



Pre-Review Questionnaire (PRQ) for Michigan Level IV 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, please write legibly 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 at the end of the document 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 website for additional tools.

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

Or the PRQ can be submitted via mail at the address below:

**Michigan Department of Health and Human Services
Bureau of EMS, Trauma and Preparedness
EMS and Trauma Division
Attn: Trauma Verification/Designation Coordinator
PO Box 30207
Lansing, MI 48909**

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

Please answer ALL questions completely. Do not use abbreviations.

Type of Review:

- Verification
- Re-Verification

Level of Review:

- Level IV 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	
Anesthesiologists	
Advanced Practice Providers (Nurse Practitioners, Advanced Practice Nurses, Physician Assistants)	
Other Physician Specialty (Family Practice, Internal Medicine, Hospitalists, Pediatricians, Orthopedic Surgeons)	
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 IV trauma care. A sample of this commitment is provided in **Appendix #1**. Please obtain a signature from the Chairperson of the hospital board (CD 5-1 & 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 a medical staff resolution. A sample of this resolution is provided in **Appendix #2** (CD 5-1). (**Label as Attachment #2**)

D. Michigan Criteria

1. Michigan's Trauma System Administrative Rules outline trauma facility responsibilities to ensure a regionalized, accountable and coordinated trauma system. This work further is supported by the following statement from 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 facility's trauma program staff participate in the state and/or regional trauma system planning, development, or operation? (CD 1-3) Yes No
- B. Is the facility submitting data to the state trauma registry? (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 SYSTEM

A. EMS

1. Briefly 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 for EMS agencies, with advice from the trauma health care team, including surgeons, and basic and advanced pre-hospital personnel. (CD 3-2)

Does the trauma program participate in the following Medical Control Authority activities?

- a. Pre-hospital protocol development (CD 3-1) Yes No
- b. EMS Training (i.e. case reviews/patient follow-up, facility sponsored classes and continuing education) Yes No
- b. 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 Data Entry Staff Name:

Other:

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

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

B. Trauma Medical Director (TMD) (may also be the Emergency Department Director)

1. Please complete the credentials section for the Trauma Medical Director (TMD) on **Appendix #3**.
2. Is there an annual review by the Trauma Medical Director of all trauma advanced practitioners addressing appropriate orientation, credentialing processes and skill maintenance? * (CD 11-87)
 Yes No N/A
**You may be asked to show documentation of this process at the site visit.*
3. Does the trauma medical director 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 and reevaluation? (CD 2–17) Yes No

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

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

E. General Surgery (If applicable)

1. If a surgeon is part of the responding trauma team members, 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, traced from patient arrival? (CD 2-8) Yes No N/A

F. 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 or extremities proximal to the elbow/knee
 - 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 5-16)

3. Fill in the following:

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
- Advanced Practice Provider

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)

Responder	Activation Level		
	Highest	Intermediate	Lowest (consult)
General Surgeon			
Emergency Physician			
Emergency Department Nursing			
Laboratory Technician			
Radiology Technician			
Anesthesiologist or CRNA			
Scribe			
Advanced Practice Provider			
Other			

7. Is the physician or advanced practice provider in the emergency department within 30 minutes for the highest trauma activation tracked from the patient arrival? (CD 2-8).

Yes No

a. Does the PI demonstrate the physician or advanced practice provider responding is in compliance at least 80% of the time? (CD 2-8)

Yes No

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

8. Total number of trauma patients **seen in the ED** but not admitted by the facility:
9. Total number of trauma patients **admitted** from the ED:
10. Total number of trauma patients transferred to a higher level of trauma care from the facility:
11. Total number of trauma patients **discharged** from the ED:
12. Total number of trauma deaths at the facility:
13. Fill in the following:

Statistics for Patients in Registry Meeting Inclusion Criteria (reporting year)			
ISS	Total Number of Admissions	Total Number of Transfers	Total Number of Deaths
0-9			
10-15			
16-24			
> or = 25			
Total			

F. 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. Does the facility have input from, feedback to, and adequate communication with the personnel responsible for the transport process and the referring hospital? (CD 4-3) Yes No
3. Have transfer guidelines and plans between all possible transfer facilities been developed? (CD 2-13) Yes No
4. Have written transfer agreements with burn facilities been developed? (CD 14-1) Yes No
5. Trauma Transfers:

Number of Trauma Transfers	Air	Ground	Private Vehicle	Total
Transfers Out				

6. A very important aspect of inter-hospital transfer is an effective PI program that includes evaluating transport activities. Is the facility performing a PI review of all transfers? (CD 4-3) Yes No

7. Provide information on the criteria used to prompt identification and consideration of transfer for patients who require a higher level of care and are reviewed by the trauma PI program on **Appendix #5**.

G. Trauma/Hospital Statistical Data

Tables should not include Dead on Arrivals and direct admits.

1. Total Trauma Admissions by Service:

Service	Number of Admissions
General 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 General Surgery
0-9			
10-15			
16-24			
> or = 25			
Total			

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

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

H. 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 (hospitals, 911, dispatch, etc.) 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 policy? Yes No

- *If 'Yes', please send the policy as an attachment. (Label as Attachment #5)*

3. Has the facility gone on trauma diversion during the previous year? Yes No

- *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 physician director? (CD 2-15) Yes No
2. Does the emergency department have coverage by a registered nurse and physician or advanced practice provider continuously available for resuscitation? (CD 2-15) Yes No

***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.**

3. Do the advanced practice providers who participate in the initial evaluation of the trauma patients have current certification as an ATLS provider? (CD 11-86) Yes No N/A
- a. List all physicians and advanced practice providers (Physician Assistants, Nurse Practitioners, and Advance Practice Nurses) currently participating in the initial resuscitation and evaluation of trauma patients on **Appendix #4**.
4. Can the facility demonstrate successful completion of the ATLS® course, at least once, for all general surgeons (CD 6-10) and emergency medicine physicians (CD 7-14) on the trauma team? (CD 17-5) Yes No
5. For any physicians who are board certified in other specialties besides those listed in question 4, and who lead the evaluation and resuscitation of trauma patients in the Emergency Department, can the facility demonstrate current Advanced Trauma Life Support® certification as part of their competencies in trauma? (CD 2-16) Yes No N/A

B. Radiology

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

C. Clinical Laboratory and Blood Bank

1. Does the facility have a massive transfusion protocol developed collaboratively between the trauma service/program 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

D. Pediatrics

1. Does the PI program have audit filters to review and improve pediatric care? (CD 2-19) Yes No

D. Organ Procurement Activities

1. Are there written protocols for declaration of brain death? (CD 21-3) Yes No

E. 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. 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
4. 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 ongoing 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 trauma program ensure that trauma registry confidentiality measures are in place? (CD 15-8) Yes No

• If 'Yes', please explain:

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

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

10. 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, and re-evaluation 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, and re-evaluation 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 (i.e. documentation, communication) 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
2. Does peer review occur at regular intervals ensuring that the volume of cases is reviewed in a timely fashion? (CD 2-18) Yes No
3. Because the trauma PI 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
4. Is there adequate administrative support to ensure evaluation of all aspects of trauma care? (CD 5-1) Yes No
5. Are the TMD and the TPM/TNC empowered by the hospital governing body to have the authority to lead the PI program? (CD 5-1) Yes No
6. 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
7. 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 Yes No
- a. Does the facility subject these cases to individual case review to determine the rationale for transfer, appropriateness of care, and opportunities for improvement? Yes No
- b. Does the facility receive follow up from the center to which the patient was transferred and include it as part of the case review? (CD 9-14, CD 3-4, CD 4-3) Yes No
8. Does the PI program document timely and appropriate ICU care and coverage is being provided? (CD 11-60) 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)
 - 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:

ISS	DOA	DIED	Admitted Mortalities
0-9			
10-15			
16-24			
>/= 25			
Total			

**If no ISS score for DOA or DIED, 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 the events are verified and validated through the PI process: (CD 16-11)

D. Multidisciplinary Trauma Committee

1. 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

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)
*Only applies to Level IV trauma facilities that have surgeons on their trauma team. Yes No N/A
- e. Issues regarding transfer decisions (CD 4-3) Yes No
 - 1. All trauma transfers (CD 4-3) Yes No
 - 2. Transfer to a level of higher care within the hospital (CD 16-8) Yes No
- f. Timely and appropriate ICU care and coverage. (CD 11-60) Yes No N/A
- g. Bypass and diversion events (CD 3-7) Yes No
- h. Process in place to review and improve pediatric care (CD 2-19) Yes No

VII. 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. 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 _____

VIII. 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 their job description? (CD 18-2) Yes No

IX. TRAUMA PROGRAM STRENGTHS AND OPPORTUNITIES

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

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

Appendix #1 – Sample of a Trauma Facility Commitment to Level IV 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].

Chairperson of the Board

Appendix #2 – Sample of a 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:
3. Year Graduated:
4. Type of Residency:
5. Post Graduate Training Institution (Residency):
6. Year Completed:
7. Board Certified: Yes No
 - Year:
 - Specialty:
8. List added qualifications/certifications giving the Specialty and date received:

9. Date of ATLS: (CD 17-5) (mm/dd/yyyy)

** MDHHS reserves the right to review certifications.*

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 #7 – 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 IV 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). 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. See Appendix #2 for a sample.

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 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 May 2017. 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 criteria 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. This is not a required role.
- Other staff could include data collection 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 have taken ATLS once.
- 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.

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

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

PRQ Level IV 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 – Staff information table complete
- Appendix #5 – Trauma transfer criteria that applies is checked
- Appendix #6 - Trauma diversion table complete
- Appendix #7 - Examples to questions 1 and 2
- The following attachments are included:
 - Trauma Facility Commitment to Level IV 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 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