency medicine physician compare favorably with comparable patients treated by other members of the call panel. (8) License to practice medicine and approval for full and unrestricted emergency medicine privileges by the facility's credentialing committee.	2
(f)	III, IV	Emergency medicine physicians on the emergency department schedule must be regularly involved in the care of injured patients.	2
(g)	III, IV	A representative from the emergency department must participate in the prehospital PIPS program.	2
(h)	III, IV	If the TMD is not an emergency medicine physician, there must be a designated emergency medicine physician liaison available to the TMD for trauma PIPS issues that occur in the emergency department. As part of the trauma PIPS program, the designated emergency medicine physician liaison must be responsible for all emergency department audits, critiques and mortality review of patients treated in the emergency department.	2
(i)	III	Emergency medicine physicians must participate actively in the overall trauma PIPS program and the multidisciplinary trauma peer review committee.	2
(j)	III, IV	Physicians who are licensed to practice medicine who treat trauma patients in the emergency department must be current in ATLS unless the physician is board-certified in emergency medicine. APPs/midlevel providers who participate in the initial evaluation of trauma patients must be current in ATLS. For Level IV TCFs, this may be fulfilled by the Comprehensive Advanced Life Support program if the program includes the mobile trauma module skills station and the provider is re-verified every four years. The Rural Trauma Team Development Course does not fulfill this requirement.	2
(k)	III, IV	All board-certified emergency medicine physicians or those eligible for certification by an appropriate emergency medicine board according to current requirements must have successfully completed the ATLS course at least once.	2
8.	Clinical Functions: Neurosurgery		

	Level	Criterion	Type
(a)	III if the TCF provides neurosurgery for trauma patients, IV if the TCF provides neurosurgery for trauma patients	The TCF must have a formal and published contingency plan for times in which a neurosurgeon is encumbered upon the arrival of a neuro-trauma case. The contingency plan must include: (1) A credentialing process to allow the trauma surgeon to provide initial evaluation and stabilization of a neuro-trauma patient. (2) A requirement for direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. (3) A review process through the trauma PIPS program to monitor the efficacy of the plan and process. The TCF, in conjunction with a higher level classification TCF, may define the non-survivable injury patient who can be kept at the facility and transmitted to palliative care.	2
(b)	III if the TCF provides neurosurgery for trauma patients, IV if the TCF provides neurosurgery for trauma patients	If one neurosurgeon covers more than one TCF, each TCF must have a published back-up schedule. The back-up schedule may include calling a back-up neurosurgeon, guidelines for transfer or both. The trauma PIPS program must demonstrate that appropriate and timely care is provided when the back-up schedule must be used.	2
(c)	III, IV	The TCF must have a written policy or guideline approved by the TMD that defines which types of patients require a response by neurosurgery and which type of neurosurgical injuries may remain at the TCF and which should be transferred.	2
(d)	III, IV	If a TCF does not have neurosurgical coverage, all patients requiring ICP monitoring and patients with significant traumatic brain injuries should be transferred to a higher level TCF. If the TCF does not transfer the patient with a traumatic brain injury, the scope of practice and care of the patient must be outlined in a written guideline or policy.	2
(e)	III, IV	For all neurosurgical cases, whether patients are admitted or transferred, care must be timely and appropriate.	1
(f)	III, IV	If a TCF provides neurosurgical services, neurosurgery must be part of the trauma PIPS program.	1
(g)	III if the TCF provides neurosurgery for trauma patients, IV if the TCF provides neurosurgery for trauma patients	For neurosurgical cases, the trauma PIPS program must: (1) Monitor all patients admitted or transferred. (2) Review all cases requiring backup to be called in or the patient to be diverted or transferred because of the unavailability of the neurosurgeon on call. (3) Monitor the 30 minute response time for the neurosurgeon once consulted.	1

	Level	Criterion	Type
(h)	III if the TCF provides neurosurgery for trauma patients, IV if the TCF provides neurosurgery for trauma patients	Neurosurgeons must meet one of the following set of standards in order to take trauma call: (1) Be board certified by an appropriate neurosurgical board. (2) Be eligible for board certification by an appropriate neurosurgical board. (3) Meet the neurosurgery alternate pathway requirements; or (4) Have completed an Accreditation Council for Graduate Medical Education or Canadian residency and be recognized by a major professional organization. *Note: An example of recognition by a major professional organization is being a fellow of the ACS.*	2
(i)	III if the TCF provides neurosurgery for trauma patients, IV if the TCF provides neurosurgery for trauma patients	The alternate pathway requirements for neurosurgeons are: (1) Completion of a residency training program in neurosurgery, with the time period consistent with years of training in the United States. The completion of a residency training program must be evidenced by a certified letter from the program director. (2) Current certification as a provider or instructor of the ATLS program. (3) Completion of 36 hours of trauma continuing medical education within the last three years. (4) Attendance at educational meetings and at least 50% of all trauma PIPS meetings in the past three years. (5) Membership or attendance at local and regional or national meetings during the past three years. (6) Provision of a list of patients treated in the last three years with accompanying Injury Severity Score and outcome data. (7) Completion of a performance improvement assessment by the TMD demonstrating that the morbidity and mortality results for patients treated by the surgeon compare favorably with comparable patients treated by other members of the call panel. (8) License to practice medicine and approval for full and unrestricted surgical privileges by the facility's credentialing committee.	2
9.	Clinical Functions: Orthopedic Surgery		
(a)	III	The TCF must have orthopedic surgery capability.	1
(b)	III required, IV if the TCF provides orthopedic surgery for trauma patients	An operating room must be adequately staffed, with at least an operating room nurse and operating room technician, and available within 30 minutes of operating room team request for emergency operations on musculoskeletal injuries.	1
(c)	III required, IV if the TCF provides orthopedic surgery for trauma patients	The TCF must have an orthopedic surgeon who is identified as the liaison to the trauma program.	1
(d)	III	TCFs must have an orthopedic surgeon on call and promptly available 24 hours a day.	2
(e)	III required, IV if the TCF provides orthopedic surgery for trauma patients	A TCF must include orthopedic surgery as part of the trauma PIPS program.	1

	Level	Criterion	Type
(f)	III required, IV if the TCF provides orthopedic surgery for trauma patients	If the orthopedic surgeon is not dedicated to a single facility or is unavailable while on call, the TCF must have a published back-up schedule. The back-up schedule may include calling a back-up orthopedic surgeon or guidelines for transfer or both. For Level IV TCFs that provide orthopedic surgery for trauma patients, an orthopedic surgeon is not required to be on call and promptly available 24 hours a day. However, when the Level IV TCF does have an orthopedic surgeon on call, the TCF must have a published back-up schedule.	2
(g)	III required, IV if the TCF provides orthopedic surgery for trauma patients	As part of the trauma PIPS program, the TCF must review all major orthopedic trauma cases for appropriateness of the decision to transfer or admit. The TCF must define the scope of practice and indicators for patients that will be admitted.	2
(h)	III required, IV if the TCF provides orthopedic surgery for trauma patients	Orthopedic surgeons must meet one of the following set of standards in order to take trauma call: (1) Be board certified in orthopedic surgery. (2) Be eligible for board certification by the appropriate orthopedic specialty board according to current criteria. (3) Meet the orthopedic surgery alternate pathway requirements; or (4) Have completed an Accreditation Council for Graduate Medical Education or Canadian residency and be recognized by a major professional organization. *Note: An example of recognition by a major professional organization is being a fellow of the ACS.*	2
(i)	III required, IV if the TCF provides orthopedic surgery for trauma patients	The alternate pathway requirements for orthopedic surgeons are: (1) Completion of a residency training program in orthopedic surgery, with the time period consistent with years of training in the United States. The completion of a residency training program must be evidenced by a certified letter from the program director. (2) Current certification as a provider or instructor of the ATLS program. (3) Completion of 36 hours of trauma continuing medical education within the last three years. (4) Attendance at educational meetings and at least 50% of all trauma PIPS meetings in the past three years. (5) Membership or attendance at local and regional or national meetings during the past three years. (6) Provision of a list of patients treated in the last three years with accompanying Injury Severity Score and outcome data. (7) Completion of a performance improvement assessment by the TMD demonstrating that the morbidity and mortality results for patients treated by the surgeon compare favorably with comparable patients treated by other members of the call panel. (8) License to practice medicine and approval for full and unrestricted surgical privileges by the facility's credentialing committee.	2
10.	Pediatric Trauma Care		

	Level	Criterion	Type
(a)	III, IV	A TCF that stabilizes pediatric trauma patients in the emergency department must have guidelines to assure appropriate and safe care of children. A TCF's pediatric trauma guidelines must include: (1) Child maltreatment assessment, treatment or transfer and reporting protocols including a list of indicators of possible physical abuse. (2) Imaging guidelines, including age and weight-based criteria based on as low as reasonably achievable guidelines. (3) A system to assure appropriate sizing and dosing of resuscitation equipment and medications. (4) Dosing guidelines for intubation, code and neurologic drugs. (5) Guidelines for administration of sedation.	2
(b)	III, IV	A TCF that stabilizes pediatric trauma patients in the emergency department must have the following medications and equipment: (1) Mannitol or 3% saline. (2) Intubation, code and neurologic medications. (3) Catheter-over-the-needle device; 22 and 24 gauge. (4) Pediatric intraosseous needles or device. (5) Intravenous solutions including the following: normal saline and dextrose 5% normal saline. (6) Infant and child c-collars. (7) Cuffed endotracheal tubes: 3.5, 4.5, 5.5, and 6.5 millimeters. (8) Laryngoscope: Straight: 1, Straight: 2, and Curved: 2. (9) Infant and child nasopharyngeal airways. (10) Oropharyngeal airways, sizes 0, 1, 2, 3 and 4. (11) Pediatric stylets for endotracheal tubes. (12) Infant and child suction catheters. (13) Bag-mask device, self-inflating: infant: 450 milliliters. (14) Masks to fit bag-mask device adaptor for infants and children. (15) Clear oxygen masks: partial non-breather infant and partial non-breather child. (16) Infant and child nasal cannulas. (17) Nasogastric tubes: Infant: 8 French size and child: 10 French size. (18) Laryngeal mask airway: sizes 1.5, 2, 2.5, and 3. (19) Chest tubes: Infant: 10 or 12 French size and child: one in the 16-24 French size range.	2
11.	Collaborative Clinical Services		
(a)	III	The TCF must have an ICU. An ICU, regardless of whether an area of the facility is actually so designated, is a department or area of a TCF that provides intensive treatment medicine, focuses on patients with severe and life-threatening illness or injuries which require constant and close monitoring and support and is staffed by highly trained doctors and nurses who specialize in caring for critically ill patients.	1
(b)	III required, IV if the TCF provides anesthesiology services for trauma patients	Anesthesiology services, including anesthesiologists or certified registered nurse anesthetists, must be available within 30 minutes of notification and request for emergency operations, for managing airway problems, and as needed for patient care.	1

	Level	Criterion	Type
(c)	III required, IV if the TCF provides anesthesiology services for trauma patients	A qualified and dedicated physician anesthesiologist or certified registered nurse anesthetist or a certified anesthesia assistant must be designated as a liaison to the trauma program.	1
(d)	III required, IV if the TCF provides anesthesiology services for trauma patients	The anesthesia liaison must participate in the trauma PIPS program.	2
(e)	III required, IV if the TCF provides anesthesiology services for trauma patients	The TCF must document the availability of anesthesia services and delays in airway control or operations in the trauma PIPS program.	2
(f)	III required, IV if the TCF provides anesthesiology services for trauma patients	When the anesthesiologist or designee is responding from outside the TCF, during the time between notification of the anesthesia provider and their arrival, a provider must be available for emergency airway management. The presence of a provider skilled in emergency airway management must be documented.	1
(g)	III required, IV if the TCF provides surgical services for trauma patients	An operating room must be adequately staffed, with at least an operating room nurse and operating room technician, and available within 30 minutes of operating room team request.	1
(h)	III required, IV if the TCF provides surgical services for trauma patients	The TCF must monitor the timeliness of starting operations and the instances when operating room personnel including anesthesia support services, post anesthesia care unit personnel are not available for greater than 30 minutes. The TCF must monitor and document through the trauma PIPS program the response times of these personnel. The TCF must identify and review operating room delays involving trauma patients or adverse outcomes for reasons for delay and opportunities for improvement.	2
(i)	III required, IV if the TCF provides surgical services for trauma patients	The TCF must have the ability to perform services involving rapid infusers, thermal control equipment and resuscitation fluids, intraoperative radiologic capabilities and equipment for fracture fixation/stabilization.	1
(j)	III, IV	If a TCF provides neurosurgical services, the TCF must have the necessary equipment to perform a craniotomy.	1
(k)	III required, IV if the TCF provides surgical services for trauma patients	Post anesthesia services, including qualified nurses, must be available 24 hours per day to provide care for the patient if needed during the recovery phase.	1
(km)	III required, IV if the TCF provides surgical services for trauma patients	In the delivery of post anesthesia care, providers must have the necessary equipment to monitor and resuscitate patients, consistent with the process of care designated by the facility.	1

	Level	Criterion	Type
(l)	III, IV	The TCF's trauma PIPS program must address the need for pulse oximetry, end-tidal carbon dioxide detection, arterial pressure monitoring, patient re-warming and intracranial pressure monitoring.	2
(lm)	III, IV	A TCF 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.	2
(m)	III, IV	Conventional radiology must be available 24 hours per day. The radiology technician does not need to be in-house 24 hours per day but must respond within 30 minutes of notification.	1
(mm)	III	CT must be available 24 hours per day. The CT technologist does not need to be in-house 24 hours per day but must respond within 30 minutes of notification.	1
(n)	III required, IV if the TCF provides CT services for trauma patients	If a CT technologist takes a call from outside the facility, the TCF's trauma PIPS program must document the CT technologist's time of arrival at the facility.	2
(nm)	III, IV	For TCFs with MRI capabilities, the MRI technologist may respond from outside the hospital. The trauma PIPS program must document and review arrival of the MRI technologist within one hour of being called.	2
(o)	III	Qualified radiologists must be available within 30 minutes of notification, in person or by tele-radiology, to interpret radiographs.	1
(om)	III	Radiological diagnostic information must be communicated in a timely manner in either written or electronic form.	2
(p)	III	Critical radiology information deemed to immediately affect patient care must be verbally communicated to the trauma team in a timely manner.	2
(pm)	III required, IV if the TCF provides radiological services for trauma patients	The final radiology report must accurately reflect the chronology and context of communications with the trauma team, including changes between the preliminary and final interpretations. The TCF must have a written over-read process that defines how changes in interpretation are documented and communicated.	2
(q)	III required, IV if the TCF provides radiological services for trauma patients	The TCF must monitor changes in interpretation between the preliminary and final radiology reports, as well as missed injuries, through the trauma PIPS program.	2
(qm)	III required, IV if the TCF provides surgical and ICU services for trauma patients	A surgeon on the trauma call panel must be actively involved in and responsible for setting policies and making administrative decisions related to trauma ICU patients. This may be a TMD who is a surgeon.	2
(r)	III	The TCF must have physician coverage of the ICU available within 30 minutes and have a formal plan in place for emergency coverage. A TCF must track physician response time as part of the trauma PIPS program. Physician coverage of the ICU does not replace the primary surgeon but instead ensures that the patient's immediate needs are met while the primary surgeon is being contacted.	1

	Level	Criterion	Type
(rm)	III	The TCF's trauma PIPS program must review all ICU trauma admissions and transfers of ICU patients to ensure that appropriate patients are being selected to remain at the TCF versus being transferred to a higher level of care. The TCF must have a written guideline that defines which types of ICU patients they will admit and which they will transfer to a higher level of care.	2
(s)	III	In a TCF, the trauma surgeon must retain responsibility for and coordinate all therapeutic decisions of trauma ICU patients. Many of the daily care requirements can be collaboratively managed by a dedicated ICU team, but the trauma surgeon must be kept informed and concur with major therapeutic and management decisions made by the ICU team.	1
(sm)	III, IV	The TCF's trauma PIPS program must document that timely and appropriate ICU care and coverage are being provided for trauma ICU patients. The TCF must continuously monitor the timely response of credentialed providers to the ICU as part of the trauma PIPS program. The TCF's trauma PIPS program must include quality indicators for the ICU including review of complications. Review of complications includes but is not limited to review of orthopedic and neurosurgical complications if the TCF provides these services.	2
(t)	III	The TCF must have a designated ICU liaison to the trauma service. The liaison must be designated based on the service that provides the majority of the care in the ICU.	2
(tm)	III	In the TCF, qualified critical care nurses must be available 24 hours per day to provide care for trauma patients during the ICU phase. The TCF may define who is a qualified critical care nurse based on education and competency standards.	1
(u)	III	For trauma patients in the ICU, the TCF must have adequate numbers of licensed registered nurses, licensed practical nurses and other personnel to provide nursing care to all trauma patients in the ICU.	2
(um)	III	The TCF must have the necessary equipment for the ICU to monitor and resuscitate patients. Each TCF shall determine the equipment necessary based on the types of patients admitted and treated.	1
(v)	III, IV	If a TCF has neurosurgical coverage and admits neuro-trauma patients, intracranial pressure monitoring equipment must be available.	1
(vm)	III, IV	Trauma patients, as defined by the Wisconsin trauma registry inclusion criteria, must not be admitted or transferred by a primary care physician without the knowledge and consent of the trauma service. The TCF's trauma PIPS program must monitor adherence to this guideline. *Note: The Wisconsin trauma registry inclusion criteria are contained within the Wisconsin Trauma Data Dictionary, which is published on the Department's Trauma webpage:* https://www.dhs.wisconsin.gov/publications/p01117.pdf.	2
(w)	III	The TCF must have a respiratory therapist in-house or on call 24 hours a day.	1
(wm)	III, IV	The TCF must have laboratory services available 24 hours per day for the standard analysis of blood, urine and other body fluids, including micro-sampling when appropriate.	1
(x)	III, IV	The TCF's blood bank must be capable of blood typing and cross-matching.	1
(xm)	III	The TCF's blood bank must have an adequate supply of packed red blood cells and fresh frozen plasma available within 15 minutes.	1
(y)	III, IV	TCFs must have a massive transfusion protocol that is developed collaboratively with the trauma service and blood bank.	1

	Level	Criterion	Type
(ym)	III	The TCF must have coagulation studies, blood gas analysis and microbiology studies available 24 hours per day.	1
(z)	III, IV	APPs who participate in the initial evaluation of trauma patients must be current in ATLS, except if the APP is accepting a trauma patient as a direct admission. For Level IV TCFs, this may be fulfilled by the Comprehensive Advanced Life Support program if the program includes the mobile trauma module skills station and the provider is re-verified every four years. The Rural Trauma Team Development Course does not fulfill this requirement.	2
(zm)	III, IV	A TCF must have appropriate orientation, credentialing processes and skill maintenance for APPs, as witnessed by an annual review by the TMD.	2
12.		Rehabilitation	
(a)	III	Physical therapy services must be provided in the TCF.	1
(b)	III	Social services must be provided in the TCF.	2
13.		Guidelines for the Operation of Burn Centers	
(a)	III, IV	A TCF must have written guidelines, including transfer plans, for the care of burn patients.	2
14.		Trauma Registry	
(a)	III, IV	A TCF must collect and analyze trauma registry data and must submit this data to the department per s. DHS 118.09 (3) (a) & (b).	2
(b)	III, IV	The TCF must submit the required data elements, defined by the Wisconsin Trauma Data Dictionary to the Wisconsin trauma registry. *Note: The Wisconsin Trauma Data Dictionary is prepared, maintained and updated by the Wisconsin Department of Health Services and is published on the Department's Trauma webpage: https://www.dhs.wisconsin.gov/publications/p01117.pdf*	2
(c)	III, IV	A TCF must use trauma registry data to support their trauma PIPS program.	2
(d)	III, IV	A TCF must use trauma registry data to identify injury prevention priorities that are appropriate for local implementation.	2
(e)	III, IV	A TCF's trauma registry must be concurrent. At a minimum, the TCF must enter 80% of cases within 60 days of patient discharge.	2
(f)	III	At least one staff trauma registrar at each TCF must either have previously attended the following two courses or attend the following two courses within 12 months of being hired: (1) The American Trauma Society's two-day, in person trauma registry course or equivalent provided by a state trauma program. (2) The Association of the Advancement of Automotive Medicine's Abbreviated Injury Scale and Injury Scoring: Uses and Techniques course. This requirement will take effect on January 1, 2022. *Note: More information, including registration information, regarding the American Trauma Society's trauma registry course can be found on the American Trauma Society's webpage:* https://www.amtrauma.org/page/TRC. *More information, including registration information, regarding the Association of Advancement of Automotive Medicine's Abbreviated Injury Scale) and Injury Scoring: Uses and Techniques course can be found on the Association of Advancement of Automotive Medicine's webpage:* https://www.aaam.org/abbreviated-injury-scale-ais/training-courses/.	2

	Level	Criterion	Type
(g)	III, IV	The TCF must ensure that appropriate measures are in place to meet the confidentiality requirements of the trauma registry data. The TCF must protect against threats, hazards and unauthorized uses or disclosures of trauma program data as required by the Health Insurance Portability and Accountability Act and other state and federal laws. Protocols to protect confidentiality, including providing information only to staff members who have a demonstrated need to know, must be integrated in the administration of the TCF's trauma program.	2
(h)	III, IV	The TCF must demonstrate that appropriate staff resources are dedicated to the trauma registry.	2
(i)	III, IV	The TCF must have a strategy for monitoring the validity of the data entered into the trauma registry.	2
(j)	III, IV	The TCF must demonstrate that all trauma patients can be identified for review.	2
(k)	III, IV	The TCF's trauma PIPS program must be supported by a reliable method of data collection that consistently obtains the information necessary to identify opportunities for improvement.	2
15.	Performance Improvement and Patient Safety		
(a)	III, IV	The TCF must have a trauma PIPS program that includes a comprehensive written plan outlining the configuration and identifying both adequate personnel to implement that plan and an operational data management system.	2
(b)	III, IV	The TCF's loop closure including problem resolution, outcome improvements and assurance of safety must be readily identifiable through methods of monitoring, re-evaluation, benchmarking and documentation.	2
(c)	III, IV	The TCF's trauma PIPS program must integrate with the facility quality and patient safety efforts and have a clearly defined reporting structure and method for the integration of feedback.	2
(d)	III, IV	The TCF must use clinical practice guidelines, protocols and algorithms derived from evidence-based validated resources to help reduce unnecessary variation in the care they provide.	2
(e)	III, IV	The TCF must document, in the trauma PIPS program written plan, all process and outcome measures. At least annually, the TCF must review and update all process and outcome measures.	2
(f)	III, IV	The TCF must systematically review all trauma-related mortalities from point of injury to death and identify mortalities with opportunities for improvement for the multidisciplinary trauma peer review committee.	2
(g)	III, IV	The TCF must have sufficient mechanisms available to identify events for review by the trauma PIPS program. Once an event is identified, the trauma PIPS program must be able to verify and validate that event.	2
(h)	III, IV	The TCF must have a process to address trauma program operational events including system process related events and, when appropriate, the analysis and proposed corrective action. The TCF must have documentation that reflects the review of operational events, and when appropriate, the analysis and proposed corrective action.	2
(i)	III, IV	When the TCF identifies an opportunity for improvement, appropriate corrective actions to mitigate or prevent similar future adverse events must be developed, implemented and clearly documented by the trauma PIPS program.	2
(j)	III required, IV if the TCF provides surgical services for trauma patients	When a general surgeon cannot attend the trauma multidisciplinary peer review meeting, the TMD must ensure that the general surgeon receives and acknowledges receipt of critical information generated at the meeting.	2

	Level	Criterion	Type
16.		Outreach and Education	
(a)	III, IV	The TCF must engage in public and professional education, including participation in prehospital education.	2
(b)	III, IV	The TCF must provide trauma-related education for nurses involved in trauma care.	2
17.		Prevention	
(a)	III, IV	The TCF must have an organized and effective approach to injury prevention and must prioritize these efforts based on local trauma registry and epidemiologic data.	2
(b)	III, IV	The TCF must have someone in a leadership position that has injury prevention as part of his or her job description.	2
(c)	III, IV	Universal screening for alcohol use must be performed and documented for all injured patients over 12 years of age. This screening must be done on patients admitted or discharged from the emergency department, but not those transferred to a higher level of care.	2
18.		Disaster Planning and Management	
(a)	III, IV	The TCF must meet the disaster-related requirements of the Joint Commission or other accrediting bodies.	2
(b)	III	A liaison from the trauma program must be a member of the TCF's disaster committee.	2
(c)	III, IV	The TCF must participate in regional disaster management plans and exercises.	2