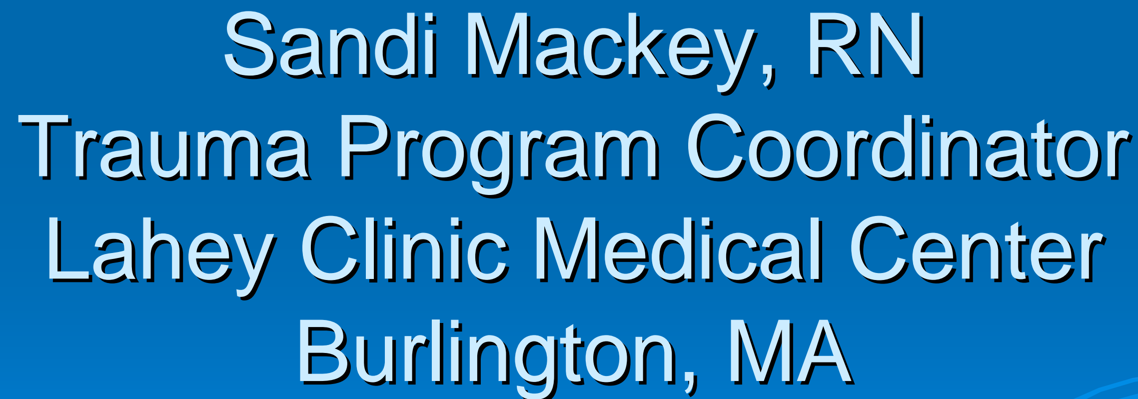
INTRODUCTION TO PERFORMANCE IMPROVEMENT AND PATIENT SAFETY FOR TRAUMA



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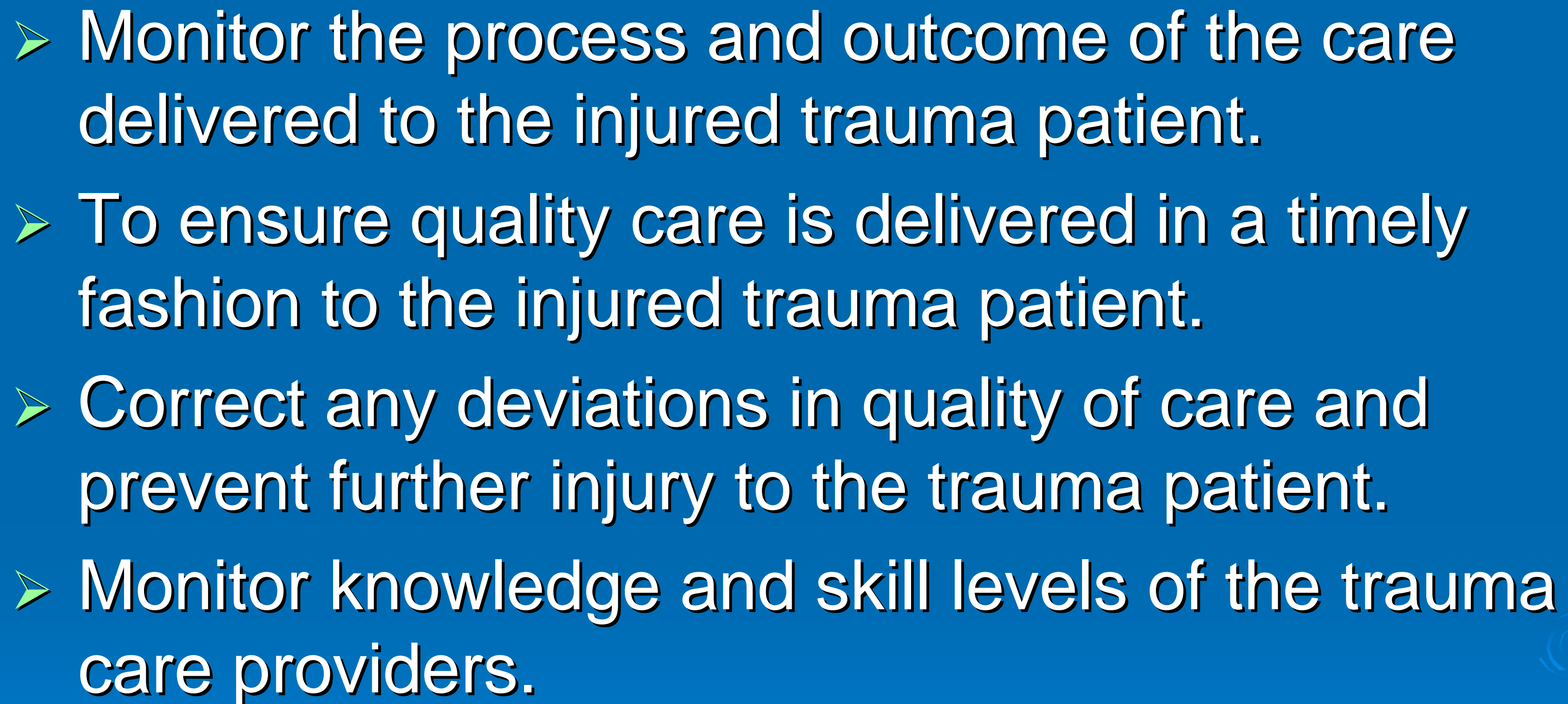
How I learned about Performance Improvement for Trauma

- On the job training
- Trial and error
- Met with other Trauma Program Coordinators
- TOPIC course
- Trauma Coordinator Course through ATS
- American College of Surgeons "Green Book"

Before starting, it is useful to review some realities

- Nobody has an ideal trauma program.
- Most programs struggle with PI.
- No precise prescription for PI exists.
- The trauma surgeon must lead.
- The effort must be multidisciplinary.
- The trauma PI programs can set the PI tone for the health care organization.
- Adverse outcome does not always indicate bad care.
- The focus should be on opportunities for improvement rather than on problems.
- Most errors are related to system failure.
- Timely collection and analysis of meaningful data are great challenges.
- A solid trauma PI program provides leverage for obtaining needed resources.
- Trauma PI is most effective when integrated with hospital-wide (system-wide) PI.

Purpose of PIPS Plan for Trauma

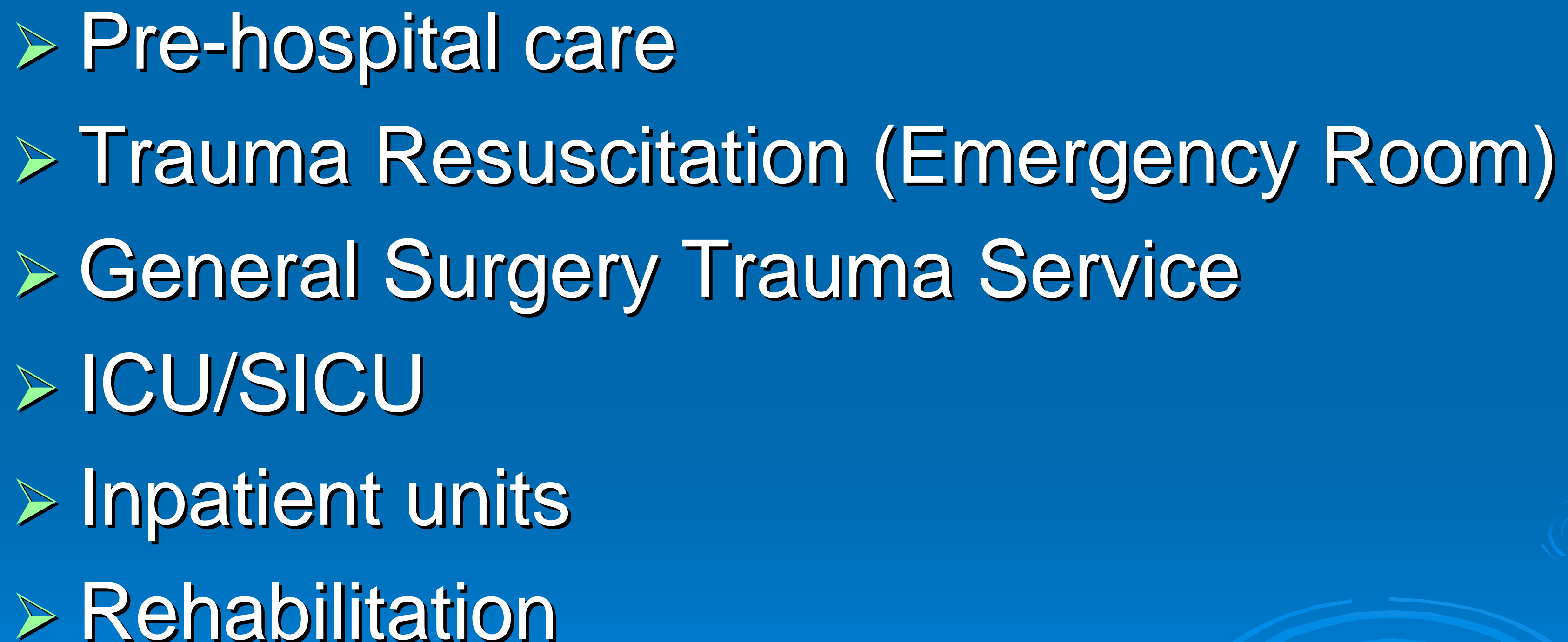


Responsibility for PIPS

The Trauma Service Medical Director must be empowered by the facilities Board of Governors or appropriate governing body with the authority to enact the PIPS process. The TMD should be able to set qualifications for the trauma program members and to recommend changes to the trauma panel based on performance review.

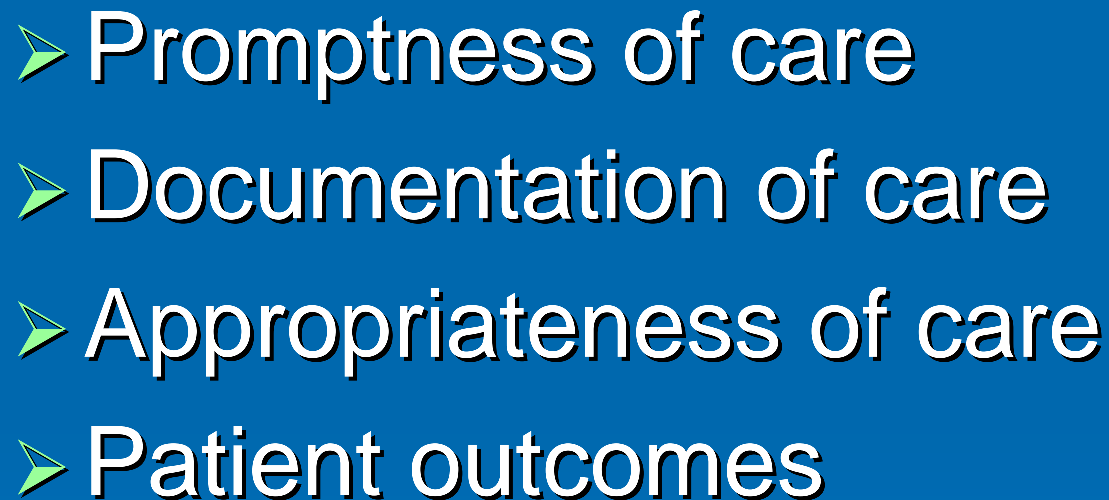
The TMD works in collaboration with the Trauma Program Coordinator/Manager to carry out these tasks.

Primary Areas of Performance Improvement



- Pre-hospital care
- Trauma Resuscitation (Emergency Room)
- General Surgery Trauma Service
- ICU/SICU
- Inpatient units
- Rehabilitation

Primary Focus of PIPS



Performance Improvement Indicators

Performance Improvement indicators should be monitored by the Trauma Service and reviewed by the Trauma Program Operational Process Performance Committee (TPOPPC, previously called Multidisciplinary System Committee) and or the Trauma M+M Committee as determined by the Trauma Service Medical Director.

Trauma Audit Filters

Pre-Hospital

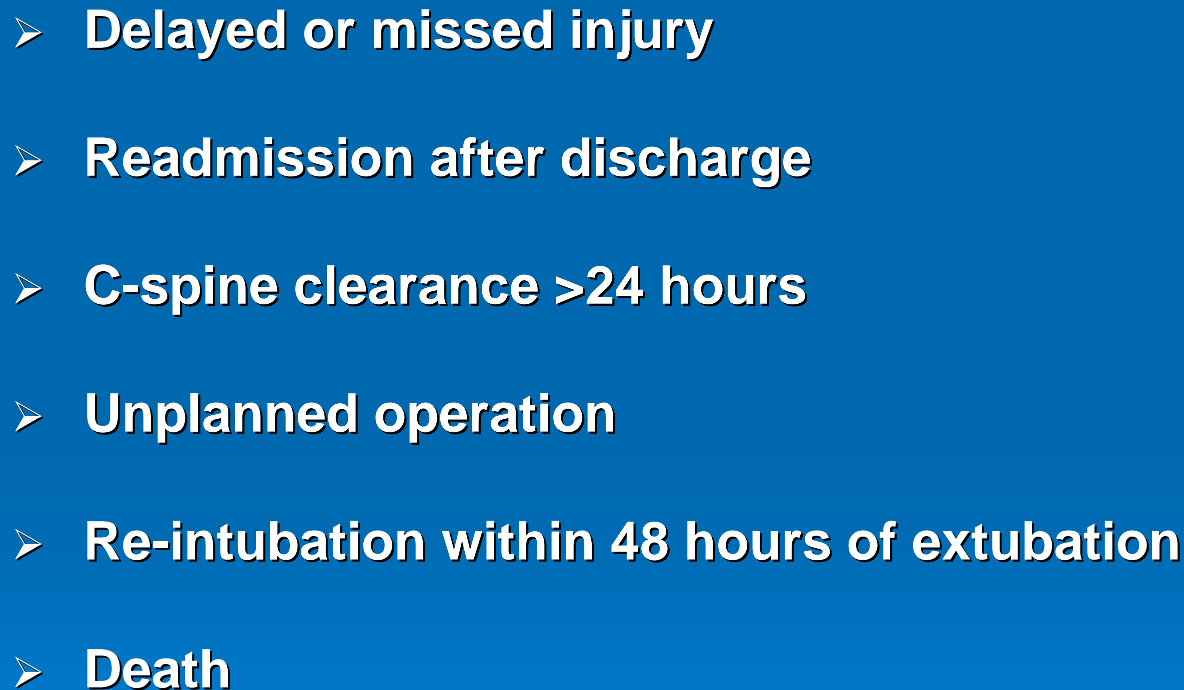
- Esophageal intubation
- Unable to intubate
- Unable to start IV
- Missing Patient Care Report (PCR, Run sheet,Trip Record)
- Inadequate immobilization of injuries
- Undertriage

Trauma Audit Filters (cont)

Trauma Resuscitation in the ED

- Trauma Surgeon Response time. 15 minutes for level I and II. 30 minutes for III
- Delay in or no trauma team activation
- Comatose trauma patient (GCS <8) leaving the ED without definitive airway.
- A trauma patient admitted to the hospital under the care of an admitting or attending who is not a surgeon.
- Absence of q 15 minute vital signs, GCS and pertinent data documented for the trauma patient while in the ED.

Trauma Audit Filters (cont)



General Surgery/Trauma Service

- **Delayed or missed injury**
- **Readmission after discharge**
- **C-spine clearance >24 hours**
- **Unplanned operation**
- **Re-intubation within 48 hours of extubation**
- **Death**

Sources of PI Information

- Registry
- Rounds
- Patient charts
- PI tracking forms
- E-mails
- Risk management reports
- Patient relations inquiries
- Personal observations
- Hallway conversations
- *Electronic Yellow Card*

Performance Improvement Patient Tracking Form

Demographics	Source of Information	Location of Issue
Date of report: LCMR#: Attending: Floor: Date of Arrival:	TPC ❑Trauma Registrar ❑Nurse Manager ❑Case Manager Rounds ❑Risk Management ❑Conference ❑Trauma Registry ❑Other:	❑Prehospital Emergency Department ❑Radiology / CT ❑Lab ❑OR ❑PACU ❑SICU / MICU ❑Floor ❑Rehab ❑Other:

Complication, occurrence, problem, or complaint

Determination	Preventability	Recommendation(s)
❑system related ❑disease related ❑ provider related ❑cannot be determined	❑nonpreventable ❑potentially ❑preventable ❑preventabe ❑cannot be determined	❑none ❑monitoring/trending ❑education ❑guideline / protocol ❑counseling ❑resource enhancement ❑privilege / credentialing action ❑TPOPPC / TPR (Trauma Peer Review) ❑Trauma M & M ❑NQI ❑other ________________________________

State of New Hampshire Mandatory PIPS Criteria

- The criteria for graded activation are clearly defined by the trauma center and continuously evaluated by the PIPS program
- For the highest level of activation the 80% compliance of the surgeons presence in the ED is confirmed or monitored by the PIPS (15 min for level I&II,30 min for III)
- Trauma deaths are systematically reviewed for quality of care, and assigned to one of the following categories: preventable, potentially preventable or non-preventable.
- There is a PIPS review of all trauma patients who are transferred and the appropriateness of the decision to transfer or retain major trauma.
- The PIPS program documents the appropriate timeliness of the arrival of anesthesia services.
- The PIPS program evaluates operating room availability and delays.
- Discrepancies in diagnostic imagining interpretation for trauma are monitored through the PIPS program.

Trauma Registry

- One of the most essential components of the trauma program.
- Registry data evaluates performance improvement of trauma team.
- Data evaluates trauma patient outcomes
- Identifies target areas for injury prevention and trauma education.
- Supports clinical, administrative, and trauma financial evaluation process.
- If used correctly the trauma registry should drive your entire trauma program.
- If your lucky enough to have one, treat your trauma registrar like gold. They are often times underpaid and under appreciated.

Types of Trauma Registry Databases

- Homegrown:
- State developed
- Commercial Software: Collector®, Trauma Base®, Trauma 1®, NTRACS®.
- Many interface with hospital data which reduce duplicate abstracting/entry.
- Many have well defined PI section with "canned" reports built in.

Data Collection

Concurrent

- Front end data
- Collected daily on all patients during rounds. Resource intense.
- Close out cases prior to discharge.
- Frequently done using laptop or tablet.
- Can aid in real time issue recognition.

Retrospective

- Back ended data
- All collection is done after pt discharge.
- Relies heavily on medical record department.
- Review can be done in one sitting, time saving.
- No ability to effect patient care in real time.

Trauma Registry Inclusion Criteria

- Includes at least 1 code within the range of the following injury diagnostic codes 800-959.9
- Excludes late effects, superficial injuries, foreign bodies
- Must include 1 of the following: Hospital admission or Patient transfer via EMS to another hospital, or Death resulting from traumatic injury.

Team Members for Trauma Program Operational Process Performance Committee

- Trauma Service Medical Director
- Trauma Program Coordinator/Manager
- Trauma Registrar
- Liaison from: Anesthesia, Emergency Medicine, General Surgery, Neurosurgery, Orthopaedic Surgery, Administration.
- Members of the Laboratory/Blood Bank, Radiology, CT scan
- Frontline leadership

Performance Review

- TPOPPC Committee: Previously called Multidisciplinary Systems Committee.
- Committee function is to examine trauma related operations from all phases of care of the injured patient. Not physician only.
- Should meet at least quarterly or greater.
- Minutes should document evidence of issue identification, review of operational issues and corrective action if taken.
- Should identify loop closure (resolution of the issue)

Trauma Peer Review

- Directed by the TMD
- Confidential proceedings
- Know your state laws regarding peer review proceeding.
- Consult your institutions Quality Officer.
- Most peer review activities are protected from discovery.
- Minutes of activities should be kept and document candid discussions.
- All deaths that are reviewed must be categorized as: Preventable, non-preventable, potentially preventable

Corrective Action Education Plan

The Trauma Program should have the authority to identify areas for corrective and or areas for improvement. The manner for correction can include but are not limited to the following:

- Formal educational intervention
- Change in protocol/policy
- Ongoing tracking of problem
- Removal from Trauma Call
- Modification of Department Training/Education
- A formal review with the individual practitioner of a recurrent problem relative to departmental standards.
- Enhanced resources

Loop Closure

- Some loops may never be closed.
- Did your corrective action have the desired effect to close your loop?

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Example of Loop Closure

- PI Identification: EMS run sheets not available on medical record during patients admission.
- Recommendations: EMS Coordinator contacted individual agencies to facilitate a plan of action in an effort to have EMS sheets present on medical record.
- Action Plan: Designated email inbox for EMS run sheets to be emailed/faxed to EMS coordinator.
- Percent of run sheets available prior to implementation of recommendations=57% for 2008. Reported at monthly TPOPPC meeting.
- After implementation of designated email for EMS run sheets percentage of run sheets available on medical record during patients admission =96% for 2009 .Reported at TPOPPC 11/12/09
- Loop Closure: Closed
- Will periodically run report from trauma registry to monitor compliance.

Questions????