Performance Improvement & Peer Review

Montana Trauma Systems

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Trauma PI is…

EVERYTHING YOU DO…

- The continuous evaluation of a trauma system and trauma providers through structured review of the process of care, as well as the outcome

OPPORTUNITIES FOR IMPROVEMENT (OFI)

- A realization that conditions exist in structures and/or processes of care where modification could reduce the incidence of real or potential adverse events or, ideally, improve outcomes

Always ask the question: If the same patient were to walk through the door today, would we do anything differently?

Why PI in Trauma?

- Evaluation of:
  - Patient care outcomes
  - Provider response
  - System performance
- Improves patient care at bedside level
- Fosters competent and accountable providers
- Organizes events which focus opportunities for improvement
- Core of trauma center development and maturation
- Evaluates cost of care
- Improves the fiscal side of a trauma program

#1 Reason hospitals fail trauma center designation

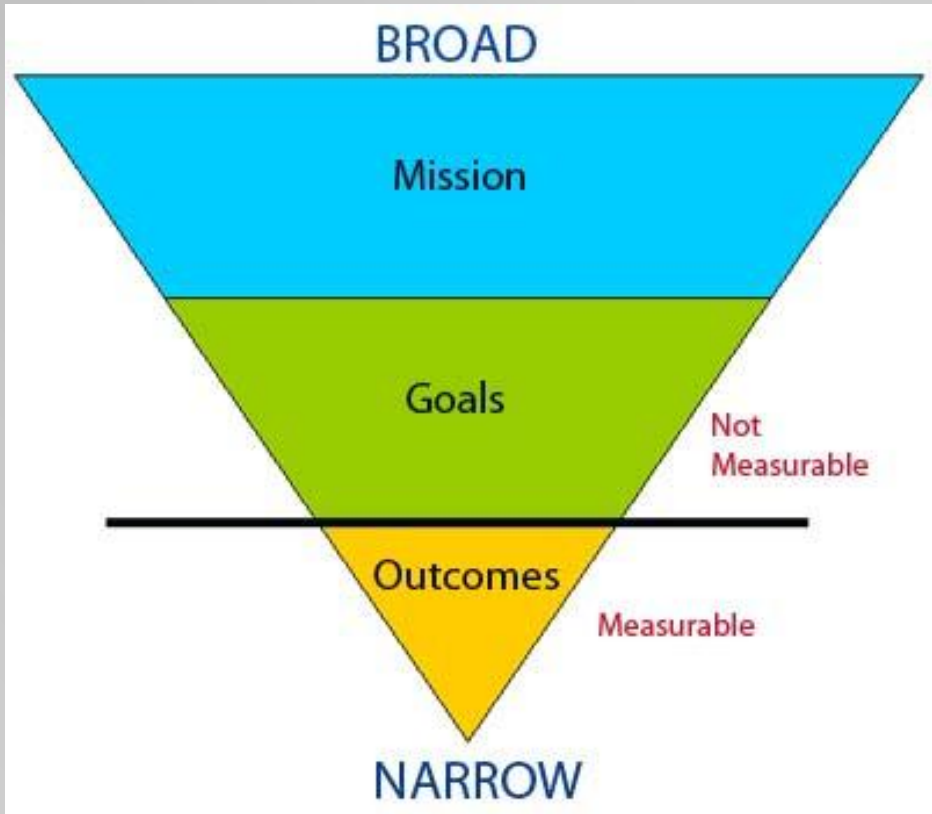
Reality Check!

1. Nobody has an ideal trauma program
2. Most programs struggle with PI
3. No precise prescription for PI exists
4. The trauma surgeon/TMD must lead
5. The effort must be multidisciplinary
6. The trauma PI program can set the tone for PI in the facility
7. Adverse outcome does not always indicate bad care
8. The focus should be on opportunities for improvement rather than on problems
9. Most errors are related to system failure
10. Timely collection and analysis of meaningful data are great challenges
11. A solid PI program provides leverage for obtaining needed resources
12. Trauma PI is most effective when integrated with hospital-wide (system-wide) PI
13. The trauma program should be familiar with national initiatives for patient safety

PI Outcomes

PI is the concept of:

- Process
  - Monitoring
  - Evaluating
  - Analyzing
  - Classifying
  - Recommending
  - Implementing



- Outcome

  Improves the care given from the perspective of system, patient, provider

Trauma Committee Structures

Required:

- Trauma Peer Review
  - Clinical concerns at the patient level
  - Provider related events
- Multidisciplinary Trauma Committee
  - Process and system focused
  - Operational events

Optional:

- Pre-Hospital Trauma PI Committee
- Morbidity and Mortality Review

- Structure defined by trauma level and volume
- Defined by ACS and State regulations

Trauma Peer Review

Goal: Review the efficacy, efficiency and safety of the trauma patient care. Systematically review mortalities, significant complications, and process variances associated with unanticipated outcomes and determine opportunities for improvement

- Trauma Medical Director leads
- Review mortalities, adverse events, selected cases
- Chronicle a candid discussion of the events
- Identify and resolve problems
- Make Determinations (judgments)
- Develop action plans (mitigation/prevention)
- Trigger new policies/protocols
- Record discreet minutes and determinations
- Document action items/prevention initiatives
- Refer system events to Trauma Committee
- Opportunities for improvement (for example, errors in judgment, technique, treatment, or communication, along with delays in assessment, diagnosis, technique, or treatment) should be determined and documented

Peer Review Cases

- All or selected deaths
- Select occurrences
- Sentinel events
- Problem trends
- Unusual or uncommon cases
- Unexpected outcomes

- Great saves

Peer Review Committee Options

May be held:

- As a stand alone meeting
- At time of Medical Staff Peer Review with separate agenda, minutes (trauma coordinator needs to attend trauma portion)
- At time of Multidisciplinary Trauma Committee (back-to-back)

- Teleconferencing or video teleconferencing
  - Referring facilities
  - Rehabilitation facilities
  - Out of town physicians/key personnel
  - Invited specialists/subject matter experts

Peer Review Obstacles

- Obstacles:
  - Not enough providers to perform peer review
  - Absence of required attendees
  - Imperfect probability of survival scoring
  - Incomplete data for case discussion
  - Absence of autopsy/death information
  - Inadequate minutes reflecting the critical discussion of the events
  - Lack of reporting trends/issues identified to PI Committee

Trauma Committee Goals

- Develop a culture that promotes both system and patient care improvements and aligns with national standards
- Review performance and patient safety of the trauma center
- Present factual/objective data and processes to facilitate decision making by the committee

Multidisciplinary Trauma Committee

- Trauma Medical Director
- Trauma Coordinator/Program Manager
- Representatives:
  - Surgery
  - OR, ED, Rehab
  - Lab, Radiology
  - Prehospital
  - Social Services
  - Administration
- Address operational events/infrastructure events
- Verification/designation readiness
- System and operations focused
- Pre-hospital processes discussed
- Transfers/diversions
- Data driven
- Process focused
- Systems events referred by Peer Review
  - Review and resolve any non-peer review system, related issues
  - Not a forum to discuss individual case care

Multidisciplinary Trauma Committee Documentation

- Minutes reflecting attendance and actions of multidisciplinary committees
- Use of audit filters or specific indicators to monitor performance
- Use of trauma registry to monitor performance
- Classification of deaths and complications

Trauma Mortality: Classification of Deaths

Old Nomenclature

- Non-preventable
- Potentially preventable
- Preventable

- With or without opportunity for improvement

New Nomenclature (effective Jan. 2012)

- Anticipated Mortality WithOut Opportunity for Improvement (AMWOOI)
- Anticipated Mortality With Opportunity for Improvement (AMWOI)
- Unanticipated Mortality With Opportunity for Improvement (UMWOI)

Trauma Medical Director (TMD)

Responsible for the leadership of a trauma PI program. Frequently delegates trauma PI responsibilities to other team members, but retains ultimate accountability, which should be reflected in job description. Directs the peer review process and oversees the multidisciplinary review process. Actively participates in the hospital-wide PI program.

TMD Roles & Responsibilities

- Authority to direct the PI plan
- Directs development of evidence based practice guidelines
- Selects cases for PI committees and referrals
- 2nd Level of review prior to Peer Review: Performs case reviews
- Mitigation/Prevention Plan Input
- Elevate concerns to Medical Staff Peer Review
- Analyzes PI trends/physician profiles
- Directs PI correspondence
- Leads peer review discussions
- Moderates peer review determinations/ judgments
- Process to disseminate key information to absent members with documentation
- Follow-up provider related counseling
- Follow-up with trauma privilege issues

Trauma Coordinator Roles & Responsibilities

Clinical, administrative and quality review functions. Heavily involved in Trauma PI and shares responsibility with TMD for collecting and presenting data to the various PI committees. May also fill Trauma Registrar role.

- Directs implementation of PI plan, defined tools and processes
- Coordinates various PI committee meetings
- Participates in peer review discussions & meetings
- Responsible for meeting minutes
- PI through Trauma Continuum
- Ensures validation of registry data
- Participates in operationalizing practice guidelines
- Facilitates Resolution/Loop Closure
- Represents trauma program on hospital and system committees
- Manages follow-up on PI system issues & peer review issues

Other Committee Members Roles & Responsibilities

- Structured orientation to PI plan and process
- Awareness of defined event reviews, complications definitions, and defined judgment or review determination language
- Report identified events and occurrence to trauma team
- Shared responsibility: extensive review for cases going to PI meeting
- Participate in peer review discussion and determinations
- Participate in developing corrective action plans
- Routine feedback (weekly, monthly, annually)

What do we track?

TRAUMA STANDARDS OF CARE

- Trauma standards are evidence-based and built on national, regional and local standards of care
  - ACS: Resources for Optimal Care of the Injured Patient
  - Montana Trauma Facility Designation Criteria
  - ATLS Care
  - TNCC, ATCN

TRAUMA AUDIT FILTERS

- Audit Filters are tools that assist with monitoring the process of care relative to standards of care
- Purpose:
  - Audit filters prompt a review
  - Triggering an audit filter does not imply “bad” care
  - Not all rise to routine review
  - Surveillance of care is a netting system

Trauma Audit Filters

- Audit filters need to be clearly defined
  - Definitions based on accepted standards of care/practice
- Should be valuable to your program/facility
- Need to be incorporated into the trauma PI written plan and reviewed at least annually

Trauma Audit Filter Review

- Rate based
  - Frequency of specific events
  - Occurrence/total number of trauma cases
- Case reviews
  - Review of specific cases/events where an audit filter was triggered (i.e. massive/rapid transfusion, transfers)
  - Review of specific populations (i.e. pediatrics, pregnant)

Audit Filters: Process Measures

- Compliance with Guidelines, Protocols and Pathways
- Trauma team activation criteria
- Response of specialists to time-sensitive procedures
- Over and under triage
- Transfers to higher level of care (both within and outside the institution)
- Documentation complete
- Admissions to non-surgical services
- Transfers out
- Delay in assessment, diagnosis, treatment or consultation
- ED physicians covering other hospital units-response times to ED
- Multidisciplinary Trauma Committee attendance
- Organ donation rate
- Registry completion

Audit Filters: System Process Measures

- Appropriateness of prehospital care and ED Triage
- ED dwell time
- In-house emergent/urgent intubations
- Delay in OR availability
- Delay in transfer
- On-call staff response
- Radiology misread rate and timeliness/availability of reports
- Time to CT

Outcome Measures

- Mortality
  - Rates
  - Autopsy rate
- Morbidity
- Major Complication rates
- Length of Stay
- Ventilator days
- Pneumonia (in TBI)
- Acute Kidney Injury (in shock)
- Patient/Family Satisfaction
- Hospital charges and cost
- Quality of life metrics

Pediatric Measures

- Each case needs to be reviewed for appropriateness of care
- Outcomes
  - Solid Organ injury
  - Head injury
  - Resuscitation (fluid)
  - DVT prophylaxis
  - Non Accidental trauma
  - Radiation exposure (CT scans- over scanning)
- Delays in obtaining vascular access
- Delays in transfer

Quality Indicator Audit Filter Examples

- Missing EMS reports
- GCS <13, no head CT
- >2 liters crystalloid fluid before blood products administered
- GCS <8 and no definitive airway
- Massive/Rapid transfusion protocol used
- Open fractures taken to the OR>8 hrs after admission
- Missed injuries
- Delayed diagnosis
- Screening and brief intervention (alcohol)
- Documentation completeness
- Ambulance scene time>20 minutes
- Transfer after 6 hours in initial hospital

Trauma System Audit Filters: Regional PI Indicators

ERTAC

- ISS ≥15 without TTA
- GCS ≤ 8 without ETT
- ISS ≤ 20 and death
- IVF > 2000 NS
- Backboard removal 30min from time of arrival to ED.
- Transfer time >3hr

WRTAC

- ISS ≥15 without TTA
- GCS ≤ 8 without ETT
- IVF > 2000 NS

CRTAC

- GCS ≤ 8 without ETT
- Age ≥55 with ISS ≥15 and no TTA
- IVF >2000ml
- EMS trip reports
- Transfers with ISS ≥15 with ≥6 hrs. in ED or before transfer
- Temperature documented

Trauma System Audit Filters: State PI Indicators

- GCS ≤8 without advanced airway support
- ED Dwell Time for ISS ≥15
- No TTA but met physiologic criteria
- Transfer of patient after admission to facility
- Transfer of patient out of state

Data Collection

- Quality
  - Efficient data collection for subsequent PI use is one of the greatest challenges for a trauma program or system. It is important that the data collected is:
    1. Easily obtainable
    2. Clinically relevant
    3. Clearly defined
    4. Limited in scope
  - An attempt at a periodic comprehensive review of the trauma program/system is very resource consumptive and may be counterproductive and overwhelming

Data Collection

CONCURRENT PROCESS

- Advantages
  - Affects current patient care at point of service
  - Increased staff/patient/family satisfaction
  - Less reliance on medical record
  - Improved prospective reporting
- Disadvantages
  - Personnel intense
  - Management of data input and concurrent reporting

RETROSPECTIVE

- Advantages
  - Done all at once
  - May be easier if resources are limited
- Disadvantages
  - Reliance on Medical Record only
  - Not as timely
  - Less effective feedback
  - PI process delay
  - Data backlog/late reporting of compliance violations

Sources of Event Identification

- EMS (ground/air)
- Medical Control
- Medical Record/ pt. chart
- Referrals (written/verbal)
- Transfer Center
- Daily rounds/case management
- Conferences (peer review, quality conference, education conferences)
- Minutes
- Personal observations
- Hallway conversations
- PI tracking forms
- Emails
- Risk management reports
- Autopsies
- Hospital Quality Management Dept.
- Patient/Family feedback
- Registry data
- Dept. reports
- Region/state forums
- Designating authority
- Benchmark reports

Levels of Performance Review

- Defined steps to address relevant level in order to reach loop closure
  - Primary/Level I
  - Secondary/Level II
  - Tertiary/Level III
  - Quaternary/Level IV

- Achievement of loop closure may occur at any level depending on the issue

Primary Review: TC

- Primary Review—finding the events
  - Concurrent/retrospective event identification
  - Confirmation of actual event
  - Immediate resolution and feedback
  - Events may be closed or trended at this level
  - Establish electronic PI tracking system to show even addressed/action/closure
  - Determination if it needs further review

Secondary Review: TC and TMD

- Secondary Review—triaging events
  - Review electronic medical record
  - Confirmation of all involved
  - Development of timeline
  - Review any additional information
  - Review by TMD and TC
  - Event may be closed at this level
  - Feedback

Secondary Review

- Secondary Review—triaging events
  - May require referral to:
    - Trauma Peer Review Committee
    - Multidisciplinary Trauma Committee
    - Trauma M & M
    - Liaisons
    - Department Heads

  - Establish PI tracking system to show event addressed/action/closure

Tertiary Review

- Tertiary Review—Structured review by group
  - Review at a formal committee
    - Trauma Peer Review Committee
    - Multidisciplinary Trauma Committee
    - Trauma M & M
    - Hospital PI Committee
    - Prehospital Trauma PI

- Efficacy, efficiency and safety of care
- Provide focused education
- Provide peer review
- System vs. Provider error
- Team performance
- Contributing factors
- Corrective recommendations/actions
- Close loop and document to Trauma PI

Level 3®

Quaternary Review

- Quaternary Review
  - Examine extraordinary care
  - External review
  - Forums:
    - Hospital Quality Committee
    - External Peer Review
      - Regional Centers
      - Regional Trauma Care Advisory Committee (RTAC)
      - State Trauma Care Committee (STCC)
      - External: Mountain Pacific Quality, Monida etc…
      - PIN Network

Case Review Evaluation

- What was the outcome?
- Were standards of care followed?
- Was supervision adequate?
- What were the preexisting conditions?
- Were trauma practice management guidelines and protocols followed?
- What were the circumstances (multiple, simultaneous patients) surrounding the event?
- Who was involved and what safety goals were related?
- Were system failures present?
- Were there knowledge and skill variation?
- Were there associated performance or behavioral events?

Action Plan Development

- Identify Opportunities for Improvement (OFIs)
- Analyze supporting data
- Develop corrective action(s)
- Implement prevention/mitigation action
- Ensure event resolution as evidenced by data to demonstrate change in practice after prevention/mitigation

Action plans need to have clear goals that are:

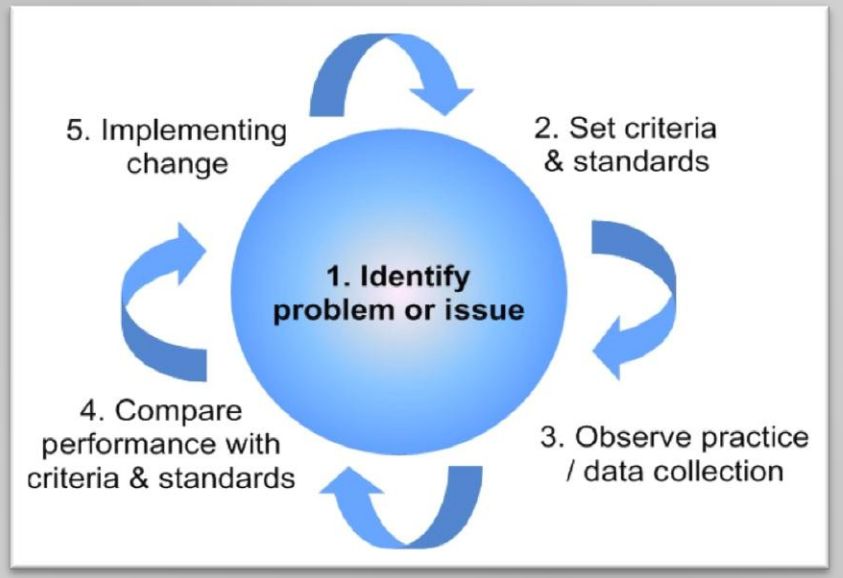
- S pecific
- M easurable
- A ttainable
- R ealistic
- T imely

Prevention and Mitigation: Corrective Action Examples

- Guidelines/Protocols/Pathway development or revision
- Education
- System Enhancements: Resources, Facilities or Communication
- Counseling
- Peer Review presentations
- External Review
- Focused Workgroup: Process Improvement Team
- Ongoing Professional Practice Evaluation
- Change in Provider privileges

Event Resolution (Loop Closure)

- Loop refers to the cycle of monitoring findings, fixing and monitoring again
  - Loop closure may be termed event resolution



- Some loops require ongoing monitoring
  - Example: Mandated audit filters

    For documentation purposes, close the loop if desired outcome achieved for specific case

    Continue to monitor for future occurrences

Event Resolution (Loop Closure)

- Discussion points:
  - When is the event resolved?
  - What barriers have been encountered?
  - What is an appropriate time frame to reach the desired goal?
  - Who determines if the event is resolved?
  - What is an appropriate reporting of event resolution:

    How is this documented?

    How is this reported?

    Who is this reported to?

Event Resolution and Monitoring

- After desired impact reached determine when continuous monitoring stops
- Monitoring includes:
  - Ensuring the contributing factors that led to the event have been appropriately corrected
  - Ensuring the corrective measures taken to prevent and mitigate adverse events are effective
- Realistic time frames for monitoring
  - Re-analyze PI data periodically to ensure mitigation/corrective actions are sustainable

Unsuccessful Event Resolution

- Possible reasons include:
  - Provider performance does not change
  - No improvement in system issue(s)
  - No improvement in patient outcomes
  - Stagnant action plans
  - Inappropriate action plan for identified issue
  - Failure to involve appropriate departments in action plan
  - Lack of authority and accountability for staff involved in corrective actions
  - Competing priorities

PI ‘File’ Components

- PI electronic or paper “file” components:
  - Case summary
  - Registry data
  - Correspondence regarding event or care, emails
  - Meeting minutes
  - Confidentiality statements
  - Issue Identification
  - Analysis of concern/trend
  - Corrective actions
  - Supporting PI documents
  - Occurrence tracking
  - Follow-up documentation
  - Loop closure