**Appendix B**

**2020-2021 Quality Improvement Plan (Example)**

1. **Philosophy of the Trauma Service**

The XXXXXX Hospital Trauma Service is dedicated to providing the highest standard of care for injured patients from resuscitation through rehabilitation.

1. **Mission and Vision of the Trauma Quality Improvement Program**

The Trauma Service will have a formal internal quality improvement (QI) program, which allows for a multidisciplinary approach to rapid problem identification, data driven analysis, and resolution of issues within the quality framework of XXXXXX Hospital. The QI program reflects and demonstrates our process for continuous quality improvement consistent with our written trauma scope of service.

1. **Authority and Scope**

The Trauma Quality Improvement Program is managed by the trauma program manager (TPM), a registered nurse, under the direction of the trauma medical director (TMD), a general surgeon, as delegated by the Department of Surgery and the Executive Quality Council. The trauma service has the authority to monitor all events that occur during a trauma episode of care. The TMD chairs the Multidisciplinary Trauma QI Committee (MTQIC). The TPM co-chairs and provides staff support to the MTQIC.

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The MTQIC has the authority to:

* Conduct trauma peer reviews to evaluate cases or care issues; referring concerns to the Department of Surgery, Emergency Medicine Department Committee, and/or Executive Quality Council.
* Establish trauma service standards of care, ensuring appropriate care throughout the facility for adult and pediatric trauma patients.
* Monitor and track compliance with standards and resolution of care issues. Evaluate the effects of corrective actions.
* Receive assurance from other quality improvement committees that trauma related issues were resolved.
* Develop, revise, and implement patient care policies, procedures, guidelines, and protocols.

The trauma service has authority throughout the facility to monitor all events that occur during an episode of trauma care.

1. **Multidisciplinary Trauma QI Committee Structure and Function**

This committee reports to the Department of Surgery, the Emergency Medicine Committee, and Executive Quality Council. MTQIC Functions as follows:

* Leads the Trauma Quality Improvement Program
* Monitors and tracks compliance with trauma care standards using audit filters and benchmarks.
* Evaluates the care of trauma patients from a clinical and system perspective.
* Performs interdisciplinary implementation of improvement strategies to resolve prehospital, physician, nursing, and system issues.
* Implements processes to correct problems or deficiencies.
* Analyzes, evaluates, and measures the effect of corrective actions.
* Determines achievement of issue resolution.
* Continuously evaluates compliance with full and modified trauma activation criteria.
* Establishes a process to communicate and provide feedback to referring trauma services and providers.
* Ensures the confidentiality of patient and provider information, per RCW 42.56 and 70.168.090.
* Maintains the currency of this Trauma Quality Improvement plan on an annual basis.
* Assures facility representatives regularly participate in the regional quality improvement program.
1. **Multidisciplinary Trauma QI Committee Membership**

The membership of this committee represents XXXXXX Hospital trauma scope of service:

* The TMD chairs the Multidisciplinary Trauma QI Committee.
* The TPM co-chairs and staffs the MTQIC.
* Voting members include:

Department representatives from:

* + - * Emergency Department
			* Surgery
			* Diagnostic Imaging
			* Critical Care
			* Lab
			* Rehabilitation
			* Hospital Administration
			* Quality

Provider representatives from:

* + - * General Surgery
			* Emergency Department
			* Intensivist
			* Orthopedic Surgery
			* Anesthesiology
			* Pediatrics
			* Internal Medicine
			* Neurosurgery
			* Prehospital Emergency Medical Services
* Attendance standards: It is recognized that the effectiveness of this committee depends on the full participation of committee members. Members are expected to attend 80% of all meetings. Members are encouraged to provide a replacement for planned absences. Members no longer able to participate will be replaced by the members department or service.
1. **Goals and Objectives**

The MTQIC’s goals and objectives are to:

* Design, measure, assess, and improve patient care processes and organizational functions of trauma care within the system.
* Provide a forum for review/evaluation of the quality of trauma care provided by\_\_\_\_\_\_\_\_\_\_ Hospital.
* Direct peer review of trauma charts, ensuring no physician reviews his/her own case.
* Facilitate development, revision, and approval of trauma care policies and protocols.
* Address regulatory trauma standards/requirements and facilitate compliance.
* Use comparative data to benchmark performance of PSPH trauma care to that of other Washington state designated trauma centers
* Review and direct the utilization of trauma resources and services.
1. **Credentialing**

Physicians, surgeons, and surgical specialists taking trauma call will be credentialed and proctored per medical staff policy and bylaws. The trauma program manager is responsible for ensuring that nurses who provided trauma patient care have the appropriate credentials and continuing education.

1. **Trauma Patient Population Criteria**

The Trauma Quality Improvement Program extends to the entire facilities’ trauma patients. The trauma patient is defined as one who has experienced a major single or multisystem injury requiring immediate medical or surgical intervention or treatment to prevent death or permanent disability and meets the Washington Trauma Registry (WTR) inclusion criteria.

The WTR inclusion criteria is comprised of any patient with ICD10-CM discharge diagnosis of:

* S00-S99 With seventh character extensions of A, B, or C only. (Injuries to specific body parts-initial encounter)
* T07 (unspecified multiple injuries)
* T14 (injury of unspecified body region)
* T20-T28 with seventh character extension of A only (burns by specific body parts-initial encounter)
* T30-T32 (burn by total body surface area (TBSA) (percentages)
* W65-W74 (drowning), and T71 (asphyxiation), or T75.4 (electrocution), and any one of the following criteria:
	+ 1. All patients (any diagnosis) for whom the Trauma Resuscitation Team (full or modified) was activated; or
		2. All trauma patients who were DOA or died in the facility; or
		3. All trauma patients transferred out to another acute care facility by EMS ambulance; or
		4. All trauma patients transferred in from another acute care facility by EMS ambulance; or
		5. All pediatric trauma patients (age 0-14) admitted to the hospital; or
		6. All adult (age 15+) patients admitted with a length of stay more than 2 days (48 hours)

 Additional Criteria which may be tracked for education/process improvement purposes:

* + All transfer-outs and their destinations
	+ All pediatric admits.
	+ All trauma patients who are discharged from the Emergency Center and are subsequently admitted for a missed diagnosis of the same injury.
1. **Data Collection and Analysis**

Trauma data collection and documentation is accomplished through the Washington Trauma Registry. Information for the quality improvement process is collected concurrently and retrospectively. Sources of issues, problems, data and referrals include:

* Trauma Registry
* EC log
* Patient Placement log
* Trauma Medical Director and/or Trauma Program Manager
* Referrals from physicians and staff involved in the care of trauma patients
* Other hospital QI committees
* Pre-hospital personnel
1. **Process for Monitoring Compliance and Issue Identification**

**Standards of Quality Care:** All trauma patients are monitored for compliance with the standards of quality care as established by the Trauma Service and local, regional, and national standards.

**Trauma Deaths:**  All trauma patient deaths are reviewed for trauma care and trauma system issues.

**Audit Filters:** An audit filter/indicator is the statement of an ideal, or the wording may describe the absence of the ideal. Audit filters/indicators are selected by the MTQIC and applied to all trauma cases and if met, should trigger the review process. Filters may focus on new policies, procedures, guidelines, and protocol changes ensuring compliance and identifying areas of educational needs.

**Threshold:** Threshold, benchmark, or expected outcomes is the measurable goal for an action plan, usually expressed in rate or percentage. Thresholds may be established by MTQIC.

**Hospital Events/Complications:** MTQIC defines and reviews complications from injury/treatment that significantly affect patient outcomes. MTQIC makes appropriate referrals and recommendations.

**System Issues:** MTQIC reviews system issues that are not provider related and make appropriate referrals and recommendations.

**XI. Review Process**

Processes of trauma care are monitored continuously by utilizing the audit filters. The review,

 monitoring, actions, and evaluations are documented for each chart selected by audit filters.

**1. First Level Review (Find and Validate the Issue):**

Trauma program staff perform the initial review of cases selected by the trauma audit filters, or referred by staff or departments. If the review affirms that clinical care is appropriate, no provider or systems issues are identified, the case does not require second level or MTQIC review. These cases are recorded in the EC Trauma Log with specifics, as well as in the outcomes section within the trauma registry software. If the review raises system level or physician clinical care concerns, the case requires Second Level or MTQIC review. If the review raises nursing level concerns, the TPM trends, intervenes and evaluates.

Trends, summary interventions, and final evaluations are reported to the TMD and MTQIC.

**2. Second Level Review (Further Investigate and Validate the Issue - Refers):**

The Trauma Medical Director performs the second level of review for cases that require the TMD’s expertise and judgment. The TMD may investigate further, implement action without formal referral to a committee, refer to MTQIC, or refer to a department’s peer review. The TMD assigns cases for physician peer review, ensuring no physician reviews his or her own case. Trends, summary interventions, and final evaluations are reported to MTQIC.

**3. Third Level Review (Formal Committee Review, Judgment, Action):**

Cases referred from the TPM or the TMD are reviewed by MTQIC, which may communicate with individual physicians or other departments to request additional data. The MTQIC makes judgments as indicated, assigns responsibility for action planning and implementation, formulates conclusions, reviews outcomes and evaluations, and determines loop closure. The MTQIC makes changes to policies and procedures, guidelines, and protocols as indicated.

**XII. Determination of Judgments**

The committee will render a judgment regarding the appropriateness of the issue being reviewed. Each issue will be placed into one of the following categories:

Rating 1: Routine/Acceptable management

Rating 2: Acceptable management/Majority of Standard of Care met

Rating 3: Questionable management/Opportunity for Improvement

Rating 4: Unacceptable/Management not consistent with Standard of Care

**XIII. Documentation of Analysis and Monitoring**

Trauma QI issues are documented in the Outcomes/ QI section of the patient registry. This form tracks all aspects of the case review including a summary of clinical care, identified issues, reference to discussion/minutes from MTQIC judgment, actions, evaluations, and loop closures.

**XIV. Referral Process for Investigation or Review**

Cases which may require further investigation as evidenced by a rating score of 3 or 4 will be referred to the

Department of Surgery, or Emergency Medicine Department, or Medical Executive Committee (when appropriate). That committee(s) will then provide a letter/action plan assuring resolution of trauma related issues were achieved. The TMD will then review the response of the referral for follow-up planning and report to the MTQIC.

**XV. Corrective Action Planning**

The trauma medical director oversees all corrective action planning and implementations. Any issue is subject to review, which may result in the implementation of an action plan. Structured plans may be created by any of the Trauma QI members or committees.

Corrective action plans may include:

* A guideline, protocol, or process development/revision
* Educational offering
* Focused QI team development
* Individual counseling/discussion
* A peer presentation
* An external review or consultation
* Tabulation and tracking of the problem for further reporting

**XVI. Loop Closure and Re-Evaluation**

Closing the loop objectively measures the result of a corrective action plan. All issues resulting in a corrective action plan will be monitored for the expected change and be subsequently re-evaluated. QI issues are not considered to be closed until the re-evaluation process demonstrates a measure of quality or change at an acceptable level as decided by the MTQIC.

MTQIC may determine a documented demonstration of an attempt to close the loop through continuous monitoring may be sufficient. An acceptable level of performance may be determined by frequency tracking, benchmarking, and variance analysis as decided by the TMD and/or MTQIC.

All evaluation results will be reported to the MTQIC, who will make the determination of loop closure and the need for periodic or continuous monitoring. All loop closures and continuous QI activities will be clearly documented in the MTQIC minutes.

**XVII. Integration into Hospital Quality Improvement Process**

The Trauma QI program practices a multidisciplinary and multi-departmental approach to reviewing the quality of patient care across all departments and divisions. The MTQIC collaborates with other network hospitals quality councils.

**XVIII. Confidentiality Protection**

All quality improvement activities and related documents are considered confidential and protected as specified in hospital policies and Washington State law, including RCW 42.56 and 70.168.090, and HIPPA.

**XIX. Operational Staff Responsible for the Trauma QI Program**

 The trauma medical director and the trauma program manager maintain the Trauma QI process with data support from the trauma data registrar. Representatives from other clinical and hospital departments participate when appropriate.

The trauma medical director is responsible for:

* Medical administration, quality of care, and effective integration of Trauma Services with other hospital services.
* Ensuring all providers are adequately trained, credentialed in trauma, and maintains continued medical education in trauma.
* Acting as a hospital representative and liaison on matters of trauma.
* Chairing MTQIC and for the initial review of all physician-related issues including all deaths and screened complications.
* Overseeing quality improvement activities relative to clinical departments /physicians as well as associated remedial actions.

The trauma program manager is responsible for:

* Identification of issues and their initial validation.
* Maintenance of the EC Trauma Log/files and protection of their confidentiality.
* Facilitating data trends and analysis.
* Documentation of all processes and proceedings.
* Coordination of surveillance of protocols/guidelines.

**XX. Audit Filter/Quality Indicator List (may be adjusted annually)**

* Deaths
* Trauma Team Activations
* Trauma Team Under-activations
* Trauma Team Over-Activations
* Trauma GCS<13 without a head CT
* Surgeon Activation
* Orthopedic Surgeon Consult
* Neurosurgeon Consult
* OB Consult
* Anesthesia Activation
* Trauma Related Transfer
* Cervical Spine Precautions
* Documentation of vital signs every 15 minutes for FTT until stable
* Massive Transfusion Protocol Initiated
* Intracranial Hemorrhage (ICH) on anticoagulants
* Major Trauma Non-surgical Admissions
* Complication/Hospital Event (see data dictionary list)

**XXI. Outcome/Performance Measures**

* Full trauma team activation undertriage rate (goal ≤ 5%)
* Modified trauma team activation undertriage rate (goal ≤ 5%)
* Surgeon response time >30 minutes for Full Trauma Team (FTT) Activation (goal < 30 min)
* Orthopedic surgeon response time > 30 minutes from time of request (goal < 30 min)
* Neurosurgeon response time >30 minutes from time of request (goal < 30 min)
* Anesthesia response time >30 minutes from time of request (goal < 30 min)
* Lab: turnaround times for stat CBC, BMP, Coags for Full Trauma Activation (goal < 30 min)
* Transfer out LOS > 3 hours (goal ≤ 3 hours)
* Documentation of c-spine clearance (when appropriate)
* Intracranial Hemorrhage (ICH) on anticoagulants
	+ Door to reversal ordered/given (goal 90 minutes)
* CT Times for full Trauma & Anticoagulated ICH
	+ CT order to CT report (goal 60 min)
	+ CT order to Patient in CT (metric for DI/Nursing) (goal 30 min)
	+ Patient in CT to CT report received (metric for DI/ Nursing) (goal 30 min)
* Nursing indicators
* Documentation of initial GCS in trauma flow sheet (goal 95%)
* Documentation of vital signs every 15 minutes for FTT until stable (goal 95%)
	+ Major trauma patient non-surgical admission (goal ≤ 5%)
	+ Unanticipated complications Delayed/Missed Diagnosis (goal ≤ 5%)
	+ Trauma patients with positive ETOH or Drug screening receive intervention and referral (goal > 75%)

**XXII. Audit Filter/Quality Indicator Rotation Calendar**

The MTQIC determines all audit filters and performance measures which are appropriate for short-term trending. Audit filters and measures are retired from use as documented in the MTQIC meeting minutes.

**XXIII. Audit Filter/Quality Indicator Definitions, Measures, Thresholds**

Audit filters will be defined, with definition approvals documented in the MTQIC minutes. An objective measure(s) for each audit filter will be chosen along with sources of data to be used. Thresholds or desired levels of performance may be assigned.

Approved by Hospital MTQIC on: 1/23/2020

Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Hospital Trauma Medical Director

Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Hospital Trauma Program Manager