

Trauma Performance Improvement and Patient Safety (PIPS) Plan

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I. Philosophy

Westchester Medical Center is dedicated to providing comprehensive, evidence-based care to all injured patients. This plan establishes a framework for performance improvement standards, aiming to monitor, evaluate, and enhance care processes, reduce inappropriate variations, and improve patient safety and outcomes. The Trauma Performance Improvement Patient Safety (PIPS) Program is aligned with the philosophy and guidelines set by the American College of Surgeons Committee on Trauma (ACS-COT).

II. Mission

To deliver patient-centered, multidisciplinary, and compassionate care based on evidence to promote healing, wellness, and knowledge for all patients and their families.

III. Vision and Values

Our trauma program embodies the following values, aligning with Westchester Medical:

- Establishing and maintaining a culture of quality and safety.
- Implementing evidence-based practices to ensure quality and mitigate risks.
- Operationalizing performance to achieve clinical and financial viability.
- Providing equitable care to all injured patients.
- Delivering care with compassion and respect.

IV. Authority and Accountability

The Board of Directors maintains the highest accountability for the hospital-wide Performance Improvement and Patient Safety Program. The Trauma Performance Improvement Patient Safety Program (PIPS) is directed by the Trauma Medical Director, delegated by the Medical Staff and in accordance with hospital bylaws. The Trauma Service has the authority to monitor events throughout the continuum of trauma patient care.

The Trauma Medical Director is empowered by the Medical Executive Committee to direct the Trauma PIPS Program. The Trauma Program reports all performance improvement activities to the Quality and Safety Council and the Medical Executive Committee.

V. Credentialing

Credentialing for all surgical and clinical staff follows the Medical Staff bylaws and the Department of Surgery protocols. The Trauma Medical Director oversees the initial and annual reviews of the ongoing

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professional practice evaluation (OPPE) credentials for the Trauma Call Panel, including Neurosurgery, Orthopedic Surgery, Critical Care Medicine, and Emergency Medicine.

Physicians taking trauma call must meet credentialing criteria, including continuing education in trauma management, committee attendance, certifications, and compliance with divisional protocols. The Trauma Program Manager collaborates with the Director of Nursing Education and Nurse Managers to monitor credentialing and continuing education of nurses caring for trauma patients.

VI. Program Scope and Population Criteria

The Trauma Service provides 24/7/365 care for patients aged 15 years and older with injuries from any source. All patients admitted to a non-surgical service are reviewed using validated tools. Trauma patients receive care in the Emergency Department, Post-Operative Center, Intensive Care Unit, and Surgical Floor Units.

VII. Event Identification, Data Collection and Analysis

Data and referrals for the Trauma PIPS process are collected concurrently and retrospectively. Specifically, sources of data and referrals are as follows:

- Trauma Morning Report with PI Checklist– 7days a week
- Hospital Trauma Registry
- Emergency Dept. Patient Activity List
- Trauma Program Manager
- Performance Improvement Coordinator Huddles with Trauma and ICU Services
- Weekly Trauma Morbidity & Mortality Conference
- Daily Trauma Rounds with the Trauma Service
- Referrals from staff involved in care of the trauma patient
- Hospital Information System/ Hospital Quality Management
- Email communications
- Referrals from Risk Management and Patient Safety

VIII. Quality Audit Filters

- Surgeon arrival time for the highest level of activation
- Delay in response for urgent assessment by the neurosurgery and orthopaedic specialists
- Delayed recognition of or missed injuries
- Compliance with prehospital triage criteria, as dictated by regional protocols
- Delays or adverse events associated with prehospital trauma care
- Compliance of trauma team activation, as dictated by program protocols
- Accuracy of trauma team activation protocols
- Unanticipated return to the OR
- Unanticipated transfer to the ICU or intermediate care
- Transfers out of the facility for appropriateness and Safety

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- All nonsurgical admissions
- Radiology interpretation errors or discrepancies between the preliminary and final reports
- Delays in access to time-sensitive diagnostic or therapeutic interventions
- Compliance with policies related to timely access to the OR for urgent surgical intervention
- Delays in response to the ICU for patients with critical needs
- Lack of availability of essential equipment for resuscitation or monitoring
- MTP activations
- Significant complications and adverse events
- Transfers to hospice
- All deaths: inpatient, died in emergency department
- Inadequate or delayed blood product availability
- Patient referral and organ procurement rates
- Screening of patients for psychological sequelae
- Delays in providing rehab services
- Screening and intervention for alcohol misuse
- Trauma and neurotrauma diversion
- Benchmarking reports

IX. Structure and Methodology

The performance improvement process follows a continuous Plan, Do, Check, Act (PDCA) cycle to standardize improvements:

- **Plan:** Identify and analyze improvement opportunities.
- **Do:** Implement changes and test on a small scale.
- **Check:** Measure effects and analyze results.
- **Act:** Standardize successful changes and reassess.

X. Corrective Action

Corrective actions are implemented when performance does not meet expectations, including:

- Development of action plans, modification of privileges, provider counseling, enhancement of resources, staff education, external review, formation of new guidelines, and existing guideline revisions.

XI. Loop Closure

The PIPS process emphasizes continuous improvement through effective loop closure. Documented follow-up actions ensure identified problems are addressed and resolved to improve care. Loop closure can occur at any level of review and is reported at the monthly multidisciplinary trauma committee meetings and/or the monthly PIPS meetings. Loop closure extends to prospective monitoring of the efficacy of any and all corrective actions implemented.

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The Trauma PIPS and peer review committees (Multidisciplinary, TPOC) will determine the corrective action needed to address identified problems.

A. Corrective action may consist of one or more of the following:

1. No action necessary
2. Education within the hospital:
 - Departmental Surgery-Trauma Mortality & Morbidity Conference
 - Trauma Conference
 - Trauma ad hoc in-services
3. Education outside the hospital
 - Prehospital Conference
 - Other trauma conferences as deemed appropriate by the Trauma peer review committee
4. Referred to Quality
5. Track and Trend for analysis
6. Protocol / policy / practice management guideline initiated or changed
7. Letter to physician with or without action
8. Provider counseled or educated
9. Other hospital staff counseled or educated
10. Referred to hospital administration

XII. Review Process

The multilevel review process includes:

(Level 1) Primary Level Review:

Daily Surveillance and Morning Report

Initial event identification by individual clinicians, morning report of the trauma service, trauma registry and PI coordinator surveillance, patient relations (if applicable) and risk management (if applicable). The Trauma Program Manager and Trauma Medical Director in collaboration with trauma faculty guide the discussion of all patient care and safety issues during the daily Morning Report of the Trauma Service. A daily registry report is also run by 8 AM each day identifying all trauma admissions within the past 24 hours and all non-surgical admissions.

1. INITIAL ASSESSMENT AND RESUSCITATION
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The trauma program employs a comprehensive surveillance system to ensure the quality and safety of patient care. For all trauma admissions, including non-surgical patients, daily monitoring is conducted for adherence to protocols such as Venous Thromboembolism (VTE) prophylaxis. This surveillance is facilitated through the daily trauma registry report, which identifies all trauma admissions within the previous 24 hours, ensuring that both surgical and non-surgical cases are reviewed.

The WMCHHealth Trauma PI Checklist

The Trauma PI Checklist is a structured tool used to ensure consistent and comprehensive review of trauma patients' care during morning report. It facilitates the identification of key interventions and time-sensitive decisions related to prehospital care, trauma activation, and specialty consultations. The checklist guides the review of performance metrics and potential deviations from established standards of care, ensuring prompt attention to clinical priorities such as timely orthopedic and neurosurgical evaluations, emergent procedures, and disposition planning.

This checklist is completed by the Performance Improvement (PI) coordinator, Trauma Program Manager (TPM), or Trauma Medical Director (TMD) or their designee during the trauma service's Morning Report. It provides a framework for systematically addressing critical care elements, improving patient outcomes, and monitoring compliance with trauma system protocols. During Morning Report, the trauma faculty, in collaboration with the TPM and TMD, review patient cases, including non-surgical admissions and any concerns, to address potential safety issues and implement timely corrective actions as necessary. This ensures continuous evaluation and improvement of trauma care.

(Level 2) Secondary Level Review:
Weekly Trauma M&M/Team Huddle

The Weekly Trauma M&M Meeting/Huddle occurs each Friday morning immediately after morning report. Cases are identified by residents, Attendings, the TMD, TPM or PI Coordinator. Cases are presented by Senior Residents and Fellows reviewing the previous week's trauma admissions with morbidities, mortalities, and any deficiencies in care identified to be reviewed in the presence of all trauma surgery core faculty and staff. This summary is reviewed by the TPM and TMD where concurrent corrective action and cases requiring further review for follow up are determined. The slide presentations are modified in real-time based on input from faculty, the TMD, TPM and PI Coordinator, and then stored. Loop closure may be implemented based on these discussions if needed, prior to tertiary level review. The TMD & TPM, in coordination with the PI Coordinator, prepare the necessary documents and pursue the necessary corrective actions and follow-up as necessary.

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Peer -Review and TMD Review

All mortalities are reviewed by a trauma surgeon not involved in the patient's care using a preformatted document. All complications are reviewed by the TMD and TPM using a preformatted document.

(Level 3) Tertiary Level Reviews:

Level 3A is the *Multidisciplinary Trauma M&M and Peer-Review panel* which meets monthly and review quality of care and safety issues related to all specialties providing care to the injured patient. The membership of the Multidisciplinary Trauma M&M panel falls under the leadership of the Trauma Medical Director (TMD), and includes the trauma surgeons and designated liaisons from orthopedic surgery, neurosurgery, emergency medicine, anesthesia, geriatrics, critical care and radiology as well as the trauma program manager, the performance improvement coordinator, injury prevention coordinator and trauma registrars. The Multidisciplinary Trauma M&M panel meets on the 3rd Thursday of each month at 8:30 AM. There is an in-depth discussion of complications and mortalities arising from First and Second Level.

The Multidisciplinary Trauma M&M and Peer-Review panel reviews all mortalities (irrespective of admitting service), all complications arising from any admitting service, and any pertinent safety issues not meeting TQIP definitions. The TMD presents all cases. Cases requiring review by Liaison services are forward to the Liaison at least 1 week in advance with a request for review and comment at the meeting. Liaisons, in turn, submit cases from consulting and other admitting services with quality concerns to the TPM, TMD and PI Coordinator in advance of the meeting. Proposals and initial actions pertaining to loop closure based on 2nd level Review are discussed and consensus obtained. Attendance is tracked amongst the panel consisting of core trauma faculty and trauma liaisons. Minutes are transcribed by the Trauma Coordinator. Slides and minutes are memorialized.

Level 3B is the *Monthly Trauma PIPS and TPOC Committee* (consisting of the same panel as Trauma Multidisciplinary Morbidity and Mortality panel) **with the addition of a representative from the hospital's quality department and representatives from Transfusion Services/Blood Bank** meets on the 4th Tuesday of each month at 8AM. *Individual complications and mortalities that have already achieved loop closure are not discussed.* Attendance is tracked to ensure compliance with minimum standards as prescribed by the American College of Surgeons. Prior to this meeting, the registry report (of all cases closed within 60 days of that month) is reviewed independently by the Registry, TPM and PI Coordinator. All complications meeting Data Dictionary definitions (whether or not they were reported/reviewed concurrently) and mortalities are forwarded to the PIPS Committee Members prior to the meeting. The principal focus of the PIPS committee is to

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review aggregate quality data, trend analyses, audit filter compliance, and programmatic issues related to quality such as the implementation of system-wide

corrective actions or guidelines. During the meeting, trend analysis of complications is presented. Any PI Issues warranting discussion/review of policies and procedures is discussed. Unresolved issues pertaining to loop closure are discussed. Slides and Minutes are memorialized. TQIP Quarterly reports are discussed. PI issues that necessitate programmatic changes or changes in guidelines/protocols are brought forth to the Trauma Program Operational Committee (TPOC) for consensus and memorialization.

Committee minutes are submitted to the Medical Executive Committee and the hospital wide Quality & Safety Council. Our Hudson Valley Regional Trauma Advisory Committee also plays a large role in our tertiary review as the role of the HVRTAC is to promote and facilitate standards for the optimal care of the injured patient and; to improve communication within the Hudson Valley Region among hospitals, EMS, disaster services, and the NYS DOH. The HVRTAC helps to advance regional performance improvement by identifying issues throughout the continuum of care.

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The Multidisciplinary Trauma M&M Panel Members Include:

Kartik Prabhakaran, MD - Chief of Trauma & Acute Care Surgery, Trauma Medical Director

Matthew Bronstein, MD - Surgical Critical Care Director, ICU Liaison

Kate Maguire, MSN - Trauma Program Manager

Syed Rahmatullah, MD - Geriatric Provider

David Asprinio, MD - Chair of Orthopedic Surgery, Orthopedic Liaison

Tina Cocuzza, MD - Medical Director of Emergency Management & Medical Logistics

Merritt Kinon, MD - Chief of Spinal Neurosurgery, Neurosurgery Liaison

Matthew Landers, MSN - VP of Nursing, Emergency & Critical Care

Matthew Melamed, MD - Emergency Department Director, Emergency Medicine Liaison

Negin Gohari, MD - Physical Medicine & Rehabilitation

Toni Manougian, MD - Anesthesia Liaison

Donna Worflar, RN - Director of Nursing Emergency Medicine

Grigory Rozenblit, MD - Radiology Liaison

Stephanie Kennedy, RN - Director of Nursing Critical Care

Ilya Shnaydman, MD - Trauma Attending

Rebecca Bates - Trauma Program Coordinator

Joshua Klein, DO - Trauma Attending Jordan

Brian Kinhead - Senior Trauma Registrar Dawn

Kirsch, DO - Trauma Attending Gabriel Froula,

Johnson - Trauma Registrar

DO - Trauma Attending Amanda Carlson, MD -

Molly Roffman - Trauma Registrar

Trauma Attending Aaron Zuckerman, MD -

Paula Duncan - Trauma Registrar

Trauma Attending Brianna McCaul, BSN - PI

Diana Franco - Senior Trauma Registrar Anna

Coordinator

Plavnick - Trauma Registrar

Marc Musicus - Injury Prevention & EMS Coordinator

The PIPS Panel Members Include:

Kartik Prabhakaran, MD - Chief of Trauma & Acute Care Surgery, Trauma Medical Director

Matthew Bronstein, MD - Surgical Critical Care Director, ICU Liaison

Kate Maguire, MSN - Trauma Program Manager

Syed Rahmatullah, MD - Geriatric Provider

David Asprinio, MD - Chair of Orthopedic Surgery, Orthopedic Liaison

Tina Cocuzza, MD - Medical Director of Emergency Management & Medical Logistics

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Toni Manougian, MD - Anesthesia Liaison
Donna Worflar, RN - Director of Nursing
Emergency Medicine

Grigory Rozenblit, MD - Radiology Liaison

Ilya Shnaydman, MD - Trauma Attending

Joshua Klein, DO - Trauma Attending

Jordan Kirsch, DO - Trauma Attending

Gabriel Froula, DO - Trauma Attending

Amanda Darlson, MD - Trauma Attending

Aaron Zuckerman, MD - Trauma Attending

Sadiqa Karim, MD - Chief of Transfusion
Medicine

Brianna McCaul, BSN - PI Coordinator

Marc Musicus - Injury Prevention & EMS
Coordinator

Stephanie Kennedy, RN - Director of Nursing
Critical Care

Patsy Jones - Director of Hospital Quality

Rebecca Bates - Trauma Program Coordinator

4. Quaternary Level Review (Level 4):

The quaternary level of review occurs at the Hospital level where the Quality Department is integrated with the Trauma Quality program. Either based on the suggestion of the TMD, individual clinical liaisons, or the independent suggestion of the Quality Department, root cause analysis may be conducted as deemed necessary. This level of review is done in accordance with the WMC Quality and Safety plan.

In addition, the TMD presents aggregate quality data to the hospital's quality council quarterly and the quality committee of the Board of Directors twice per year. In addition, monthly data from the tertiary levels of review are submitted to the Quality Department of the Hospital.

1. Integration with Hospital PI Program

The Trauma PI program upholds a multi-disciplinary and multi-departmental approach to reviewing the quality of patient care across all departments and divisions. The Trauma Program – Trauma Services upholds the National Patient Safety Goals as outlined by WMC and The Joint Commission. In addition, the Trauma Program monitors the trauma patient population for the NY State mandatory reporting of adverse events called “Never 28”. The Trauma PIPS Committee is integrated with and collaborates with the following performance improvement committees when appropriate:

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- A. Anesthesia / OR Performance Improvement Committee (PIC)
- B. Perioperative Executive Committee
- C. Emergency Medicine PIC
- D. Transfusion Services PIC
- E. Radiology Quality Improvement Committee
- F. Department of Surgery Quality and Safety Committee

XIII. Outcomes after Peer-Review

Determination of opportunities for improvement for morbidity and mortality cases may include:

- System-related issues (including pre-hospital course), provider-related issues, or natural course of disease
- Categorization of mortalities based on opportunities for improvement.
- Modification and/or Addition of Guideline, Policy and Procedure
 - 1. The development of a new policy, guideline, protocol, or practice management guideline may initiate the formation of a multidisciplinary task force. This task force will review the identified problem and develop the policy/guideline. The Trauma PIPS Committee approves all policies, guidelines, etc. before being forwarded to the Dept. of Surgery Performance Improvement Committee and the Medical Executive Council for formal review and approval.
 - 2. Prior to implementation of new or revised policies, education of all involved departments will occur according to each department's procedures and under the leadership of the Trauma Medical Director.
 - 3. Reassessment for the effectiveness of the corrective action may occur after a period of time that is determined by the Trauma PIPS Committee.
- Physician Education/Counseling
 - This process involves the review of a specific case with the Trauma Medical Director and the individual physician, and all records of counseling are transferred to individual personnel files
- Performance Evaluation and Credentialing
 - Deviations from the standard of care that warrant further action, as deemed by the Trauma Medical Director in conjunction with leadership from individual clinical departments, can lead to the institution of a Focused Provider Practice Evaluation (FPPE). These evaluations will be considered at the time of the annual review of privileges for the care provided to the injured patient.

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- Reevaluation
 - To evaluate the effectiveness of the corrective action, continuous monitoring will occur. The Trauma Medical Director, TPM, and PI Coordinator shall, in collaboration with the Trauma PIPS or peer review committee, determine the duration of the re-evaluation period.

XIV. Documentation of Analysis and Evaluation

- (Level 1) The PI Checklist is memorialized for each patient.
- (Level 1) Morning report summaries are memorialized for each patient.
- (Level 2) Weekly Trauma Morbidity and Mortality Meeting/Huddle Minutes are transcribed.
- Peer Reviews are memorialized for each complication and mortality.
- (Level 3A and 3B) Minutes are transcribed from the Monthly Multidisciplinary Peer Review/Morbidity and Mortality Conference, and from the PIPS/TPOC Meetings.
- Summaries from all levels of review and patient-focused minutes are stored in the performance improvement module of the trauma registry.
- Loop Closure memoranda, FPPE's (if necessary) are memorialized and stored as applicable in the PI module of the registry.
- Prospective tracking of loop closure action items is memorialized in the PI module and can be integrated with the registry.

XV. PI Committee Structure

The PIPS Committee includes:

- Trauma Medical Director, Trauma Program Manager, Performance Improvement Coordinator, trauma surgeons, specialty liaisons, trauma registrars, hospital quality department representative, and pre-hospital liaison.

XVI. Corrective Action Planning

Corrective action planning follows the PDCA approach to ensure continuous improvement and problem resolution.

XVII. Confidentiality Protection

All PI activities and documents are confidential and protected under New York State Law 2805. All participants in PI activities must have confidentiality agreements on file.

XVIII. Integration into Hospital Performance Improvement Process

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The trauma program integrates with the hospital's PI process through bi-directional communication, shared committee membership, and escalation of cases to the hospital's quality department for further analysis or root cause investigation.

Effective Date: December 2023 **Review Date:** December 2026