Introduction to TQIP 2013

Trauma Quality Improvement Program (TQIP) Training
Quality

• The degree to which health services and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge” – Institute of Medicine
AVEDIS DONABEDIAN
Professor, Public Health, University of Michigan
Measurement of Quality

Structure

Process

Outcome
What are the elements that lead to better outcomes?
Selected Structural Elements

- Volume requirements (2.3)
- Dedicated trauma surgeon on call (2.8)
- Published backup call schedule (2.9)
- Commitment of institutional governing body and staff to become a trauma center (5.1)
- Trauma medical director on call roster (5.6) and member/participant of national/regional trauma organizations (5.8)
- Multidisciplinary peer review committee (5.18)
- Operating room staffed and immediately available (11.15)
- Operating microscope and cardiopulmonary bypass 24/7 (11.23)
- Surgeon-director of ICU board certified in critical care, critical care-trained physicians, coverage 24/7 (11.43-47)
- Clearly defined PIPS program (16.1)
Selected Processes

• Trauma program must continuously evaluate its processes and outcomes (5.2)
• Seriously injured patients admitted to/evaluated by credentialed trauma providers (5.12)
• Attendance threshold of 80% for presence in the ED (6.6)
• Adequate attendance by general surgery at multidisciplinary peer review (6.10)
• Attending neurosurgeon available for consultation (8.5)
• Neurosurgeon attends >50% of multidisciplinary peer review committee meetings (8.2)
• Corrective action taken in face of consistent problems, inappropriate variation (16.26)
Where does TQIP fit?

Structure

Process

Outcome

Mortality
Rates of PE
Rates of unplanned return to ICU

TQIP
ACS TQIP Goals

• To improve the quality of care of trauma patients
  • Feedback to participating centers on their performance relative to their peers
  • Explore variability to identify best practices
  • Confidential reports - not available for use by others, advertising for competitive advantage

• Focus on outcomes & understand processes
ACS TQIP

Valid, Reliable, Standardized Data

Risk-Adjusted Performance Measurement

Feedback to Trauma Centers

Promote Structures and Processes of High Performers

Monitor Performance
TQIP components

Risk adjusted inter hospital comparisons:
- Four reports, including the annual TQIP risk adjusted benchmark report and three additional reports each year on topics of interest.
- Online data analysis tool to drill down into your own TQIP data, obtain patient lists, compare to other centers

Education and training:
- Annual meeting
- Online training
- Monthly educational experiences for abstractors

Enhanced data quality:
- Data validation site visit -- starting in 2012
- Data quality reporting and quarterly submissions
- TQIP Validator

Sharing best practices:
- Annual meeting
- High performers
- Web conferences
TQIP Data Source and Quality

• TQIP uses your annual NTDB data submission – there is not an additional, parallel data collection process for TQIP
• TQIP uses the current infrastructure in trauma centers and does not require additional staff
• Critical to review your validator reports to ensure your data make sense before sending it on
TQIP deliverables

• Risk adjusted benchmark reports
• Quarterly data quality checks
• Online course
• Monthly educational experiences
• Online data analysis tools
• Web conferences
• Monthly open forum calls
• Annual meeting
• Best practices guidelines tailored to YOUR patients
TQIP reports
Risk adjusted mortality & LOS

- All Patients
  - AIS>=3 in at least one body region
- Blunt multisystem injury
  - AIS>=3 in at least two body regions
- Penetrating injuries
- Isolated TBI
- Shock at ED presentation
- Elderly patients
  - Age>=65
  - Isolated hip fractures
What’s in the risk adjustment models?

- Age, gender, race, insurance type, comorbidities
- Mechanism of injury
- Admission GCS motor, blood pressure, and heart rate
- AIS for the most severe injury in each AIS body region
- ICISS (ICD-9 based survival risk ratio)
  - Accounts for every injury
Model characteristics

Discrimination

• How well does the model discriminate between survivors and deaths
  • Measured by the C-statistic - 0.91
Model Characteristics

Calibration

• How well does the model fit at every level of mortality risk

![Graph showing calibration of observed vs predicted mortality]
TQIP reports 2012
Processes of care

• Timing of fracture fixation
  • Midshaft femur, open tibial shaft
• ICP monitoring practices
• Tracheostomy practices
• Management of blunt splenic injury
• Use of angiography
Welcome to the new TQIP website for participants only! From this site, you will access the new online charting and drill down tool, the TQIP course, educational experiences, and reports and slides. Please take a moment to drop a note and give us your comments and let us know if you need assistance.

TQIP Online Charting and Drill-Down

To access the TQIP Charting and Drill-Down tool, please click "TQIP Online" in the upper right hand corner. This system provides the tools you need to generate lists of your patients that are included in each TQIP report analysis. In addition, this system shows comparisons between your centers and other TQIP centers on patient characteristics, injury information, and outcomes.

TQIP Training Module

Please click here to access the TQIP training module. The course consists of information about the TQIP program, important fields for the TQIP, registry data validation, and using TQIP results in your center. You will be responsible for watching all course videos and completing a short case-study provided at the end of the course.
Online course

- Available 24/7 to all participants
- Complements live meeting
- Chapters on
  - TQIP overview
  - Focus on data quality
  - Injury info
  - Pre-hospital info
  - ED info
  - Procedures and diagnosis
  - Outcomes
  - Quality assurance
Monthly educational experiences

- Brief, only about 10 minutes per quiz
- Address specific NTDS and data quality issues
- Progress reports
- High participation
- Positive feedback
- Improving scores over time
Where does TQIP fit in your PI program?

- Does not replace your case and filter-based review process
- Provides focus to better understand where your opportunities for improvement might be
- Identifies where you excel, leaving time available to focus on more significant challenges
TQIP Communications

• Primary contact
  • Receives all communications regarding reports, web conferences, submission deadlines, educational experiences, upcoming meetings/trainings, contracts and payments

• Data abstractors
  • Receives all communications regarding submission deadlines, educational experiences, upcoming meetings/trainings.

• Trauma Medical Director or designate
  • Receives all reports and communications regarding web conferences, meetings, and training
TQIP leadership

- COT Executive Committee
  - Quality and Data Resources Committee
    - TQIP Team
      - TQIP Best Practices Project Team
      - TQIP Analytics Project Team
      - TQIP Training Project Team
TQIP Team

Coordination:
• Avery Nathens
• Melanie Neal
• Julia McMurray
• Alice Rollins
• Richard Sallee

Analytics:
• Emmanuel Eklou
• Chrystal Price
• Chris Hoeft

Education:
• Tammy Morgan
• Amy Svestka

Consultants:
• Sandra Goble
• Wei Xiong