Performance Improvement Committee

Statewide Trauma Advisory Council
Wednesday, June 5, 2024

WISCONSIN DEPARTMENT
of HEALTH SERVICES

Division of Public Health

Acronyms

- DVT: Deep Vein Thrombosis
- OFI: Opportunity for Improvement
- PI: Performance Improvement
- PDSA: Plan-Do-Study-Act
- TMD: Trauma Medical Director
- TTA: Trauma Team Activation

Agenda

- Introductions and announcements
- Review and approve March 2024 meeting minutes
- Action plans and loop closure
- Regional Performance Improvement
- Over- and Under- Triage
- Adult Dashboard follow up
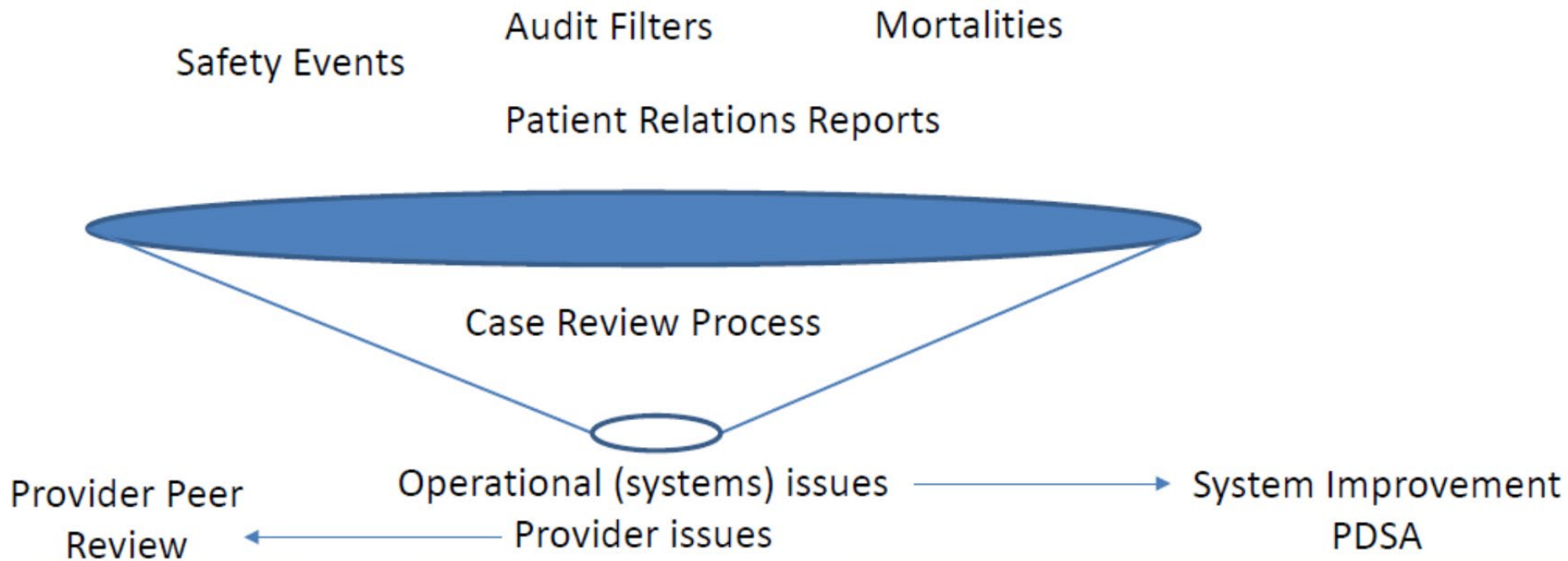- Membership
- Public comment

Committee Members

- **Chair:** Thomas Bergmann, Aurora BayCare Medical Center, Region 3, Level II
- **Vice Chair:** Kristin Braun, Children's Wisconsin, Region 7, Level I
- Committee Members:
  - **Tracy Schaetzl**, UnityPoint Health Meriter, Region 5, Level IV
  - **Ali Heiman**, Aurora Medical Center Oshkosh, Region 6, Level III
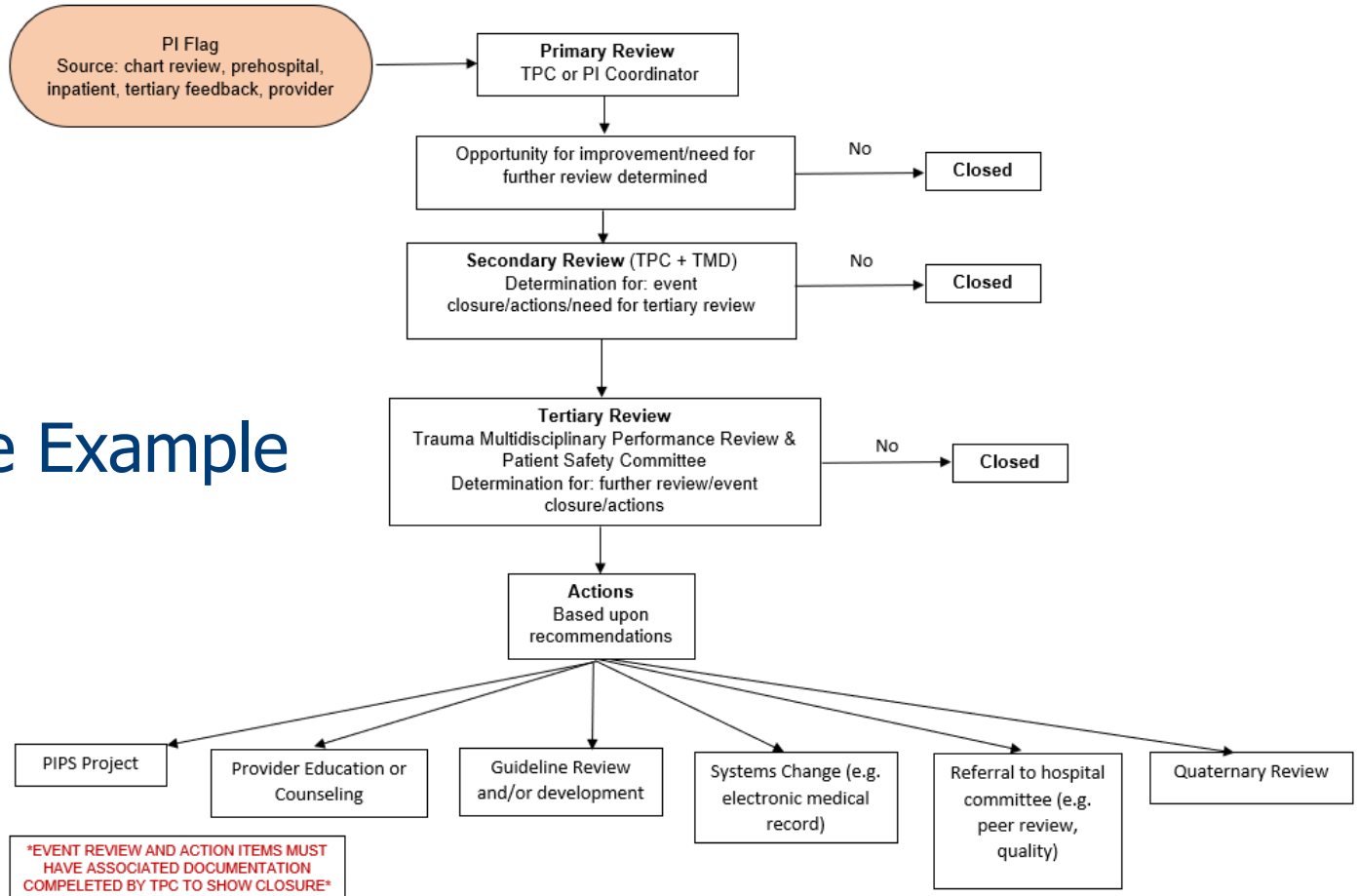 - **Thomas Ellison**, UW Health, Region 5, Level I

Approval of Minutes

Action Plans and Loop Closure

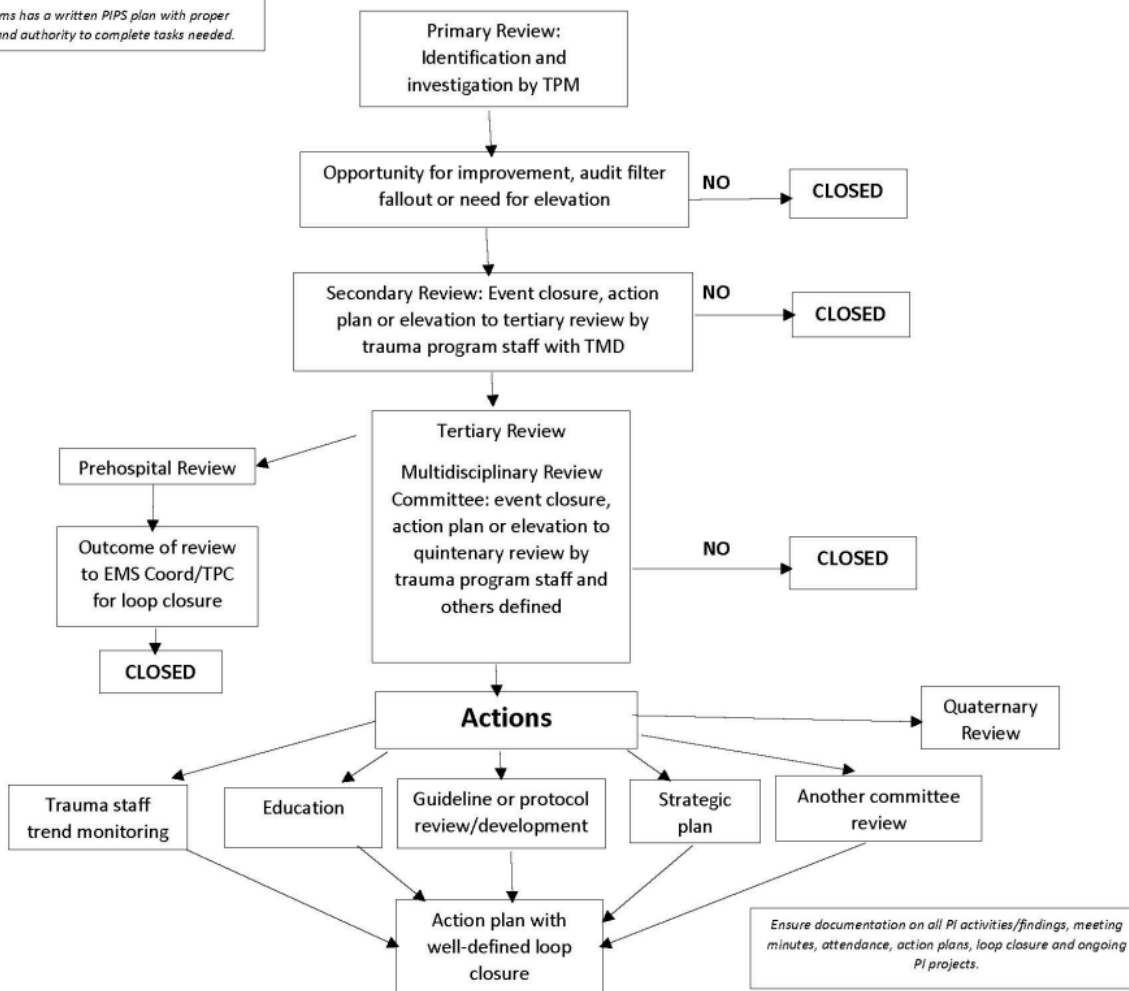# Case Review is Foundation of Performance Improvement

Safety Events

Audit Filters

Mortalities

Patient Relations Reports

Case Review Process

Provider Peer Review

Operational (systems) issues

Provider issues

System Improvement PDSA

Michael Chang, MD
TQIP 2018

Aurora BayCare Example

Trauma PIPS Levels of Review

PI Flag
Source: chart review, prehospital, inpatient, tertiary feedback, provider

Primary Review
TPC or PI Coordinator

Opportunity for improvement/need for further review determined → **No** → **Closed**

Secondary Review (TPC + TMD)
Determination for: event closure/actions/need for tertiary review → **No** → **Closed**

Tertiary Review
Trauma Multidisciplinary Performance Review & Patient Safety Committee
Determination for: further review/event closure/actions → **No** → **Closed**

Actions
Based upon recommendations

- PIPS Project
- Provider Education or Counseling
- Guideline Review and/or development
- Systems Change (e.g. electronic medical record)
- Referral to hospital committee (e.g. peer review, quality)
- Quaternary Review

EVENT REVIEW AND ACTION ITEMS MUST HAVE ASSOCIATED DOCUMENTATION COMPELETED BY TPC TO SHOW CLOSURE

Trauma Coordinators Onboarding Toolkit Example

Trauma programs has a written PIPS plan with proper facility support and authority to complete tasks needed.

Primary Review: Identification and investigation by TPM

Opportunity for improvement, audit filter fallout or need for elevation — NO → CLOSED

Secondary Review: Event closure, action plan or elevation to tertiary review by trauma program staff with TMD — NO → CLOSED

Tertiary Review

Multidisciplinary Review Committee: event closure, action plan or elevation to quintenary review by trauma program staff and others defined — NO → CLOSED

Prehospital Review

Outcome of review to EMS Coord/TPC for loop closure

CLOSED

Actions

Quaternary Review

Trauma staff trend monitoring

Education

Guideline or protocol review/development

Strategic plan

Another committee review

Action plan with well-defined loop closure

Ensure documentation on all PI activities/findings, meeting minutes, attendance, action plans, loop closure and ongoing PI projects.

General PIPS Program

Level	Criteria Reference	Type of Criteria	Action Item
III, IV	15(a)	2	Established a written trauma PIPS program. This document should outline your PIPS process in its entirety. Below is additional items to have in your plan.
III, IV	2(o)	2	Establish who should be involved within each level of review. Include within your written trauma PIPS plan.
III, IV	15(c)	2	Include facility quality and patient safety within your PIPS program structure with clearly defined roles per written trauma PIPS plan. Ensure this show reporting structure and alliance to the quality department.
III, IV	15(h)	2	Operational events include the review of trauma diversions.
III, IV	15(g)	2	Have an established event identification process. Define a trauma patient and locate the patient in your hospital. Cases can be found through daily rounding/spreadsheet, TTA charge-nurse spreadsheets, retrospective chart review or other means.

Levels of Review: Primary

- Criteria 15(d)
- Action items:
  - Initial review based on established PI audit filters, standards of care, and operational processes
  - Trauma Coordinator or PI coordinator
  - No OFI, the case can be closed
  - All others are forwarded secondary review

Levels of Review: Secondary

- Criteria 15(d) and best practice
  - ♦ Review by the Trauma Medical Director (TMD) or alternate if TMD was involved in case, subspecialist liaison, department leadership, or prehospital service or referring facility leadership.
  - ♦ No OFI, the case can be closed
  - ♦ All others are forwarded for additional review

Levels of Review: Secondary

- ♦ Examples:
  - Nonsurgical service admission
  - Transfers
  - Deviation from Trauma Team Activation Criteria
  - Death or hospice
  - Event or complication: e.g. DVT, unplanned OR, GCS < 8 and no advanced airway placement

Levels of Review: Tertiary

- Criteria 15(f) and 2(o)(8)(9)
  - ♦ Multidisciplinary Trauma Peer Review or Trauma Operation & System Committee
  - ♦ Event determination:
    - Event without OFI
    - Event with OFI
    - Undetermined OFI
    - Mortality without OFI
    - Mortality with OFI

Levels of Review: Tertiary

- No OFI the case can be closed
- All others are forwarded for additional review, or in-depth PI review (for example, root cause analysis)

Levels of Review: Quaternary

- Review outside of the trauma program (for example, hospital peer review or other administrative committee, etc.)
- Ensure you get some feedback to close the loop

All Levels

Criteria 15(i)

If an opportunity for improvement is identified at any level of review, a written action plan should be created. Actions plans should be measurable over time with a goal and utilize the trauma registry data or hand collected date. Action plan interventions can include education, resource adjustments, protocols revisions, or other appropriate interventions.

All Levels

Criteria 15(b)

If an action plan is created, it can be divided into two categories, in progress and closed with documented loop closure. Loop closure is the ultimate resolution to an identified opportunity for improvement. This closure is to demonstrate mitigation steps (action plan) taken to reduce the likelihood of this event occurring again. This can be demonstrated through data or other cases throughout time.

Essential Element

Ensure documentation at all levels

- ♦ Emails
- ♦ Hallway conversation
- ♦ Meeting minutes
- ♦ Action plans
- ♦ Data
- ♦ Loop closure
- ♦ Other

Documentation Example

SAMPLE ACTION PLAN WITH LOOP CLOSURE

Review Date	Patient Name	MRN #	Additional Patient Information (if applicable)
	Select One		

Review of Facts

EMS:

ED:
Level of Activation:
Injury Severity Score (if available):

Inpatient Stay:
Admission Service:

Case Review Findings

Primary:

Secondary:

Tertiary:

Quaternary:

Action Plan and Loop Closure

Planned Prevention or Mitigation Activities:

Implementation Timeline:

Measure of Success:

Loop Closure Notes:

[*insert hospital approved peer review protection clause*]

Action Plans and Loop Closure

- Many tools are available for analysis and development of action plans
  - ♦ Root Cause Analysis
  - ♦ Cause-and-Effect Diagram (Ishikawa or fishbone diagram)
- Loop closure is the process to determine whether or what changes need to be made.

Action Plans and Loop Closure

Loop closure:

- ♦ Measurable and conducted over time
- ♦ Reflects resolution of the problem
- ♦ Involved periodic review to ensure corrective actions remain in place

CAUTI: Catheter Associated Urinary Tract Infections

Goal of project: Decrease the # of CAUTI occurrences

VII. In-Hospital Events

Table 11: Hospital Events by Cohort* (continued)

		Patients	
Cohort	Group	N	Catheter-Associated UTI (%)
All Patients	All Hospitals	127,575	0.1
	Your Hospital	1,368	0.5
Age 0-14	All Hospitals	100,058	0.0
	Your Hospital	1,065	0.6
Age 15-18	All Hospitals	27,517	0.1
	Your Hospital	303	0.3
Severe TBI	All Hospitals	5,109	0.8
	Your Hospital	66	←7.6
TBI Age 0-14	All Hospitals	3,559	0.8
	Your Hospital	43	←9.3
TBI Age 15-18	All Hospitals	1,550	0.8
	Your Hospital	23	←4.3

* In addition to centers excluded from all risk-adjusted models, centers excluded from risk-ad

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Aim and Methods: CAUTIs

- Develop a partnership with Infection Prevention and Quality
- Evaluate CAUTI events to identify solutions and implement strategies to prevent the occurrence of CAUTIs

Aim and Methods: CAUTIs

Methods:

- Recruited CAUTI nurse champions & CAUTI retreat
- Development of a formal rounding tool
- Creation of a nurse driven foley removal protocol, including an algorithm
- Standardization of urine culture orders within EHR order sets

Aim and Methods: CAUTIs

Methods:

- Reimplementation of CAUTI event huddles to review and analyze CAUTI events with front line staff and health care providers
- Weekly rounding on units by CAUTI team leads to connect with staff through discussion, observation, and problem solving.

Results

- Increased documentation of compliance (insertion and/or maintenance)
- Decrease in CAUTI rate per 1,000 patients within Children's main campus
- No CAUTI events for trauma population

CAUTI Event Rate and Bundle Compliance
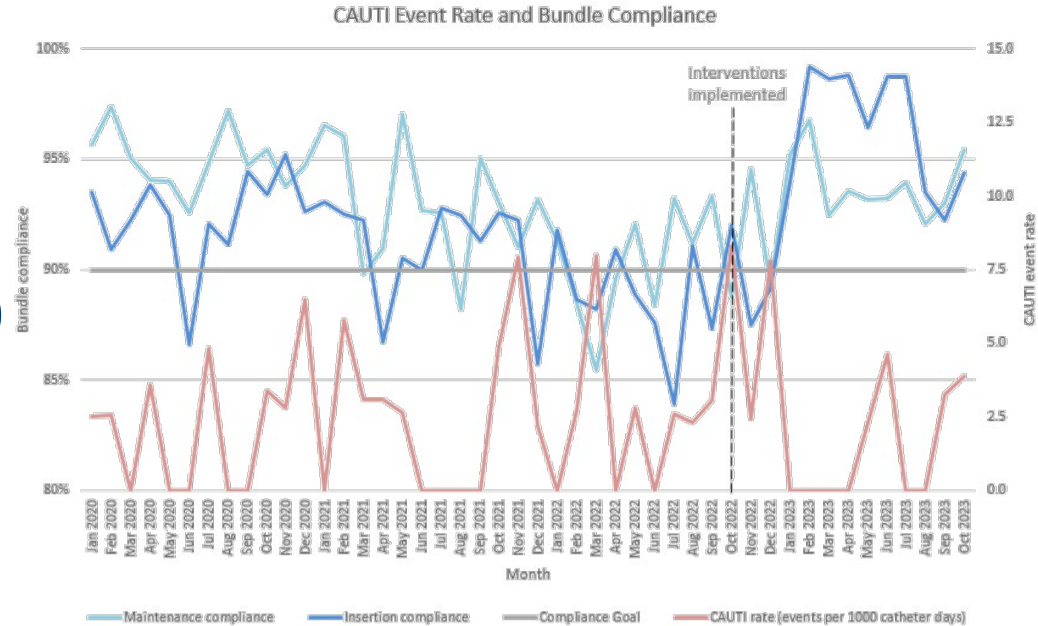
Spring 2024

Table 11: Hospital Events by Cohort* (continued)

		Patients	
Cohort	Group	N	Catheter-Associated UTI (%)
All Patients	All Hospitals	128,202	0.0
	Your Hospital	1,378	0.2
Age 0-14	All Hospitals	99,734	0.0
	Your Hospital	1,043	0.3
Age 15-18	All Hospitals	28,468	0.1
	Your Hospital	335	0.0
Severe TBI	All Hospitals	5,167	0.5
	Your Hospital	62	3.2 ←
TBI Age 0-14	All Hospitals	3,596	0.4
	Your Hospital	41	4.9 ←
TBI Age 15-18	All Hospitals	1,571	0.6
	Your Hospital	21	0.0 ←

* In addition to centers excluded from all risk-adjusted models, centers excluded from risk-adj

Regional Performance Improvement

Revision of Document Plan

- Soliciting feedback from RTACs
- Soliciting feedback from STAC Data Management subcommittee
- Soliciting feedback from CRC
- New draft will be presented at the September 2024 meeting for feedback
- Presentation to STAC for vote at the December 2024 meeting

Over- and Undertriage

TCF Standard 03(c)

TCFs must evaluate over and under triage rates on a quarterly basis and perform rigorous multidisciplinary performance improvement to attain a goal of less than five percent undertriage.

Introduction

- Proper triage is critical to ensure that appropriate resources are available to provide optimal care of the patient.
- Rigorous multidisciplinary review of overtriage and undertriage rates can minimize the consequences of inappropriate utilization of trauma resources.

https://www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/resources

Introduction

- **Undertriage** is defined as a triage decision that classifies patients as not needing full trauma team activation (TTA) when in fact they did (false negative).
- **Overtriage** is a decision that incorrectly classifies a patient as needing full TTA, although retrospective analysis suggests that such care was not needed.
- Goals: undertriage (< 5%); overtriage (25%-35%)

  https://www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/resources

Cribari Grid

- Retrospective review based upon injury severity score (ISS >15 require full TTA)

- Undertriage = ISS > 15 w/o full TTA

- Overtriage = ISS $\leq$ 15 w/full TTA

Figure 2   The Matrix Method for the Calculation of Triage Rates

	Not Major Trauma	Major Trauma	Total	Overtriage
Highest Level TTA	A	B	C	A/C x 100
Midlevel TTA	D	E	F	Undertriage =
No TTA	G	H	I	(E+H) / (F+I) x 100

Need For Trauma Intervention (NFTI)

- Need for intervention (NFTI) a prospective review based upon patient assessment upon arrival
- Patients meeting any one criterion or any combination of the criteria are classified as NFTI positive (NFTI +) and are deemed highly likely to have needed trauma activations regardless of ISS
- Patients meeting none of these criteria are labeled as NFTI negative (NFTI −) and are considered highly unlikely to have needed trauma activations

https://journals.lww.com/journaloftraumanursing/fulltext/2017/05000/asking_a_better_question__development_and.4.aspx

Need For Trauma Intervention (NFTI)

The final NFTI criteria are:

- receiving packed red blood cells (PRBC) within the first 4 hr of arrival;
- being discharged from the ED to the operating room (OR) within 90 min of arrival;
- being discharged from the ED to interventional radiology (IR);
- being discharged from the ED to the intensive care unit (ICU) and having a total ICU length of stay (LOS) of 3 or more calendar days;
- receiving mechanical ventilation for reasons other than procedural anesthesia within the first 3 days; and/or
- death within 60 hr of hospital arrival.

https://journals.lww.com/journaloftraumanursing/fulltext/2017/05000/asking_a_better_question__development_and.4.aspx

Next Steps

Investigation into your over- and under- triage
- ♦ Communication
- ♦ Activation criteria
- ♦ Provider engagement
- ♦ Case review issues

Discussion

What are your questions related to over- and undertriage?

Adult Dashboard Follow Up

Mortality Definition

Hospice patients are included within this definition currently—feedback?

Membership

Open Membership

Send an email to DHSTrauma@dhs.wisconsin.gov with a letter of interest by June 28, 2024

Public Comment