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**MEADVILLE MEDICAL CENTER
Policy and Procedure Manual
Trauma Department**

Policy TRU-05

SUBJECT: TRAUMA PERFORMANCE IMPROVEMENT PROGRAM

PURPOSE: The goals of a trauma performance improvement program are to monitor the process and outcome of patient care, to ensure the quality and timely provision of such care, to improve the knowledge and skills of trauma care providers, and to provide the institutional structure and organization to promote performance improvement.

RESPONSIBILITY: Trauma Program Multidisciplinary Committee (TPMC) maintains the authority and responsibility for the trauma system oversight. This committee will consist of: Trauma Surgeons, Orthopedic Surgeons, Emergency Medicine Physicians, Emergency Department Advanced Practitioners, Anesthesia, Radiology, Trauma Program Medical Director (TPMD), Trauma Program Coordinator (TPC), Trauma Program Process Improvement Coordinator, Trauma Registrar, Social Work and Ancillary Departments.

POLICY:

1. The trauma performance improvement (PI) programs must review trauma patients both concurrently and retrospectively. The trauma performance improvement program will be integrated into the MMC's overall performance improvement program and reported to the institution's governing body. Performance improvement must be supported by a reliable method of data collection, which consistently gathers valid and objective information necessary to identify opportunities for improvement.
 - A. Concurrent PI – The Trauma PI process includes concurrent review primarily through problem/issue identification during clinical rounds, performed by the Trauma Program Coordinator, and self-reporting by trauma team members. Any member of the multidisciplinary team may identify patient, provider, or system issues as they occur. The primary data collectors for this process are the TPMD and TPC. The Trauma Coordinator, in collaboration with the TPMD, the Trauma Program PI Coordinator, and the Trauma PI Committee, ensures concurrent review of issues, analysis, action planning and performance improvement loop closure. Patient Outcomes Performance Improvement Management System (POPIMS) is the electronic PI data repository utilized by the trauma program. The Trauma Program Coordinator is frequently present at resuscitations to facilitate immediate concurrent identification and provide education when appropriate during the resuscitative phase of care.
 - B. Retrospective PI – Focused studies for retrospective review arise through querying the registry database and/or POPIMS. Select PI issues and quality

indicators are trended and presented at the Trauma Multidisciplinary Committee Meeting, by the Trauma Program PI Coordinator. This information is also presented to the appropriate subspecialty liaison, TPC, and TPMD. Final loop closure can occur at any level. Loop closure can be approved by the TPMD, TPC, or TPIC.

2. Trauma Patient Population Criteria – ALL patients admitted for treatment of a diagnosis of trauma (ICD-10-CM injury codes 800-995) and who meet any of the following criteria:
 - A. All Intensive Care Unit (ICU) admissions (2:1 ratio) – Excluding ICU used as a PACU.
 - B. All Dead on Arrivals (DOA) pronounced dead after arrival.
 - C. All Trauma Deaths.
 - D. All trauma patients remaining at Meadville Medical Center between 36 and 48 hours, beginning from time of arrival to the Emergency Department, with an Injury Severity Score (ISS) of 9 or greater. Trauma patients are defined as patients remaining at our facility for the treatment or diagnosis of trauma.
 - E. All transfers out.
 - F. Cases meeting **any of** the above criteria, but have no documented injuries.
 - G. All trauma patients remaining at MMC for greater than 48 hours.
 - H. Excluded: Patients who only suffer a solitary hip fracture (ICD-10-CM code 820.0-820.9) with no other injuries (contusion and abrasions of skin should not be considered other injuries) as a result of a fall on the same level (ICD-10-CM E-codes E885-0-E888.9). The intent is to exclude solitary hip fractures that are pathological or osteopenic in nature.
 - I. Asphyxiation with no other injuries.
 - J. Drownings.
 - K. Poisonings (chemical ingestion, including internal organ burns from chemical ingestion, classifiable to the ICD-10-CM code 947).
 - L. Admitted patients injured while in a trauma center (i.e.-a patient who fell out of a bed).
 - M. Patients only having a hypothermia or hyperthermia diagnosis with no other injuries.
 - N. Patients admitted for less than 48 hours are entered into the trauma registry for quality purposes, but are not submitted for Pennsylvania Trauma Outcomes Study (PTOS) reports.

3. Trauma Registry Data Collection – The trauma registry is provided with Emergency Department and hospital admission reports generated daily specific to the previous calendar day. The reports are reviewed Monday through Friday for mechanism of injury, admitting service and primary diagnosis. Reports generated on Saturday, Sunday and hospital observed holidays are reviewed on the next business day. Initial identification of trauma patients is the responsibility of the Trauma Program Coordinator. Designated trauma patients are then assigned a unique identification number (Collector trauma number) for accession into the registry by the trauma registrar. Newly created registry

records are concurrently amended with demographic and diagnostic data from the hospital's online mainframe information system.

- A. The daily Emergency Department (ED) Census Log is the key forum for identifying new clinical patient information. It is the responsibility of the registrar in attendance Monday through Friday to record and enter the newly reported or updated information into the Collector database. The following types of information are collected and updated on a daily basis as they become known:
 - i. Pre-existing conditions
 - ii. Pre-hospital interventions
 - iii. Clinical data; i.e.-airway status, abnormal vital signs, blood alcohol content
 - iv. Diagnoses
 - v. Key procedures performed within the:
 - a. Emergency Department
 - b. Operating Room
 - c. ICU
 - d. Special Procedure Unit
 - vi. PTOS occurrences with date of identification and location
 - vii. Discharge dates and disposition
- B. Additional diagnostic, procedural and disposition data is entered concurrently. The registry has access to online dictations and diagnostic findings which may also be included. Finally, the registry receives copies of discharge summaries for concurrent updates of disposition and outcomes.
- C. The trauma registry and trauma PI department work collaboratively in regards to case finding, occurrence and UDI (user defined issue) identification, and mortality review. The trauma registry abstracts all death charts concurrently and the data is used to aid the discussion during weekly and monthly TC and Trauma Chart Review (TCC). Furthermore, the information gathered by the trauma registry in the process noted above eliminates redundant data gathering, saving time and enhancing committee discussions by using Collector reports.

4. MMC must provide resources to support the trauma performance improvement program.

- A. There must be specific audit filters. Severely injured children must be reviewed internally for appropriateness of care and the appropriateness of the decision not to transfer the patient to a Pediatric Regional Resource Trauma Center or Trauma Center with additional Qualifications in Pediatric Trauma in recognition of MMC's pediatric capabilities.

- B. There must be specifically designed audit filters for the pediatric trauma patient and early identification of suspected child abuse.
 - C. Additional filters will be periodically decided upon by the TMPD, TPC, and TPIC for targeted performance improvement.
5. A multidisciplinary forum(s) for performance improvement review is necessary. TPMC, in collaboration with the TPC, TPMD, and the TPIC, will have a leadership role in all forums. Minutes must be maintained for all meetings. The goals of multidisciplinary review include:
- A. Review of the performance of the trauma program. This can be accomplished by Trauma Program Multidisciplinary Committee, which should include representatives from all phases of care. The following aspects will be addressed: all deaths, morbidities, performance improvement issues, system issues, clinical management guideline issues, and provider specific issues.
 - i. The trauma program will utilize and monitor compliance with the trauma patient management guidelines.
 - ii. Trauma admissions will be reviewed through the performance improvement process. Audit filters may be utilized. They can be selected from the American College of Surgeons Committee on Trauma audit filters (Resources for Optimal Care of the Injured Patient: 2006, Chapter 16, Performance Improvement and Patient Safety), identified based on institutionally specific opportunities for improvement, or a combination of both. All phases of care will be reviewed over a period of time by MMC. MMC will demonstrate that actions will be taken as a result of issues identified in the performance improvement process created a measurable improvement.
 - iii. Utilization, issue, and procedure review will be performed in concurrence with MMC's performance improvement process.
 - iv. The performance improvement program will evaluate resource utilization and cost-effectiveness of the trauma program.
 - B. Provide education. Education can be provided to many disciplines and should be linked to the trauma performance improvement program. Education should focus on areas of concern.
 - C. Internal CME/CE/additional continuing education programs should be linked to the trauma performance improvement program and provide didactic programs covering identified areas of concern.
 - D. Provide peer review. The peer review process can be in committee or conference format and must include a multi-specialty physician review of

provider performance. Both provider specific morbidities and mortalities must be reviewed, trended, and reported to the TPMD.

6. Process for Maintaining Compliance – Standards of Quality Care: All trauma patients that meet criteria for entry into the trauma registry are monitored for deviation in care, occurrences, or adverse events according to the standards of quality trauma care as established by the Trauma Service, local, regional, and national standards.
 - A. Death reviews: Trauma patient deaths are reviewed as they relate to trauma care and trauma system issues.
 - B. Audit Filters Indicators: Audit filters/indicators as defined by the American College of Surgeons and/or the trauma program and/or the trauma system are monitored and reported on a monthly basis at the TPMC meeting.
 - C. Occurrences: Complications or occurrences, as they are defined by Pennsylvania Trauma Systems Foundation (PTSF), which occur in the trauma patient, are recorded in the hospital Trauma Registry. The TPMC will review occurrences for injury or treatment that significantly affected patient outcome. The TPMC makes appropriate referrals and recommendations.
 - D. Systems issues: All identified issues that are not provider related are reviewed in the TPMC.
7. Levels of Review – The process of care will be monitored continuously by utilizing audit filters and occurrences as defined by the PTSF and American College of Surgeons Committee on Trauma. User Defined Issues will be presented as they are selected by the Trauma PI Committee. Those cases or system issues identified will be reviewed by the TPC, TPIC, and the TPMD for determination of further action.
 - A. Level I Review:
 - i. Following data entry into POPIMS, individual cases are reviewed by the TPC . If the clinical care is deemed appropriate and no provider or system issues are identified, the case does not require Level II or formal committee review. At this point, identified issues will be addressed individually by the TPC. Action plans will be created, implemented and loop closure may be reached. .Issues that will be addressed and closed at Level 1 include: all nursing documentation issues, EMS issues with c-collar application, prolonged scene times, minor radiology discrepancies, unpreventable occurrences, trauma panel non-compliance, transfer out cases that are on the Mandatory Transfer List, absence of hourly vitals, absence of hourly neurologic documentation in patients with intracranial injury, spinal cord injury, or skull fx. Charts with care issues identified for further review will be

referred to the Trauma Program PI Coordinator for appropriate sub-specialty liaison referral and/or TC weekly meeting. Educational issues identified may be addressed individually or referred for discussion.

B. Level II Review:

- i. Level II Review is required when issues in clinical care, provider issues, or systems issues are evident that require the TPMD's expertise and judgment. These cases are identified by the Trauma Program Coordinator and then passed on to the Trauma Program PI Coordinator. On a weekly basis the TPMD, TPC, TPIC, and other requested clinical representatives meet to review all cases with issues listed above. This group may complete further investigation into the issue at hand, create and implement an action plan, or formally refer the issue to the appropriate hospital department, or close the issue. If the issue is referred, the Trauma Team requests written follow-up. Determination may also be made to take the case to a Level III review. The case will then be referred to the appropriate Committee. Discussion also includes determination of preventability status for each issue. Documentation of issues and discussion are entered into POPIMS by the Trauma Program PI Coordinator. Educational issues identified may be addressed individually.

- C. Level III Review: The TPIC in collaboration with the TPMD will perform an initial case review in preparation for the Committee meeting identifying all background information, pertinent protocols (or lack thereof) and specifying all individual issues to be discussed. The goal is to evaluate the care of a trauma patient from a clinical and systems perspective and to perform interdisciplinary implementation of improvement strategies. Review will occur at the following forums:

- i. Monthly chart review which is led by the Trauma Program Medical Director:
 - a. Major issues requiring further discussion, multidisciplinary review, all deaths and/or autopsy analysis are conducted at the monthly multidisciplinary Trauma chart review. Action items at this meeting may include recommendations for education, referral to the appropriate sub-specialty liaison for review with an individual provider or creation of an ad hoc committee to review/revise a policy, procedure, or protocol.
 - b. Membership includes all trauma surgeons, the TPM, TPC, TPIC, and representatives from Orthopedic Surgery,

Anesthesia, Radiology, and Emergency Medicine Departments. Additional attendees are invited ad hoc.

- c. Action plans determined at this meeting will be delegated to the appropriate member of the committee for implementation. Documentation of plan implementation will be sent to the Trauma Program PI Coordinator for submission into POPIMS.
 - d. Loop Closure of action plans created at the Monthly Chart Review Meeting will be the responsibility of either the Trauma Medical Director or the Trauma Program PI Coordinator.
- ii. Monthly TPMC Meeting:
 - a. Problems are identified concurrently and/or retrospectively by the individual committees or groups that report to the TPMC. Identification and discussion of system issues.
 - b. Major issues of a system nature are reviewed at the Trauma Program Multidisciplinary Committee Meeting. Policies, procedures, or protocols currently under review or revision are presented at this forum.
 - iii. Quality Management Committee:
 - a. The Quality Management Committee has as its charge to establish, coordinate, and maintain an effective hospital-wide Quality Improvement Plan. Trauma related issues are taken to this committee for further analysis or to approve a plan for issue resolution.
 - b. Committee serves as a forum for the discussion, analysis, and oversight of hospital policy and procedure concerning quality improvement activities.
 - iv. Ad Hoc Committees:
 - a. Major issues that are not able to be resolved at the monthly TPMC may be referred to committee for review, recommendation and final resolution.

D. Level IV Review: Any case that involves provider issues identified with the Trauma Medical Director or cases that provided extraordinary care are subject to external review. These cases will be identified through a Level I or II review and referred to Meadville Medical Center's mentoring hospital for independent unbiased review. Information received from Level IV review will be considered when developing an action plan for the issue. All educational issues will be addressed along with provider counseling that may need to be completed.

- 8. Determination of Judgments – The committee will render a judgment regarding the appropriateness of the issue on every case being reviewed. Each issue will be assigned a

preventability status, note opportunities for improvement, and contain a detailed plan for loop closure.

9. Corrective Action Planning – The TPMD oversees all corrective action planning and their institution. Structured plans may be created by any of the Trauma PI team members or committees in an effort to improve sub-optimal performance identified through the PI process. Our goal is to create forward momentum to effect demonstrable outcome change leading to subsequent loop closure. An evaluation and re-evaluation process will be part of the plan according to the hospital’s action plan methodology of plan, do, study, act (PDSA). Examples of potential corrective action categories are:

- A. Organization of Improvement PI Teams
- B. Education
- C. Referral to peer group
- D. Trending
- E. Focused Audit
- F. Protocols
- G. Counseling
- H. Proctoring/change in privileges or credentials
- I. External Review
- J. Enhanced resources or methods of communication

10. Confidentiality Protection

- A. All performance improvement activities and related documents will be considered confidential and protected as specified in PA Peer Review Protection Act 63 P.S.425.1 et seq., Meadville Medical Center policies and HIPPA.
- B. All PI information will be clearly labeled “CONFIDENTIAL PEER REVIEW INFORMATION: Data contained in this report or document was generated as part of a peer review process within the scope of 63 P.S.425.1 et seq. and is therefore not subject to discovery during litigation and is confidential. THIS MATERIAL IS NOT TO BE PHOTOCOPIED DUPLICATED OR DIDSCLOSED IN ANY MANNER”.
- C. No PI information will be part of the patient medical record. All PI paper documents and electronic information will be kept in a secure location with limited, controlled access.

11. Complete anatomical diagnosis of injury is essential to assessment of quality of care. A postmortem examination should, therefore, be sought in all trauma related deaths.

See: [Loop Closure and Evaluation Process](#)