Michigan Department of Health & Human Services

Pre-Review Questionnaire (PRQ) for Michigan Level III Trauma Facility

This pre-review questionnaire allows site reviewers to have a preliminary understanding of the trauma care capabilities and performance of the hospital and medical staff before beginning the review. Please use this document to gather the hospital data. Please note, the site review team MAY ask for further documentation to substantiate information on any question that is answered with a "yes."

Complete each section of the PRQ and attach additional pages if necessary. Ensure all attachments are included and labeled appropriately. See, "General Information and Instructions" at the back of the PRQ for details and definitions. A checklist has been provided to assist in compiling the PRQ and supporting documents. The PRQ must be submitted no later than 45 days prior to the scheduled site visit. Keep a copy of the PRQ for reference during the site visit.

The information used to complete the site review report will be considered in both the verification and designation determinations. The data submitted may be used for analysis by MDHHS Division of EMS and Trauma and may not be used for any purpose other than the intended. The reporting period is defined as 12 months and cannot be earlier than 15 months prior to the date of application. There must be 12 months of data in the State Trauma Registry, Image Trend, to schedule a site review. Ongoing data submission (quarterly) is a requirement for designation. See the State of Michigan Trauma website for additional tools.

The PRQ can be submitted via email to TraumaDesignationCoordinator@michigan.gov.

Once the PRQ is received by the State Designation Coordinator an electronic confirmation of receipt will be sent.

Please answer ALL questions completely. Do not use abbreviations.

For MDHHS Use:

☐ **In Person Verification Site Visit**

☐ **Virtual Verification Site Visit**

Type of Review:

☐ Verification
☐ Re-Verification

Level of Review:

☐ Level III Trauma Facility

Reporting time frame for this document:
(*Twelve months of data must be submitted into the State Trauma Registry prior to applying for designation as a Michigan trauma facility for the first time. The twelve-month time frame must start no earlier than fifteen months from the date of application*) (MI-CD 1-2)

Date Range: From month/year to: month/year

I. HOSPITAL INFORMATION

A. Demographics

1. Name of Hospital:
2. Hospital Address:
3. City, State, ZIP:
4. Trauma Region:

B. General Information

Trauma Care Provider	Total Number of Providers
General Surgeons	
Emergency Physicians	
Orthopedic Surgeons	
Anesthesiologists	
Advanced Practice Providers (Nurse Practitioners, Advanced Practice Nurses, Physician Assistants) involved in trauma resuscitation and/or care of the trauma patient	
Other Physician Specialty (Family Practice, Internal Medicine, Hospitalists, Pediatricians, Neurosurgeons)	
Certified Registered Nurse Anesthetists	

C. Hospital Commitment

1. Trauma facilities must provide the necessary human and physical resources (plant and physical) to properly administer acute care consistent with the level of verification. Documentation of this is demonstrated by providing a commitment to Level III trauma care. A sample of this commitment is provided in ***Appendix #1***. Please obtain a signature from the Chairperson of the hospital board every 3 years (CD 5-1, 5-2 & CD 2-3). (***Label as Attachment #1***)

2. The individual trauma facility and their health care providers are essential system resources. They must be active and engaged participants. Documentation of this commitment is demonstrated by providing medical staff resolution every 3 years. A sample of this resolution is provided in ***Appendix #2*** (CD 5-1, 5-3). (***Label as Attachment #2***)

3. Does the trauma program involve multiple disciplines and transcend normal departmental hierarchies? (CD 5-4) ☐ Yes ☐ No

D. Regional Activities/Michigan Criteria

1. Michigan's Trauma System Administrative Rules outline trauma facility responsibilities to ensure a regionalized, accountable and coordinated trauma system. This work is supported by the American College of Surgeons Committee on Trauma, "Meaningful involvement in state and regional trauma system planning, development, and operation is essential for all designated trauma facilities and participating acute care facilities within a region" (CD 1-3).

   Failure to meet the Michigan Criteria outlined in the Administrative Rules will result in a Type I critical deficiency.

   Please respond to the following questions regarding participation in the regional trauma system:

   A. Does the hospital trauma program staff participate in the state and/or regional trauma system planning, development, or operation? (CD 1-3, CD 1-2) ☐ Yes ☐ No

   B. Is the facility submitting data to the state trauma registry quarterly? (MI-CD 1-1) ☐ Yes ☐ No

   C. Is the facility participating in regional injury prevention planning and initiatives? (MI-CD 3-1) ☐ Yes ☐ No

   D. Is the facility participating in regional performance improvement as described in the Regional Trauma Network work plan*? (MI-CD 2-1) ☐ Yes ☐ No

   **The Regional Trauma Network work plan for your region can be found at www.michigan.gov/traumasystem under the individual region heading.*

II. PRE-HOSPITAL TRAUMA CARE

1. Describe the area and identify the number and level of other trauma facilities within a 50-mile radius of the hospital. Do not include the names of those facilities.

2. The protocols that guide pre-hospital trauma care must be established by emergency physicians and medical directors of EMS agencies, with advice from the trauma care team, including surgeons, and basic and advanced pre-hospital personnel. (CD 3-2)

   A. Does the trauma program participate in the following Medical Control Authority activities? (CD 3-1)
      a. Pre-hospital protocol development? ☐ Yes ☐ No
      b. EMS Training which could consist of case reviews/patient follow-up, facility sponsored classes and continuing education? ☐ Yes ☐ No
      c. If 'Yes', briefly describe and provide one example:

III. TRAUMA PROGRAM*

A. Trauma Staff

Complete the section below. Note if not applicable.

Trauma Manager/Trauma Nurse Coordinator Name:

Trauma Medical Director Name:

Injury Prevention Staff Name:

Trauma Registrar Name:

Other:

Attach position descriptions for the Trauma Manager/Trauma Nurse Coordinator and Trauma Medical Director (***Label as Attachment #3***)

****Be prepared to discuss the Trauma Program: how roles interact on a daily basis, and how issues and problems are handled.***

1. Does the trauma program 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 individual practitioners? (CD 5–21)

   ☐ Yes ☐ No

B. Trauma Program Manager/Trauma Nurse Coordinator (TPM/TNC)

1. How long has the TPM/TNC been in this position?
   - Years Months

2. Education:
   - Associate in Nursing ☐ Yes ☐ No
   - Bachelor in Nursing ☐ Yes ☐ No
   - Masters in Nursing ☐ Yes ☐ No
   - Other Degree ☐ Yes ☐ No
     - If 'Other' degree, please describe:

3. In addition to administrative ability, does the TPM/TNC have evidence of educational preparation and clinical experience in the care of injured patients? (CD 5-22) ☐ Yes ☐ No

C. Trauma Medical Director (TMD)

1. Please complete the credentials section for the Trauma Medical Director (TMD) on ***Appendix #3***. (CD 5-6)

2. Does the trauma medical director participate in trauma call? (CD 5-5) ☐ Yes ☐ No

3. Does the trauma medical director in collaboration with the TPM/TNC have sufficient authority to correct deficiencies in trauma care and exclude from trauma call the trauma team members who do not meet specified criteria? (CD 5-11) ☐ Yes ☐ No

4. Injured patients may be admitted to individual surgeons, but the structure of the program should allow the trauma director to have oversight authority for the care of trauma patients. Does the structure of the trauma program allow the TMD to have oversight authority for the care of injured patients who may be admitted to individual physicians? (CD 5-17) ☐ Yes ☐ No
   - If 'No', please explain:

5. The TMD should identify representatives from orthopedic surgery, anesthesiology, emergency medicine, neurosurgery (if providing neurosurgical care to trauma patients), and other appropriate disciplines to determine which physicians from their disciplines are qualified to be members of the trauma program and on-call panel. Does the TMD have the responsibility and authority to ensure compliance with the above requirements? (CD 5-11) ☐ Yes ☐ No

6. Does the TMD perform an annual assessment of the trauma on call panel providers? (CD 5-12) ☐ Yes ☐ No
   - Describe the assessment process at your facility.

7. Does the trauma director perform an annual assessment of the trauma panel providers in the form of Ongoing Professional Practice Evaluation (OPPE) and Focused Professional Practice Evaluation (FPPE) when indicated by findings of the PI process and have the authority to appoint and/or remove members, or recommend changes to the trauma panel based on an that annual review? (CD 2-5, CD 5-11) ☐ Yes ☐ No

- If 'Yes', briefly describe the process of appointments and removals:

- Briefly describe the TMD's reporting structure (may attach flow chart):

8. The TMD's responsibility extends far beyond the technical skills of surgery. Does the TMD have the authority to manage all aspects of trauma care? (CD 5–9) ☐ Yes ☐ No

9. Does the trauma medical director must have sufficient authority to set the qualifications for the trauma service members, including individuals in specialties that are routinely involved with the care of the trauma patient. (CD 5-11) ☐ Yes ☐ No

10. Does the trauma program demonstrate appropriate orientation, credentialing processes, and skill maintenance for advanced practitioners who are members of the trauma service, as witnessed by an annual review by the trauma medical director? (CD 11–87) ☐ Yes ☐ No

11. Does the TMD direct more than one trauma center? (CD 5-12) ☐ Yes ☐ No

12. Do the TMD and TPM/TNC 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? (CD 2–17) ☐ Yes ☐ No

13. Does the TMD chair the multidisciplinary trauma peer review committee meetings? (CD 5-10) ☐ Yes ☐ No

D. Surgeons/Trauma Service

1. Does the facility have continuous general surgical coverage? (CD 2–12) ☐ Yes ☐ No

2. Do all of the trauma panel surgeons have privileges in general surgery? (CD 6-4) ☐ Yes ☐ No

3. General surgeons caring for trauma patients must meet certain requirements, as described. These requirements may be considered in four categories: current board certification, clinical involvement, performance improvement, and patient safety and education. Complete the credentialing section for all general and trauma surgeons providing care for trauma patients on ***Appendix #4***. (CD 6-1, 6-2, 6-9, 6-10)

4. Is there a mechanism for documenting surgeon presence in the operating room for all trauma operations? (CD 6-7) ☐ Yes ☐ No
   - If 'Yes', please describe:

E. Trauma Activation

1. Does the facility have a multilevel activation response that addresses the minimum requirements listed below? (CD 5-13) ☐ Yes ☐ No
   - 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
   - Glasgow Coma Scale score 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 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

2. Attach the facility's activation policy (***Label as Attachment #4***). (CD 5-13) The criteria for a graded activation must be clearly defined by the trauma facility, with the highest level of activation including the six required criteria listed in Table 2 (Chapter 5, page 38). Trauma hospitals shall have a trauma team activation protocol/policy to include:
   - Lists of all team members
   - Response requirements for all team members when a trauma patient is en route or has arrived
   - The criteria for a graded activation must be clearly defined by the trauma center, with the highest level of activation including the six identified, required criteria (Table 2)
   - The person(s) authorized to activate the trauma team.
   - Protocols that guide pre-hospital trauma care

3. Fill in the following (CD 5-14):

Activation Level Statistics for Patients in Registry (reporting year)		
Level	**Number of activations**	**Percent of total activations**
Highest		
Intermediate		
Lowest (consult/evaluation)		
Total		**=100%**

4. Who has the authority to activate the trauma team? (Check all that apply)
   - ☐ EMS
   - ☐ ED Physician
   - ☐ ED Nurse
   - ☐ Surgeon

5. The highest level of activation is communicated by: (Check all that apply)
   - ☐ Group pager
   - ☐ Telephone page
   - ☐ Other

6. Which trauma team members respond to each level of activation? (Check all that apply)

	Activation Level		
Responder	**Highest**	**Intermediate**	**Lowest**
General Surgeon			
Emergency Physician			
Emergency Department Nursing			
Laboratory Technician			
Radiology Technician			
Anesthesiologist or CRNA			
Scribe			
Other			

7. Is the trauma team available for response to the highest level of activation within 30 minutes? (CD 5–15) ☐ Yes ☐ No

8. For Level III trauma facilities, it is expected that the surgeon will be in the emergency department on patient arrival, with adequate notification from the field. Is the maximum acceptable response time of 30 minutes for the highest level of activation, tracked from patient arrival? (CD 2-8) ☐ Yes ☐ No

9. Other potential criteria for trauma team activation that have been determined by the trauma program to be included in the various levels of trauma activation must be evaluated on an ongoing basis in the PI process to determine their positive predictive value in identifying patients who require the resources of the full trauma team. Are all criteria for trauma team activation that have been determined by the trauma program evaluated on an ongoing basis in the PI process? (CD 5–16) ☐ Yes ☐ No

10. Does the PI program demonstrate that the surgeon's presence at trauma activations is in compliance at least 80 percent of the time? (CD 2-8) ☐ Yes ☐ No

- If 'Yes', what is the response percentage for the entire call panel?
  *See **Appendix 4** to enter percentages for each surgeon on the trauma call panel.*

Using the data collected from the date range listed on page 2 complete the following:

11. Total number of trauma patients **seen in the ED** but not admitted by the facility?

12. Total number of trauma patients **admitted** from the ED?

13. Total number of trauma patients transferred to a higher level of trauma care from the facility?

14. Total number of trauma patients **discharged** from the ED?

15. Total number of trauma deaths at the facility?

G. Trauma Transfer

1. Is there a process and documentation of direct contact of the physician or advanced practice provider with a physician at the receiving hospital? (CD 4-1) ☐ Yes ☐ No

2. Is the decision to transfer an injured patient to a specialty care facility in an acute situation based solely on the needs of the patient and not on the requirements of the patient's specific provider network (for example, a health maintenance organization or a preferred provider organization) or the patient's ability to pay? (CD 4–2) ☐ Yes ☐ No

3. Have written transfer agreements with burn facilities been developed? (CD 14-1) ☐ Yes ☐ No

4. For all patients being transferred for specialty care, such as burn care, microvascular surgery, cardiopulmonary bypass capability, complex ophthalmologic surgery, or high-complexity pelvic fractures, agreements with a similar or higher level verified trauma facility should be in place. Have transfer plans between all possible transfer facilities been developed? (CD 2-13, 8-5) ☐ Yes ☐ No

5. Trauma Transfers:

Number of Trauma Transfers	Air	Ground	Private Vehicle	Total
Transfers In				
Transfers Out				

6. Were any of the 'Transfers In' from the table above, also transferred out during the acute care phase? ☐ Yes ☐ No
   - If 'Yes', how many?

7. Are all transfers **into your facility** evaluated by the performance improvement (PI) process and is feedback provided to the transferring facility? (CD 4-3) ☐ Yes ☐ No

8. When transferring a patient to a higher level of care, does your facility receive feedback from that facility? ☐ Yes ☐ No

9. Does the PI program include evaluating transport activities? (CD 4–3) ☐ Yes ☐ No

10. Does the trauma facility have a transfer agreement in place with a facility capable of dialysis? (if the facility does not have dialysis available) (CD 11–78) ☐ Yes ☐ No

11. Provide information on the criteria the facility uses to prompt identification and consideration of transfer for patients who require a higher level of care and are reviewed in the PI program on ***Appendix #5***.

H. Trauma/Hospital Statistical Data

Tables should not include dead on arrivals and direct admits.

1. Total Trauma Admissions by Service:

Service	Number of Admissions
Trauma Surgery	
Orthopedic Surgery	
Other Surgical Specialties	
Non-Surgical	
Total Admissions	

2. Injury Severity Score/Mortality/General Surgery:

ISS	Total Number of Admissions	Number of Deaths from Total Trauma Admissions	Number Admitted to Trauma Service
0-9			
10-15			
16-24			
> or = 25			
Total			

** The total admissions for tables 1 and 2 should be the same.*

3. Does the trauma program admit more than 10% of injured patients to non-surgical services? (CD 5-18) ☐ Yes ☐ No
   - If 'Yes', are all non-surgical admissions reviewed through the PI process? ☐ Yes ☐ No

4. What is the number of isolated hip fractures admitted in the reporting period?

I. Trauma Diversion

1. When a trauma facility is required to divert, the facility must have a system to notify dispatch and EMS agencies. (CD 3-7). Does the hospital do the following when on diversion?
   a. Prearrange alternative destinations with transfer agreements in place? ☐ Yes ☐ No
   b. Notify other facilities of divert status? ☐ Yes ☐ No
   c. Maintain a divert log? ☐ Yes ☐ No
   d. Review all diversions in PI program? ☐ Yes ☐ No

2. Does the facility have a diversion protocol? ☐ Yes ☐ No
   - *If 'Yes', please send the policy as an attachment. (**Label as Attachment #5**)*

3. Is the trauma director involved in the development of the trauma facility's diversion protocol? (CD 3–4) ☐ Yes ☐ No

4. Is the trauma surgeon involved in the decision regarding diversion each time the facility goes on diversion? (CD 3–5) ☐ Yes ☐ No

5. Has the facility gone on diversion more than 5% of the time in the past year? ☐ Yes ☐ No (CD 3-6)
   - *Information regarding diversion date, length of time, and reason for occurrence should be documented on **Appendix #6**.*

IV. HOSPITAL RESOURCES

A. Emergency Department (ED)*

1. Does the emergency department have a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients? (CD 7-1) ☐ Yes ☐ No

2. In institutions where there are emergency medicine residency training programs, is supervision provided by an in-house attending emergency physician 24 hour per day? (CD 7–4) ☐ Yes ☐ No

3. Are the roles and responsibilities of the emergency medicine residents defined, agreed on, and approved by the director of the trauma service? (CD 7–5) ☐ Yes ☐ No

4. Are the emergency physicians on the call panel regularly involved in the care of injured patients? (CD 7–7) ☐ Yes ☐ No
   - *May be required to provide a copy of the call panel at the site review visit.*

5. Is there a representative from the emergency department participating in the prehospital PI program? (CD 7-8) ☐ Yes ☐ No

6. Is there a designated emergency physician liaison available to the trauma director for PI issues that occur in the emergency department? (CD 7-9) ☐ Yes ☐ No
   - *Provide information about the emergency department liaison to the trauma program on **Appendix #7**.*

7. Do the advanced practitioners who participate in the initial evaluation of the trauma patients have current verification as an ATLS provider? (CD 11-86) ☐ Yes ☐ No

8. Have all board-certified emergency physicians or those eligible for certification by an appropriate emergency medicine board, according to current requirements, successfully completed the ATLS course at least once? (CD 7-14) ☐ Yes ☐ No

9. Are the physicians who are certified by boards other than emergency medicine and who treat trauma patients in the emergency department current in ATLS? (CD 7-15) ☐ Yes ☐ No

10. List all emergency physicians and advanced providers (Physician Assistants, Nurse Practitioners, and Advance Practice Practitioners) currently participating in the initial resuscitation and evaluation of trauma patients on ***Appendix #8***. (Please reference CD 6-3 for alternate criteria for Non-Board-Certified Emergency Medicine Physicians in a Level III Trauma Facility.)

Have a copy of the ED trauma flow sheet and trauma protocols available on site at the time of the review. An example of a trauma flow sheet can be found at www.michigan.gov/traumasystem.

B. Neurosurgery

1. Does the facility have a plan approved by the trauma medical director that determines which types of neurosurgical injuries may remain, and which should be transferred? (CD 8–7) ☐ Yes ☐ No
   - *Please describe or attach plan:*

2. Are all neurotrauma cases, whether patients are admitted or transferred, monitored by the PI program for the timeliness and appropriateness of care? (CD 8–9) ☐ Yes ☐ No

3. Does the facility have transfer agreements with appropriate Level I and Level II trauma facilities for neurotrauma patients? (CD 8–8) ☐ Yes ☐ No

If the facility has neurosurgery providers, please complete questions 4-9. If not, skip to the next section.

4. Does the facility have a formal, published contingency plan in place for times in which a neurosurgeon is encumbered upon the arrival of a neurotrauma case? (CD 8-5) ☐ Yes ☐ No

The contingency plan must include the following:

a. A credentialing process to allow the trauma surgeon to provide initial evaluation and stabilization of the neurotrauma patient. ☐ Yes ☐ No
b. Transfer agreements with a similar or higher-level verified trauma center. ☐ Yes ☐ No
c. Direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. ☐ Yes ☐ No
d. Monitoring of the efficacy of the process by the PI program. ☐ Yes ☐ No

5. If the facility has neurosurgical coverage and admits neurotrauma patients, is intracranial pressure monitoring equipment available? (CD 11-86) ☐ Yes ☐ No

6. If one neurosurgeon covers two centers within the same limited geographic area, do you have a published backup schedule? (CD 8-6) ☐ Yes ☐ No

7. If the backup call must be utilized because the neurosurgeon is encumbered, does the performance improvement process demonstrate that appropriate and timely care was provided? (CD 8–6) ☐ Yes ☐ No

8. Provide information about the neurosurgery liaison to the trauma program on ***Appendix #9***.

9. Board certification or eligibility for certification by the current standard requirements or the alternate pathway is essential for neurosurgeons who take trauma call. (CD 8–10). Please complete the credentialing section for all neurosurgery providers on the trauma call panel on ***Appendix #10***. (Please reference CD 6-3 for alternate criteria for Non-Board-Certified Neurosurgeons in a Level III Trauma Facility.)

C. Orthopedic Surgery

1. Does the facility have the availability and commitment of you orthopedic surgeons? (CD 11-72) ☐ Yes ☐ No

2. Are operating rooms promptly available to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization, external fixator placement, and compartment decompression? (CD 9–2) ☐ Yes ☐ No

3. If the orthopedic surgeon is not dedicated to a single facility while on call, is there a published backup schedule? (CD 9-12) ☐ Yes ☐ No

4. Level III facilities vary significantly in the staff and resources that they can commit to musculoskeletal trauma care. Does the facility have an orthopedic surgeon on call promptly available 24 hours a day? (CD 9-11) ☐ Yes ☐ No

5. Does the facility have an orthopedic surgeon who is identified as the liaison to the trauma program? (CD 9-4) ☐ Yes ☐ No

6. Provide information about the orthopedic liaison to the trauma program in ***Appendix #11.***

7. Board certification or eligibility for certification by the current standard requirements or the alternate pathway is essential for orthopedic surgeons who take trauma call. (CD 9–17). Please complete the credentialing section for all orthopedic surgeons' providers taking trauma call. List all orthopedic surgeons taking trauma call on ***Appendix #12***. (Please reference CD 6-3 for alternate criteria for Non-Board-Certified Neurosurgeons in a Level III Trauma Facility.)

V. COLLABORATIVE CLINICAL SERVICES

A. Radiology

1. Does the trauma facility 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? (CD 11–28) ☐ Yes ☐ No

2. Is conventional radiography available 24 hours per day? (CD 11-29) ☐ Yes ☐ No

3. Is computed tomography (CT) available 24 hours per day? (CD 11-30) ☐ Yes ☐ No

4. Are radiologists available within 30 minutes in person or by teleradiology, when requested for the interpretation of radiographs? (CD 11-32) ☐ Yes ☐ No

5. Diagnostic information must be communicated in a written or electronic form in a timely manner. (CD 11-34) How is diagnostic information communicated to the trauma team?
    - Please Describe:

6. Critical information deemed to immediately affect patient care must be verbally communicated to the trauma team in a timely manner. How is critical information communicated to the trauma team? (CD 11-35)
    - Please Describe:

7. Do final reports accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretations? (CD 11-36) ☐ Yes ☐ No

B. Anesthesiology and CRNAs

1. Are anesthesiology services available within 30 minutes for **emergency operations**? (CD 11-1) ☐ Yes ☐ No

2. Are anesthesiology services available within 30 minutes for **airway problems**? (CD 11-2)
☐ Yes ☐ No

3. Is there an anesthesiologist who is qualified and dedicated to the care of injured patients and who serves as the designated liaison to the trauma program? (CD 11-3)
☐ Yes ☐ No
   - *Provide information about the anesthesia liaison to the trauma program on **Appendix #13.***

4. In Level III facilities, in-house anesthesia services are not required. Does the facility have anesthesiologists or CRNAs available within 30 minutes? (CD 11-7) ☐ Yes ☐ No

5. If the facility does not have in-house anesthesia services, are protocols in place to ensure the timely arrival at the bedside by the anesthesia provider within 30 minutes of notification and request? (CD 11–8) ☐ Yes ☐ No
   - If 'Yes', please describe:

   - Under these circumstances, is the presence of a physician skilled in emergency airway management documented? (CD 11–9). ☐ Yes ☐ No

C. Operating Room

1. Is the operating room adequately staffed and available within 30 minutes? (CD 11-17)
☐ Yes ☐ No

2. Does the PI program evaluate operating room availability and delays when an on-call team is used? (CD 11-18) ☐ Yes ☐ No
   a. Describe the process for notifying the on-call team:

   b. Describe the mechanism for opening the OR:

   c. Describe how on-call team availability for trauma cases is documented by the PI program:

3. Level III trauma facilities should have the necessary operating room equipment for the patient populations they serve (CD 11-19). Check the OR equipment below the facility has:
   - ☐ Rapid fluid infusers
   - ☐ Thermal control equipment for patients and resuscitation fluids
   - ☐ Intraoperative radiologic capabilities
   - ☐ Equipment for fracture fixation
   - ☐ Equipment for bronchoscopy and gastrointestinal endoscopy

4. Level III trauma facilities that provide neurosurgical services must have the necessary equipment to perform a craniotomy***** (CD 11–20). If the facility provides neurosurgery, is there craniotomy equipment? ☐ Yes ☐ No
   ****Level III trauma facilities that do not offer neurosurgery services are not required to have craniotomy equipment.***

D. PACU

1. Does the PACU have qualified nurses available 24 hours per day (in-house or on-call) to provide care during the recovery phase for trauma patients if needed? ☐ Yes ☐ No (CD 11-24)

2. If the PACU is covered by a call team from outside the hospital, is there documentation by the PI program that PACU nurses are available and delays are not occurring? ☐ Yes ☐ No (CD 11-25)
    - If 'Yes', please describe:

3. Does the PACU have the necessary equipment to monitor and resuscitate patients consistent with the process of care designated by the institution? (CD 11-26) ☐ Yes ☐ No

E. Intensive Care Unit (ICU)

1. In Level III trauma facilities, a surgeon who is currently board certified or eligible for certification by the current standard requirements, must serve as co-director or director of the ICU and be actively involved in, and responsible for, setting policies and administrative decisions related to trauma ICU patients. Who is the surgical director (and co-director) of the ICU? (CD 11-53 & CD 11-54)
   Name:
   Name:

2. Does the facility have physician coverage of the ICU available within 30 minutes, with a formal plan in place for emergency coverage? (CD 11-56) ☐ Yes ☐ No
   a. During the day:
   b. During afterhours:
   c. Who responds to acute issues in the ICU after hours?

3. Does the facility have an internal medicine specialist available on the medical staff? (CD 11–74) ☐ Yes ☐ No

4. Does the trauma surgeon retain responsibility for the trauma patient admitted to ICU, and coordinate all therapeutic decisions? (CD 11–58) ☐ Yes ☐ No

5. Many of the daily care requirements can be collaboratively managed by a dedicated ICU team. Is the trauma surgeon kept informed and in agreement with major therapeutic and management decisions made by the ICU team regarding admitted trauma patients? (CD 11-59) ☐ Yes ☐ No

6. Is there a designated ICU liaison to the trauma service? (CD 11–61) ☐ Yes ☐ No
    - Name:

7. Does the facility have qualified critical care nurses available 24 hours per day to provide care for patients during the ICU phase? (CD 11-65) ☐ Yes ☐ No

8. Does the patient-to-nurse ratio in the ICU exceed two to one? (CD 11–66) ☐ Yes ☐ No

9. Does the ICU have the necessary equipment to monitor and resuscitate patients? (CD 11–67) ☐ Yes ☐ No

10. If the facility admits neurotrauma, is there intracranial pressure monitoring equipment available? (CD 11–68) ☐ Yes ☐ No

F. Clinical Laboratory and Blood Bank

1. Does the facility have a massive transfusion protocol developed collaboratively between the trauma service and the blood bank? (CD 11-84) ☐ Yes ☐ No
   - *If 'Yes', attach the protocol* (***Label as Attachment #6***)

2. Is the blood bank capable of blood typing and cross matching? (CD 11-81) ☐ Yes ☐ No

3. Are laboratory services available 24 hours per day for the standard analysis of blood, urine, and other body fluids, including micro-sampling when appropriate? (CD 11-80) ☐ Yes ☐ No

4. Does the facility have the ability to perform coagulation studies, blood gas analysis, and microbiology studies available 24 hours per day? (CD 11-85) ☐ Yes ☐ No

5. Does the facility's blood bank have an adequate supply of packed red blood cells available within 15 minutes and fresh frozen plasma available? (CD 11-83) ☐ Yes ☐ No

G. Additional Required Services

1. Is a respiratory therapist on call 24 hours per day? (CD 11–76) ☐ Yes ☐ No

2. Which of the following services does the hospital provide? (Check all that apply)

☐ Physical therapy (CD 12-3)
☐ Social services (CD 12-4)

H. Pediatrics

1. Does the facility annually admit 100 or more injured children younger than 15 years of age? (CD 2-23) ****If yes please answer question 2*** ☐ Yes ☐ No

2. Any adult trauma center that annually admits 100 or more injured children younger than 15 years must fulfill the following additional criteria demonstrating their capability to care for injured children:

a. Are the trauma surgeons credentialed for pediatric trauma care by the hospital's credentialing body? (CD 2–23) ☐ Yes ☐ No

b. Does the facility have (CD 2-24):

- A pediatric emergency department area? ☐ Yes ☐ No
- A pediatric intensive care area? ☐ Yes ☐ No
- Appropriate resuscitation equipment? ☐ Yes ☐ No
- A pediatric-specific trauma PI program? ☐ Yes ☐ No

3. Fill out the Tables 1 and 2 below. *Note only include pediatric totals for patients under 15 years of age.*

Table 1 – Pediatric Trauma Admissions

Service	Number of Admissions
Pediatric	
Orthopedic	
Neurosurgical	
Other Surgical	
Non-Surgical	
Total Pediatric Trauma Admissions	

Table 2 – Pediatric Injury Severity and Mortality

ISS	Total number of pediatric admissions	Number of deaths from Total pediatric trauma admissions	Percent mortality from total pediatric trauma admissions	Number admitted to pediatric service	Number Admitted to Non-Surgical
0-9					
10-15					
16-24					
>25					
Total					

** The total admissions for tables 1 and 2 should be the same.*

I. Organ Procurement Activities

1. Does the facility have an established relationship with a recognized Organ Procurement Organization (OPO)? (CD 21–1) ☐ Yes ☐ No

2. Does the facility have a written policy in place for triggering notification of the regional OPO? (CD 21–2) ☐ Yes ☐ No

3. Does the facility have written protocols defining the clinical criteria and confirmatory tests for the diagnosis of brain death? (CD 21–3) ☐ Yes ☐ No

J. Disaster Plan

1. Does the facility participate in regional disaster management plans and exercises? (CD 2–22) ☐ Yes ☐ No

2. Does the facility meet the disaster-related requirements of the Joint Commission or equivalent? (CD 20–1) ☐ Yes ☐ No

3. Is a surgeon from the trauma panel a member of the hospital's disaster committee? (CD 20–2) ☐ Yes ☐ No

4. Are hospital drills that test the facility's disaster plan conducted at least twice a year, including actual plan activations that can substitute for drills? (CD 20–3) ☐ Yes ☐ No

5. Does the facility have a hospital disaster plan described in the hospital's policy and procedure manual or equivalent? (CD 20–4) ☐ Yes ☐ No

VI. TRAUMA REGISTRY

Ongoing, accurate data collection and analysis is crucial to trauma system development, performance improvement, and injury prevention. The American College of Surgeons requires trauma registries and analysis by every trauma center. Michigan requires data collection to be designated. For the purposes of this document trauma patients are defined by trauma registry inclusion criteria.

1. What trauma registry software does the hospital use?

2. Is trauma registry data collected and analyzed using the minimum data collection set? (National Trauma Data Bank)(CD 15-1) (MI-CD 1-1) ☐ Yes ☐ No

3. Is the trauma registry data submitted to the State Registry? (MI-CD 1-2) ☐ Yes ☐ No

   - Date of most recent data submission (mm/dd/yyyy):

4. Is there a process in place to submit data quarterly? (MI-CD 1-3) ☐ Yes ☐ No

5. Has the facility designated a person responsible for trauma registry activities? This person should have minimal training necessary to maintain the registry. If the facility admits less than 500 trauma patients annually this does not need to be a dedicated position. (MI-CD 1-4) ☐ Yes ☐ No

6. The trauma registry is essential to the performance improvement (PI) program. Does the trauma registry support the PI process and assist in identifying injury prevention priorities that are appropriate for local implementation? (CD 15-3, 15-4) ☐ Yes ☐ No

a. Describe how the registry is used in the PI process to identify and track opportunities for improvement:

7. Does the facility plan to participate in the risk stratified benchmarking system (when available) to measure performance and outcome using registry data (i.e. attend training, review reports, anticipate action steps based on benchmarking of other facilities)? (CD 15-5) ☐ Yes ☐ No

8. Does the trauma program ensure that trauma registry confidentiality measures are in place? (CD 15-8) ☐ Yes ☐ No
   - If 'Yes', please explain:

9. Trauma registries should be concurrent. At a minimum, does the registry have 80 percent of cases entered within 60 days of discharge? (CD 15–6) ☐ Yes ☐ No

10. Does the facility demonstrate that all trauma patients can be identified for review? (CD 15-1) ☐ Yes ☐ No

11. Has the trauma registrar attended or previously attended two courses within 12 months of being hired (CD 15–7):
    a. The American Trauma Society's Trauma Registrar Course or equivalent provided by a state trauma program ☐ Yes ☐ No
    b. The Association of the Advancement of Automotive Medicine's Injury Scaling Course ☐ Yes ☐ No

12. One full-time equivalent employee dedicated to the registry must be available to process the data capturing the NTDS data set for each 500–750 admitted patients annually (CD 15–9). Does the facility have a full-time employee dedicated to the trauma registry? ☐ Yes ☐ No

13. The information provided by a trauma registry is only as valid as the data entered. Does the facility have strategies for monitoring data validity? (CD 15–10) ☐ Yes ☐ No

VII. PERFORMANCE IMPROVEMENT

A. Performance Improvement (PI) Program

1. The facility must have a written performance improvement plan which addresses the following: (MI-CD 2-3)

   a. A process of event identification and levels of review which result in the development of corrective action plans, and methods of monitoring, re-evaluation, risk stratified benchmarking must be present and this process must be reviewed and updated annually? ☐ Yes ☐ No

b. Problem resolution, outcome improvements and assurance of safety (loop closure) must be readily identifiable through methods of monitoring, re-evaluation, benchmarking and documentation. ☐ Yes ☐ No

c. All criteria for trauma team activation have been determined by the trauma program and evaluated on an ongoing basis in the PI process. ☐ Yes ☐ No

d. The PI program identifies and reviews documents, findings, and corrective action on the following five (5) audit filters:
   - Any system and process issue ☐ Yes ☐ No
   - Trauma deaths in house or in emergency department ☐ Yes ☐ No
   - Any clinical care issues, including identifying and treatment of immediate life threatening injuries ☐ Yes ☐ No
   - Any issues regarding transfer decision ☐ Yes ☐ No
   - Trauma team activation times to trauma activation ☐ Yes ☐ No

e. In addition, does your facility have mechanisms in place to review issues that revolve predominately around (1) system and process issues such as documentation and communication, (2) clinical care including identification and treatment of immediate life threatening injuries (ATLS); and (3) transfer decisions. (CD 16-10) ☐ Yes ☐ No

2. All trauma facilities shall develop and have in place a performance improvement process. 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 events are less likely to occur (CD 16-19). Does the facility have a written PI plan* that addresses the criteria in ***Appendix #14***?** ☐ Yes ☐ No

Plan needs to be available for reviewers.
****Use Appendix #14 to summarize your responses***

3. Does the trauma facility have a PI 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? (CD 16-1) ☐ Yes ☐ No

4. Does peer review occur at regular intervals ensuring that the volume of cases is reviewed in a timely fashion? (CD 2-18) ☐ Yes ☐ No

5. Because the trauma PIPS program crosses many specialty lines, it must be empowered to address events that involve multiple disciplines. Is the PI program endorsed by the hospital governing body as part of its commitment to optimal care of injured patients? (CD 5-1) ☐ Yes ☐ No

6. Is there adequate administrative support to ensure evaluation of all aspects of trauma care? (CD 5-1) ☐ Yes ☐ No

7. Are the TMD and the TPM/TNC empowered by the hospital governing body to have the authority and to lead the PI program? (CD 5-1) ☐ Yes ☐ No

8. Are all process and outcome measures documented within the trauma PI program's written plan reviewed and updated at least annually? (CD 16–5) ☐ Yes ☐ No

9. Is there a rigorous multidisciplinary performance improvement to evaluate over triage and under triage rates to attain the optimal goal of less than 5 percent under triage? (CD 3-3) ☐ Yes ☐ No

10. Does the facility's PI program integrate with the hospital quality and patient safety effort and have a clearly defined reporting structure and method for provision of feedback? (CD 16-3) ☐ Yes ☐ No

11. Does the trauma program use clinical practice guidelines, protocols, and algorithms derived from evidenced-based validated resources? (CD 16-4) ☐ Yes ☐ No

12. Are all process and outcome measures documented within the PI program plan and reviewed and updated annually? (CD 16-5) ☐ Yes ☐ No

13. 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 admissions. Are the trauma surgeon response time to other levels of trauma team activation and backup call response time monitored? (CD 5-16) ☐ Yes ☐ No

- If 'Yes', does the PI committee document variances and review the reason for delay, opportunities for improvement, and corrective actions? ☐ Yes ☐ No

14. Does the facility monitor all trauma patients who are diverted or transferred during the acute phase of hospitalization to:

- Another trauma center, acute care hospital, or specialty hospital(for example: burn center, re-implantation center, pediatric trauma center) ☐ Yes ☐ No
- Patients requiring cardiopulmonary bypass ☐ Yes ☐ No
- When specialty personnel are unavailable:

a. Does the facility subject these cases to individual case review to determine the rationale for transfer, appropriateness of care, and opportunities for improvement (CD 9-14) ☐ Yes ☐ No

b. Does the facility receive follow up from the center to which the patient was transferred as part of the case review? (CD 9-14, CD 3-4, CD 4-3) ☐ Yes ☐ No

15. Describe how the emergency physicians are actively involved with the overall trauma PI program: (CD 7-10)

16. Does the PI process review the appropriateness of the decision to transfer or retain major orthopedic trauma patients? (CD 9-13) ☐ Yes ☐ No

17. Does the orthopedic service participate actively with the overall trauma PI program and the multidisciplinary trauma peer review committee? (CD 9-15) ☐ Yes ☐ No

18. Are changes in interpretation between preliminary and final reports, as well as missed injuries monitored through the PI program? (CD 11-37) ☐ Yes ☐ No

    a. Describe the institution's process for tracking changes in radiology interpretation and missed injuries.

    b. Describe how these are monitored through PI. (If the facility does FAST exams in the ED please include the monitoring of these as well)

19. Does the PI program document and monitor the response times when the specialties listed below are responding from outside the trauma facility?
    - Response times of computed tomography technologist (30 minutes) ☐ Yes ☐ No
    - Magnetic resonance imaging (60 minutes) ☐ Yes ☐ No
    - Technologist/Interventional radiology team (30 minutes) ☐ Yes ☐ No

20. Is the availability of the anesthesia services and the absence of delays in airway control or operations documented by the hospital PI Process? (CD 11-6) ☐ Yes ☐ No

21. Does the PI program review all ICU admissions and transfers of ICU patients to ensure appropriateness of patients being selected to remain at the Level III trauma facility vs. being transferred to a higher level of care? (CD 11-57) ☐ Yes ☐ No

22. Does the PI program document the timeliness and appropriate ICU care and coverage is being provided? (CD 11-60) ☐ Yes ☐ No

23. Regardless of the type of hospital or designation, system performance for pediatric patients, at a minimum, should be measured by analysis of mortality, morbidity, and functional status (see Chapter 16, Performance Improvement and Patient Safety). Pediatric process and outcome measures that encompass prehospital hospital, and post hospital care should be tracked concurrently and reviewed periodically.
    a. Does the facility admits less than 100 injured children younger than 15 years per year? ☐ Yes ☐ No

    b. Is the care of the injured children reviewed through the PI program? (CD 2-24, 2-25) ☐ Yes ☐ No

B. Mortality Review

1. All trauma-related mortalities must be systematically reviewed and those mortalities with opportunity for improvement identified for peer review. (CD 16-6, 16-17)

A. Total trauma-related mortality rates. Outcome measures for total, pediatric (younger than 15 years), and geriatric (older than 64 years) trauma encounters should be categorized as follows:

1. DOA (pronounced dead on arrival with no additional resuscitation efforts initiated in the emergency department).
2. DIED (died in the emergency department despite resuscitation efforts).
3. In-hospital (including operating room).
4. Mortality rates by Injury Severity Scale (ISS) subgroups using the table below:

Mortality Table

ISS	DOA	DIED	Admitted Mortalities	Mortalities Admitted to Trauma Service	Mortalities Admitted to Non-Surgical	Mortalities Admitted to Other Surgical Service (if applicable)
0-9						
10-15						
16-24						
>/= 25						
Total						

**If no ISS score for DOA or DIED available, place in the 0-9 category.*

C. Event Identification Review

1. Sufficient mechanisms must be available to identify events for review by the trauma PI program. Issues that must be reviewed will revolve predominately around (1) system and process issues such as documentation and communication; (2) clinical care, including identification and treatment of immediate life-threatening injuries (ATLS); and (3) transfer decisions. Are there sufficient mechanisms available to identify events for review by the trauma PI program? (CD 16-10) ☐ Yes ☐ No

   a. Describe how these events are verified and validated through the PI process: (CD 16-11)

2. Is there a Multidisciplinary Trauma Systems/Operations Committee? (CD 16-12) ☐ Yes ☐ No

3. Is there documentation (minutes) reflecting the review of operational events and, when appropriate, the analysis and proposed corrective actions? (CD 16-13) ☐ Yes ☐ No

4. Does the PI program address the need for pulse oximetry, end-tidal carbon dioxide detection, arterial pressure monitoring, pulmonary artery catheterization, patient rewarming, and intracranial pressure monitoring (Level III's with neurosurgery) in all trauma patients? (CD 11–27) ☐ Yes ☐ No

5. Occasionally, in a Level III trauma center, it is necessary for the physician to leave the emergency department for short periods to address in-house emergencies. Are these cases and their frequency reviewed by the performance improvement and patient safety (PIPS) program to ensure that this practice does not adversely affect the care of patients in the emergency department? (CD 7-3) ☐ Yes ☐ No

D. Multidisciplinary Trauma Committee

1. Does the trauma facility's PI program have a multidisciplinary trauma peer review committee chaired by the TMD with representatives from general surgery (group of general surgeons on the call panel), orthopedic surgery, emergency medicine, ICU**,** and anesthesia, and neurosurgery (if applicable)? (CD 6–8, CD 5-25) ☐ Yes ☐ No

2. Do the following trauma team members attend a minimum of 50% of the multidisciplinary trauma peer review committee meetings? (CD 16-15)

Trauma Team Member	**Percentage**
Trauma Medical Director (CD 5-10)	
General Surgeons on the call panel (CD 6-8)	
Emergency Medicine Representative or designee (CD 7-11)	
Orthopedic Liaison (CD 9-16)	
Anesthesiology Representative (CD 11-13)	
ICU Liaison (CD 11-62)	
Neurosurgical Representative (CD 8-13)	

3. Does the multidisciplinary trauma peer review committee meet regularly, with required attendance of medical staff active in trauma resuscitation, to review systemic and care provider issues, as well as propose improvements to the care of the injured (CD 2–18) ☐ Yes ☐ No

4. Does the trauma medical director ensure and document dissemination of information and findings from the peer review meetings to the general surgeons? (CD 16-16) ☐ Yes ☐ No

5. Does mortality data, adverse events and problem trends, and selected cases involving multiple specialties undergo multidisciplinary trauma peer review? (CD 16–14) ☐ Yes ☐ No

6. Do these selected case reviews involve the participation and leadership of the trauma medical director (CD 5–10); general surgeons on the call panel and the liaisons from emergency medicine, orthopedics, neurosurgery, anesthesia, critical care, and radiology? (CD 5-10, 6-8, 7-11, 9-16, 11-13, 11-62) ☐ Yes ☐ No

7. When an opportunity for improvement is identified, are appropriate corrective actions to mitigate or prevent similar future adverse events developed, implemented, and clearly documented by the trauma PI program? (CD 16-18) ☐ Yes ☐ No
    a. Examples of corrective actions include the following:

- Guideline, protocol, or pathway development or revision.
- Targeted education (for example, rounds, conferences, or journal clubs)
- Counseling
- Peer review presentation
- External review or consultation
- Ongoing professional practice evaluation
- Change in provider privileges

E. Audit Filters

Fundamental to the performance improvement process is monitoring and measuring the outcome of specific processes or procedures. Another name for process and outcomes measures is audit filters. Audit filters require defined criteria and metrics. The PI program must have audit filters to review and improve pediatric and adult patient care.

1. Does the PI program identify, review, and document findings and corrective actions on the following audit filters? Check yes or no depending on whether the facility is tracking the audit filter.

   a. Does the facility have a policy in place to review issues that revolve predominately around (1) system and process issues such as documentation and communication; (2) clinical care, including identification and treatment of immediate life-threatening injuries (ATLS®); and (3) transfer decisions? (CD 16-10) ☐ Yes ☐ No

   b. All trauma deaths in house or in emergency department. (CD 16-6) ☐ Yes ☐ No

   c. Trauma team response times to trauma activation, including consultants. (CD 2-8, 5-15) ☐ Yes ☐ No

   d. General surgeon response times to trauma activation. (CD 5-15, 2-8, 5-16, 2-9) ☐ Yes ☐ No

   e. If the CT technologist takes a call from outside the hospital, the technologist's arrival to the hospital is documented. (CD 11-47) ☐ Yes ☐ No

   f. Anesthesiology services availability (within 30 minutes) after notification for **emergency operations**. (CD 11-1) (Includes delay of surgery for times greater than 30 minutes) ☐ Yes ☐ No

   g. Anesthesiology services availability (within 30 minutes) after notification for **managing airway problems.** (CD 11-2) ☐ Yes ☐ No

   h. Radiologists availability (within 30 minutes), in person or by teleradiology, when requested for the interpretation of radiographs. (CD 11-32) ☐ Yes ☐ No

   i. Changes in interpretation between preliminary and final reports, as well as missed injuries are monitored. (CD 11-37) ☐ Yes ☐ No

j. Operating room adequately staffed and available within 30 minutes of a call. (CD 11-17) ☐ Yes ☐ No

k. If an on-call team is used, the availability of operating room personnel and PACU, and the timeliness of starting operations are continuously evaluated, and measures implemented to ensure optimal care (CD 11-16, 11-18). ☐ Yes ☐ No

l. Over triage and under triage (CD 16-7, 3-3) ☐ Yes ☐ No
   1. Reporting year: over triage ____% and under triage ____% rates

m. Issues regarding transfer decisions (CD 4-3) ☐ Yes ☐ No
   1. All trauma transfers (CD 4-3, 8-8, 8-9) ☐ Yes ☐ No
   2. Transfer to a level of higher care within the hospital (CD 16-8) ☐ Yes ☐ No

n. Trauma patients admitted or transferred by a primary care physician without the knowledge and consent of the trauma service are monitored. (CD 11-69) ☐ Yes ☐ No

o. Appropriateness of the decision to transfer or retain major orthopedic trauma cases. (CD 9-13) ☐ Yes ☐ No

p. Facilities annually admitting fewer than 100 injured children younger than 15 years must review the care of their injured children. (CD 2-25) ☐ Yes ☐ No

q. Timely and appropriate ICU care and coverage is provided. (CD 11-56) ☐ Yes ☐ No

r. Timely response of credentialed providers to the ICU. (CD 11-60) ☐ Yes ☐ No

s. If the trauma program admits more than 10% of injured patients to non-surgical services, all non-surgical admissions are reviewed. (CD 5-18) ☐ Yes ☐ No

t. 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 are reviewed to ensure this practice does not adversely affect the care of patients in the emergency department. (CD 7-3) ☐ Yes ☐ No

u. Bypass and diversion events (CD 3-4, 3-5, 3-6, 3-7) ☐ Yes ☐ No

v. Organ donation rate reviewed annually. (CD 16-9) ☐ Yes ☐ No

w. A process to address trauma program operational events. (CD 16-12) ☐ Yes ☐ No

x. The multidisciplinary trauma peer review committee must systematically review mortalities, significant complications, and process variances associated with unanticipated outcomes and determine opportunities for improvement. (CD 16-17) ☐ Yes ☐ No

VIII. EDUCATION ACTIVITIES/OUTREACH PROGRAMS

1. Is the trauma facility engaged in public and professional education? (CD 17-1) ☐ Yes ☐ No

2. Is there an injury prevention/public trauma education program based on local/regional trauma registry and epidemiologic data? (CD 18–1) ☐ Yes ☐ No

3. The facility must provide a mechanism for trauma-related education to nurses involved in trauma care (CD 17-4). Check the certifications below the nursing staff has obtained (check all that apply):
   - ☐ Trauma Nursing Core Course (TNCC)
   - ☐ Advanced Trauma Care for Nurses (ATCN)
   - ☐ Emergency Nursing Pediatric Course (ENPC)
   - ☐ Trauma Care After Resuscitation (TCAR)
   - ☐ Certified Emergency Nurse (CEN)
   - ☐ Other _____

IX. PREVENTION

A. Alcohol Screening and Intervention for Trauma Patients

1. Is universal screening for alcohol performed on all **admitted** trauma patients documented? (CD 18-3) ☐ Yes ☐ No

B. Injury Prevention

1. Does the trauma facility have someone in a leadership position that has injury prevention as part of his or her job description? (CD 18-2) ☐ Yes ☐ No

X. TRAUMA PROGRAM STRENGTHS AND OPPORTUNITIES

1. Please provide a brief description (**250 characters or less**) of your trauma program strengths.

2. Please provide a brief description (**250 characters or less**) of your trauma program opportunities for improvements.

Appendix #1 – Sample of a Trauma Facility Commitment to Level III Trauma Care

WHEREAS, traumatic injury is the leading cause of death for Michigan residents between the ages of 1 and 44 years; and

WHEREAS, [HOSPITAL] strives to provide optimal trauma care; and

WHEREAS, treatment at a trauma hospital that participates in a standardized system of trauma care can significantly increase the chance of survival for victims of serious trauma; and

WHEREAS, participation in the Michigan Statewide Trauma System will result in an organized and timely response to patients' needs, a more immediate determination of patients' definitive care requirements, improved patient care through the development of the hospital's performance improvement program and an assurance that those caring for trauma patients are educationally prepared:

THEREFORE; BE IT RESOLVED that the board of directors of [HOSPITAL] resolve to provide the resources necessary to achieve and sustain a level [III or IV] trauma hospital designation.

IN WITNESS THEREOF, I have hereunto subscribed my name this [DAY] day of [MONTH], [YEAR].

_____

Chairman of the Board

Appendix #2 – Sample Medical Staff Resolution

WHEREAS, traumatic injury is the leading cause of death for Michigan residents between the ages of 1 and 44 years; and

WHEREAS, [HOSPITAL] strives to provide optimal trauma care; and

WHEREAS, treatment at a trauma hospital that participates in a standardized system of trauma care can significantly increase the chance of survival for victims of serious trauma; and

WHEREAS, participation in the Michigan Statewide Trauma System will result in an organized and timely response to patients' needs, a more immediate determination of patients' definitive care requirements, improved patient care through the development of the hospital's performance improvement program and an assurance that those caring for trauma patients are educationally prepared:

THEREFORE; BE IT RESOLVED that the medical staff of [HOSPITAL] resolves to support the hospital's trauma program and to participate with initiatives in the furtherance of the standards published by the Michigan Statewide Trauma System for level [III or IV] trauma hospitals.

IN WITNESS THEREOF, I have hereunto subscribed my name this [DAY] day of [MONTH], [YEAR].

_____

Chief of Staff

Appendix #3 - Trauma Medical Director

1. Name:
2. Medical School:
    - Year Graduated:
3. Type of Residency:
4. Post Graduate Training Institution (Residency):
    - Year Completed:
5. Board Certified (or a general surgeon eligible for certification by the American Board of Surgery according to current requirements) or a general surgeon who is an American College of Surgeons Fellow with a special interest in trauma care? ☐ Yes ☐ No
    - Year:
    - Specialty:
    - Expiration Date:

6. List added qualifications/certifications giving the Specialty and date received:

7. Current in ATLS? ☐ Yes ☐ No

**Documentation will be required at site visit*

Appendix #4 - Trauma Surgeons

Name	Board Certification S=American Board of Surgery OS=Osteopathic Surgery CC=Critical Care PS=Pediatric Surgery	Frequency of trauma calls per month (Days)	Number of trauma patients admitted per year	Number of operative cases per year	Number of trauma patients admitted per year ISS>15	Percentage of time the surgeon arrival was within 30 minutes of patient arrival	ATLS taken at least once (Exp. Date)	ATLS Current (Check)	Alternate Pathway* (Check)

* *General surgeons who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure. For a current description of alternate pathway criteria for general surgery recognition see the Alternate Pathway for Non-Board Certified Surgeons and Physicians which can be found at www.michigan.gov/traumasystem.*

Appendix #5 – Trauma Transfer Guidelines

Check the criteria below that the facility uses to prompt identification and consideration of transfer for patients who require a higher level of care and are reviewed in the trauma PI program. **The following are conditions that should immediately activate emergency transfer procedures.**

1. Central Nervous System:
   - ☐ Penetrating injury/open fracture with or without cerebrospinal fluid leak
   - ☐ Depressed skull fracture
   - ☐ GCS <14 or deteriorating mental status or lateralizing neurological signs
   - ☐ Spinal fracture, spinal cord injury or major vertebral injury
2. Circulatory System:
   - ☐ Carotid or vertebral arterial injury
   - ☐ Torn thoracic aorta or great vessel
   - ☐ Cardiac rupture
3. Chest:
   - ☐ Major chest wall injury
   - ☐ Bilateral pulmonary contusion with Pao2:Flo2 ratio less than 200.
   - ☐ Wide mediastinum or other signs suggesting great vessel injury
   - ☐ Cardiac injury
   - ☐ More than two unilateral rib fractures or bilateral rib fractures with pulmonary contusion (if no critical care consultation is available).
4. Pelvis/Abdomen:
   - ☐ Pelvic fracture with shock or other evidences of continuing hemorrhage
   - ☐ Open pelvic injury
   - ☐ Unstable pelvic fracture requiring transfusion of more than 6 U of red blood cells in 6 hours
   - ☐ Major abdominal vascular injury
   - ☐ Grade IV or V liver injuries requiring transfusion of more than 6 U of red blood cells in 6 hours
   - ☐ Complex pelvis/acetabulum fractures.
5. Major Extremity Injuries:
   - ☐ Fracture/dislocation with loss of distal pulses
6. Multiple-System Injury:
   - ☐ Head injury combined with face, chest, abdominal, or pelvic injury
   - ☐ Burns with associated injuries
   - ☐ Significant torso injury with advanced comorbid disease (such as coronary artery disease, chronic obstructive pulmonary).
7. Secondary Deterioration (Late Sequelae):
   - ☐ Single or multiple organ system failure (deterioration in central nervous, cardiac, pulmonary, hepatic, renal, or coagulation systems)
   - ☐ Major tissue necrosis
   - ☐ Prolonged mechanical ventilation required
8. Co-morbid Factors
   - ☐ Age >55 years
   - ☐ Children < 15 years of age
   - ☐ Cardiac or respiratory disease
   - ☐ Insulin-dependent diabetes
   - ☐ Morbid obesity
   - ☐ Pregnancy
   - ☐ Immunosuppression

Appendix #6 - Trauma Diversion

List dates, length of time, and reasons in the last year that the facility has been on diversion to trauma patients. Diversion is the term used when a facility is not able to care for trauma patients. It may be for various reasons: the system is overwhelmed (disaster scenario), ICU full, surgeon unavailable, etc.

Date of Occurrence	Length of Diversion Minutes/Hours/Days	Reason for Diversion

Appendix #7 - Emergency Medicine Liaison to Trauma Program

1. Name:

2. Medical School:
    - Year Graduated:

3. Post Graduate Training Institution (Residency):
    - Year Completed:

4. Board Certification in Emergency Medicine? ☐ Yes ☐ No
    - Year of Certification:
    - Expiration Date:

5. ATLS Certified? ☐ Yes ☐ No

Appendix #8 – Emergency Physicians and Advanced Practice Providers

Please list all emergency physicians and advanced practice providers** (Physician Assistants, Nurse Practitioners, and Advance Practice Nurses) currently participating in the activation and initial resuscitation of trauma patients. (CD 7-6, 7-14, 1-15)

****Advanced practice providers should be identified as PA, NP, or APN, and include any locum tenens.**

Name	Credentials (i.e. MD, DO, PA, NP, APN)	Board Certified (Physician Specialty)	ATLS Current (Exp. Date)	ATLS Taken Once (Exp. Date)	No ATLS Course Taken (Check)	Alternate Pathway* (Check)

** Emergency physicians who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure. For a current description of alternate pathway criteria for general surgery recognition see the Alternate Pathway for Non-Board Certified Surgeons and Physicians which can be found at www.michigan.gov/traumasystem.*

Appendix #9 - Neurosurgeon Liaison to Trauma Program

1. Name:

2. Medical School:
    - Year Graduated:

3. Post graduate training institution (Residency):
    - Year Completed:

4. Type of Fellowship:
    - Year Completed:

5. Is this neurosurgeon certified by the American Board of Neurological Surgery? ☐ Yes ☐ No
    - If 'Yes', year of certification:
    - Expiration Date:

Appendix #10 – Neurosurgery

Name	Board Certification (Check)	Frequency of trauma calls per month (Days)	Number of trauma patients admitted per year	Number of Trauma Craniotomies per year	Alternate Pathway* (Check)

* *Neurosurgeons who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure. For a current description of alternate pathway criteria for general surgery recognition see the Alternate Pathway for Non-Board Certified Surgeons and Physicians which can be found at www.michigan.gov/traumasystem.*

Appendix #11 - Orthopedic Liaison to Trauma Program

1. Name:

2. Medical School:
    - Year Graduated:

3. Post graduate training (Residency):
    - Year completed:

4. Type of Fellowship:
    - Year completed:

5. Is the Orthopedic liaison to the trauma program certified by the American Board of Orthopedic Surgery? ☐ Yes ☐ No
    - If 'Yes', year of certification:
    - Expiration Date:

Appendix #12 – Orthopedic Surgery

Name	Board Certification (Check)	Frequency of trauma calls per month (Days)	Number of trauma patients admitted per year	Alternate Pathway* (Check)

* *Orthopedic surgeons who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure. For a current description of alternate pathway criteria for general surgery recognition see the Alternate Pathway for Non-Board Certified Surgeons and Physicians which can be found at www.michigan.gov/traumasystem.*

Appendix #13 - Anesthesia Liaison to Trauma Program

1. Name:

2. Medical School:
    - Year graduated:

3. Post graduate training institution (residency):
    - Year completed:

4. Fellowship:
    - Year completed:

5. Is this anesthesiologist certified by the American Board of Anesthesiology? ☐ Yes ☐ No
    - Year Certified:
    - Expiration Date:

Appendix #14 – Performance Improvement Plan

1. The 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. ***Please submit an example of a specific PI problem, where the PI process was utilized by the facility to identify, track, document and discuss the issue. (CD 2-17).***

2. Problem resolution, outcome improvements, and assurance of safety ("loop closure") must be readily identifiable through methods of monitoring, reevaluation, benchmarking, and documentation. ***Please submit an example of a PI problem the center identified and the loop closure (resolution) achieved along with who was responsible for the system and/or peer review issues. (CD 16-2)***

General Information and Instructions

HOSPITAL INFORMATION

Hospital Commitment
Requested Documents:

Trauma Facility Commitment to Level III Trauma Care – The hospital's administrative structure must support the trauma program. Documentation of administrative commitment is required from the governing body and the medical staff (CD 5–1). This support must be reaffirmed continually (every 3 years) and must be current at the time of verification (CD 5–2). Administrative support of the trauma program helps provide adequate resources for the optimal care of injured patients. The participation of an administrator helps ensure that the written commitment to the trauma program is aligned with optimal multidisciplinary trauma care. See Appendix #1 for a sample.

Medical Staff Resolution – Medical staff commitment ensures that the members of the medical staff support the trauma program by their professional activities. This support includes a current written commitment acknowledging the medical staff's willingness to provide enough specialty care to support the optimal care of injured patients. The support must be reaffirmed continually (every 3 years) and must be current at the time of verification (CD 5–3). See Appendix #2 for a sample.

Surgical Commitment – Although surgical commitment is often difficult to measure objectively, it is recognized in a number of ways, including having a surgeon who is the full-time director of the trauma program, surgeons who take an active role in all aspects of caring for injured patients, surgical participation in the trauma PIPS program, and surgeons who take an advocacy role for injured patients. Surgical leadership in promoting the trauma program to the community, hospital, and other colleagues also is easily recognized. This commitment is a valuable resource that is integral to a successful trauma program (CD 2-2).

Michigan Criteria/ACS Criteria/Critical Deficiencies

Certain criteria are fundamental to establishing and maintaining a trauma facility. These criteria have been identified as critical in nature and the failure of the healthcare facility to meet these criteria is considered a "critical deficiency" (CD). If a Type I deficiency or more than three Type II deficiencies are present at the time of the initial in-state verification visit a facility will not be recommended for designation as a Michigan trauma facility. There are two categories of critical deficiencies that must be met; one category is the **Michigan Criteria** which is derived from the Statewide Trauma System Administrative Rules 325.125-325.138 filed with the Secretary of State on October 2009. The second category of criteria outlined in the PRQ is based on the **American College of Surgeons Committee on Trauma (ACS)** Resources for Optimal Care of the Injured Patient 2014.

1. **Michigan Criteria:**
   Michigan criterion are noted throughout the document and preceded by a reference number Ex: MI-CD 1, MI-CD 2, MI-CD 1-2 etc. Not meeting these requirements is considered a Type I critical deficiency. References for these critical deficiencies can be found www.michigan.gov/traumasystem.

2. **ACS Criteria:**
   American College of Surgeons criteria are noted throughout the document and are preceded by a reference number CD 5-13 etc. Not meeting these requirements is considered a Type I or Type II critical deficiency. References for these critical deficiencies can be found at https://www.facs.org/quality-programs/trauma/vrc/resources.

PRE-HOSPITAL SYSTEM

For the purposes of this document EMS Education refers to any interaction between the trauma facility staff and the EMS providers for the purposes of improving trauma care in the injured patient. This may include case reviews, trauma courses such as Pre-Hospital Trauma Life Support (PHTLS), offering EMS continuing education, joint exercises and drills.

TRAUMA PROGRAM

Trauma Staff

At a minimum, all trauma facilities should have a Trauma Program Manager/Trauma Nurse Coordinator (TPM/TNC) and a Trauma Medical Director (TMD).

- The TPM/TNC is most commonly is a nurse, with trauma/emergency care experience.
- The TMD is a physician on staff who has a role in leadership for the trauma program and acts as a liaison for trauma care.
- Injury prevention staff can be a nurse or other personnel involved in injury prevention activities.
- Other staff includes a Trauma Registrar, research personnel or administrative assistants.

Trauma Diversion

Hospital Trauma Diversion: A trauma facility may re-route a trauma patient to an alternate trauma care facility if one or more of its essential trauma resources are currently functioning at maximum capacity, or is otherwise unavailable, in order to serve the best interest of the trauma patient.

Trauma Bypass: Pursuant to the trauma triage guidelines in this protocol, the EMS provider may bypass the nearest trauma care facility in order to transport the trauma patient to a trauma care facility whose resources are more appropriate to the patient's injury.

HOSPITAL RESOURCES

Emergency Department

Education requirements for trauma care providers:

- Emergency Department mid-level providers that function as a member of the team caring for trauma activation patients via assessment or interventions must be current in ATLS. If the ED mid-level's only role is as a scribe or entering orders they would not need to meet the ATLS requirement.
- The Trauma Medical Director must be current in ATLS.
- General surgeons treating trauma patients must have taken ATLS once.
- Emergency Medicine physicians who are board certified in emergency medicine must have taken ATLS once.
- Physicians who work in the emergency department and are board certified in something other than emergency medicine, for example family practice, internal medicine, etc. al, must be current in ATLS.

General surgeons who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure. For a current description of alternate pathway criteria for see the Alternate Pathway for Non-Board Certified Surgeons and Physicians which can be found at www.michigan.gov/traumasystem.

PERFORMANCE IMPROVEMENT

Performance improvement process focuses on structure, process and outcomes evaluations. Improvement efforts identify root causes of problems, intervene to eliminate these causes and take steps to correct the process. This process must be implemented for facility and regional performance improvement.

A strong PI program must address the following:

- Process improvement contains a detailed audit of all trauma related deaths, major complications and transfers
- A multi-disciplinary trauma peer review committee that includes all members of the trauma team
- Participation in the statewide trauma registry
- The ability to follow up on corrective actions to ensure performance improvement activities
- The hospital participates in the regional performance improvement activities
- Practice Guidelines, protocols, algorithms, derived from evidenced validated resources are used to stratify benchmarking and measure performance improvement

For additional resources, see the ACS book, "Resources for Optimal Care of the Injured Patient 2014", Chapters 15 and 16.

PRQ Level III Checklist

Before submitting the PRQ, ensure the following has been completed:

- ☐ All questions on the PRQ are complete
- ☐ Appendix #3 - Complete with Trauma Medical Director information
- ☐ Appendix #4 – Trauma Surgeon table complete
- ☐ Appendix #5 – Criteria for transfer guidelines checked.
- ☐ Appendix #6 – Complete Trauma Diversion Table
- ☐ Appendix #7 – Complete with Emergency Medicine Liaison information
- ☐ Appendix #8 – Emergency Physician and Advanced Practice Provider table complete
- ☐ Appendix #9 – Complete with Neurosurgeon Liaison information (if applicable)
- ☐ Appendix #10 – Neurosurgery table complete (if applicable)
- ☐ Appendix #11 – Complete with Orthopedic Liaison information
- ☐ Appendix #12 – Orthopedic Surgeon table complete
- ☐ Appendix #13 – Complete with Anesthesia Liaison information
- ☐ Appendix #14 – Examples to PI questions
- ☐ The following attachments are included:
  - ☐ Trauma Facility Commitment to Level III Trauma Care – Signed by Chair of the Board, labeled as Attachment #1
  - ☐ Medical Staff Resolution – Signed by Chief of Staff, labeled as Attachment #2
  - ☐ Position descriptions for Trauma Program Manager/Trauma Nurse Coordinator and Trauma Medical Director, labeled as Attachment #3
  - ☐ Hospital's activation policy, labeled as Attachment #4
  - ☐ Hospital's diversion policy, labeled as Attachment #5
  - ☐ Hospital's massive transfusion protocol, labeled as Attachment #6