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Advancing Science, Fostering Relationships, and Building Careers

32nd EAST Annual Scientific Assembly
Short Course

Developing A Trauma Quality & Safety Program

January 16, 2019
JW Marriott Austin
Austin, Texas

Quality

In the Eye of the Beholder

Oscar Guillamondegui, MD, MPH, FACS
Trauma Medical Director
Vanderbilt University Medical Center

Conflict of Interest

- None

Caveat

Culture trumps System

Quality Improvement ≠ **Performance** Improvement

Quality Improvement vs Performance Improvement

- Quality Improvement:
  - Retrospective analysis to make forward changes
- Performance improvement:
  - Prospective analysis to predict outcomes

To the CEO

Quality = $$$$$

To the Team

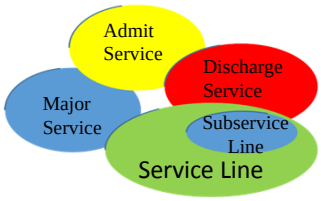
Quality = WORK

Sorting Mortalities

- Externally Assigning Service Lines:
  - Diagnosis Codes
  - Procedure Codes
  - Discharge Disposition
  - Gender
  - AGE

Diagnosis Related Group (DRG)
+ Complications
+ Comorbidities
(CCs and MCCs)

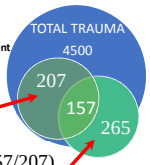
→ Specific Service Line



National Trauma Database / TQIP

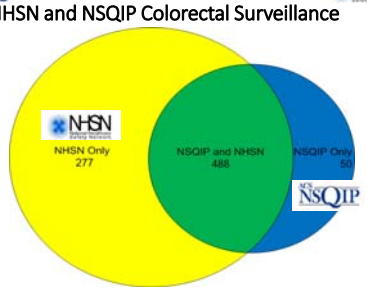
- All trauma patients > 16
- 207 deaths August 2015 – March 2016
- 50 expired in the ED
- 2 were under 16

not included in Vizient



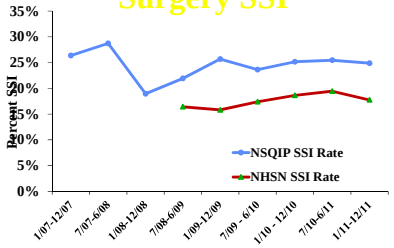
TQIP deaths in VIZIENT: 76% (157/207)
VIZIENT deaths in TQIP:59% (157/265)

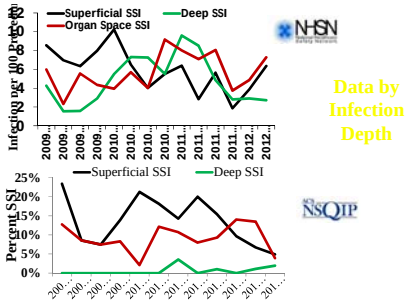
NHSN and NSQIP Colorectal Surveillance



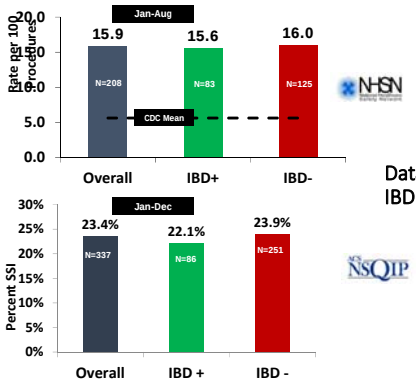
	NHSN	NSQIP
Procedure Selection	ICD-9 Procedure Code from hospital billing; All surgical services included. May be principal or secondary procedure	CPT Codes: OR Schedule, review of operative note, surgeon billing . General and vascular surgery patients reviewed for inclusion. Ostomies and takedowns are not in the Colectomy category
Exclusion Criteria	Patients with wound left open at the index procedure	Trauma and Transplant patients Patients with proc w/in 30 days prior to index operation Wound closure noted; **no exclusion for wounds left open**
Surveillance Period	30 days for most with exception of **365 days if implant** placed	30 days for all procedures
Multiple Procedures	Infection ascribed to most likely site or prioritized by risk	Primary procedure is CPT Code with highest work RVU; SSI is not assigned to specific procedure
Risk Adjustment	Stratified by risk index that incorporates the following • Duration of operation • Wound class • ASA classification [New regression model risk stratification implemented in Jan 12]	Odds Ratio: multivariate regression analysis models every six months; significant factors include • Wound class • Body mass index • Preoperative sepsis • ASA classification • Patient age • Emergent operation

NSQIP vs. NHSN Colorectal Surgery SSI





Data by Infection Depth



Data by IBD Status

Who is looking at the data?

- CEO
- CQO
- Chairman
- Trauma Medical Director
- YOU?

What changes can you make that will result in improvement?

- Eliminate waste
- Improve work flow
- Optimize inventory
- Change the work environment
- Patient / clinician interface
- Manage time
- Focus on variation
- Error proofing
- Focus on the product or service

What changes can you make that will result in improvement?

- What you change may result in the intended improvement—
  - May have unintended consequences, positive or negative.

Implementing Changes

- Test first on a small scale—one or two patients, then for a day.
- Solicit immediate feedback—at the point of use if possible.
- Make changes based on feedback

Implementing Changes

- Once the process is reasonably stable, implement widely, across a unit or area
- *Changes are still possible*—even probable—after full implementation
- Consider sustainability while designing process implementation

Measuring Success

- Simple, real-time process measures may help to drive implementation
- Outcomes measures
  - may lag too much to be actionable
  - often ultimate measures.
- Measures should be *meaningful* to those who perform the actions
  - Think about those who are affected by the new task
  - Invite input

Final Thoughts

- Quality improvement is not separate or in addition to clinical care.
- Quality is integrated into every interaction with patients.
- Nearly every aspect of care has been, is, or will be subject to improvement.
- Every change you make to your practice is about improving the outcome.

Thank You

Quality

In the Eye of the Beholder

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Trauma Medical Director
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Trauma Registry Management & Oversight

Joan Pirrung, MSN, APRN, ACNS-BC
Director of Clinical Operations, Trauma
Christiana Care Health System
Newark, DE

1

Disclosure

- I have no conflict of interest relative to this educational activity.

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Learning Objectives

- Review the core functions of a trauma registry and its impact on trauma performance improvement processes.
- Discuss the oversight necessary to validate the accuracy of trauma registry data.

3

Registry:

A disease-specific data collection repository

Trauma Registry:

Uniform data elements that describe the injury event, demographics, pre-hospital information, diagnoses, care, outcomes, and costs of treatment for injured patients.

Resources for Optimal Care of the Injured Patient

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Trauma Registry

The Committee on Trauma

- Requirement as a verified and/or designated trauma center
- Essential component of a trauma center and state system
  - Internally
  - Regionally
  - Nationally
- Repository for both clinical and system processes/issues
- Hospitals across the United States share key elements of data

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Trauma Registry

- Foundation for the trauma program and state trauma systems
- Supports all aspects of the program:
  - Performance improvement
  - Guideline development
  - Research
  - Finance
  - Business plan development to increase resources
  - Advocacy
  - Injury prevention
  - Education

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Trauma Registry: Data Dictionary

- National Trauma Data Bank (NTDB):
  - Contains more than 80 core data elements
  - Contains more than 30 Trauma Quality Improvement Program (TQIP) data elements
- Continuously updated

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Trauma Registry: Elements of the Data Dictionary

- **Name** of the data element
- **Definition** of the data element
- **Data type** of the data element (many data elements have comments provided to assist in the implementation of a database schema and the Version 2 XML standard)
- How to deal with **missing or incomplete** information
- The **variables associated** with each data element
- A data **scheme** describing how variables contained in the National Trauma Data Bank (NTDB) Dataset are **related**
- What **edit checks** are associated with the use of the data elements
- A list of data elements that are **auto-populated** within the dataset or variables **auto-generated** from values collected in NTDB
- A **glossary** providing definitions for variables and values utilized in the NTDB

https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb/ntds/data-dictionary

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National Trauma Data Standard (NTDS)

- An effort to standardize the data in the National Trauma Data Bank (NTDB)
- A dataset defining standardized data elements collected by the ACS within NTDB and TQIP
- Contains core variables that would prove useful if aggregated nationally

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NTDB Data Standard

- Development of nationally trauma benchmark
- Facilitation of research efforts
- Evaluation of hospital and state trauma system patient outcomes
- Analysis of regional and national trends in trauma care
- Provides guidance for addressing resource needs such at disaster preparedness, injury prevention efforts or other issues related to trauma care
- Trauma centers and/or state systems collect more comparable elements in addition to the NTS

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Trauma Registrar

- Background:
  - Varying degrees to no college degree
  - Health information specialist
  - Nurse
  - Informatics
  - Hospital data system analyst
  - Certification or no certification in trauma registry
- Training:
  - ATS Registrar Course
  - AAAM Scaling Course
  - Institutional or State developed Course

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Trauma Registrar Software

- Data must be valid and reliable
- Report writing is an essential skill of a registrar
- Reports must be reflective of the data requested
- Registry system must be compatible with state and national registry systems
- Data validation must occur frequently

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Data Validation

My corollary proof that "I - You = Double Awesome" did little to dry his tears.

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Data Validation

- Process must be developed to ensure the trauma registry data is complete and appropriate with the elimination of erroneous values
- Routine inter-rater reliability must be conducted
- Software systems have internal validation options
- Re-abstraction of patient records or specific data elements should be built into the validation process
- Updates with data dictionary definitions should drive elements for reviews
- Frequent discussions among the registry team is imperative to ensure collection by the team is identical

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Protection of Trauma Data

- Data must be secure at all times
- Develop and maintain a research request form
- Ensure patient confidentiality and data integrity by limiting access to the registry

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Integration of Trauma Registrars

- Members of various PI committees
- Participate in event/issue identification
- Review and update the data dictionary when necessary and ad hoc
- Develop, implement and update the data validation process
- Develop data reports and run data requests
- Provide education on anatomy, trauma injuries and trauma systems
- Review data reports with registrars and ensure accuracy

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Concurrent Registry

- Adds to the efficiency of the PI process
- Lean methodology
- Data entered throughout patient admission
- Requires clear workflow algorithm

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The most important function of a trauma registry is to improve and assist in optimizing care for the trauma patient locally, regionally and nationally.

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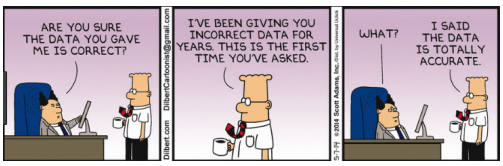
Thank-You



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Data Interpretation & Variance Identification

Kevin M. Schuster, MD, MPH
Associate Professor of Surgery
Yale School of Medicine
NSQIP, Surgeon Champion
Yale New Haven Hospital

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Disclosure

- Nothing to Disclose

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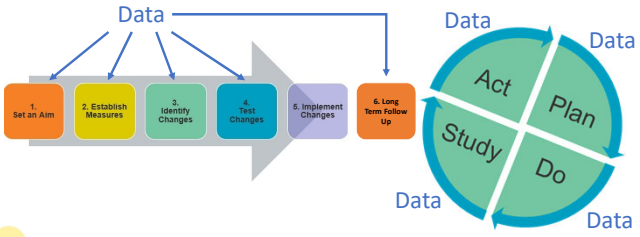
Model for improvement (PDSA)



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Sources for data

- TQIP
- Vizient
  - 95% of academic acute care hospitals
  - Over 50% of acute care health systems
- Hospital reported PSI
- Hospital reported mortality
- National Healthcare Safety Network (NHSN)
- STS National database

> *In today's health care world, lowering costs isn't enough. You have to link good cost management with better health care to produce better health in our communities – and that's what Vizient is going to allow us to do. Vizient has no ceiling.*
>
> **Marna Bergstrom**
> President and Chief Executive Officer, Yale New Haven Health System

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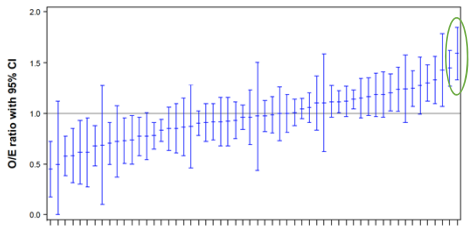
TQIP risk adjusted mortality 2009



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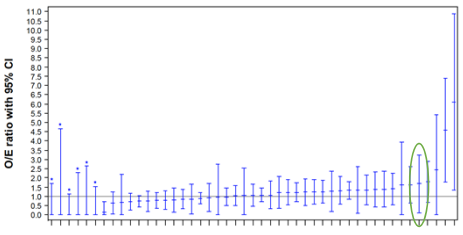
Risk adjusted mortality penetrating only 2009



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Improving outcomes with data quality

- Careful review of the TQIP report
- Use all of the data
- Track outcomes over time
- Implement a registry data quality program

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TQIP comorbidities 2009

	Count	Percent
No NTDS co-morbidities	14,719	27.2
Hypertension	12,669	23.5
No co-morbidities	8,280	15.3
Not Known/Not Recorded	7,084	13.1
Diabetes mellitus	5,202	9.6
Current smoker	5,085	9.4
Alcoholism	4,735	8.8
Impaired sensorium	3,418	6.3
Respiratory Disease	2,953	5.5
Bleeding Disorder	2,213	4.1
Congestive heart failure	1,693	3.1
Obesity	1,426	2.6
CVA/residual neurological deficit	1,168	2.2
History of myocardial infarction within past 6 months	663	1.2
Functionally dependent health status	436	0.8
Currently requiring or on dialysis	370	0.7
Disseminated cancer	282	0.5
Congenital Anomalies	158	0.3
Steroid use	156	0.3
Chemotherapy for cancer within 30 days	107	0.2
History of angina within past 1 month	94	0.2
Ascites within 30 days	55	0.1
Esophageal varices	38	0.1
History of revascularization / amputation for PVD	33	0.1
Prematurity	12	0.0

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Early response to data quality issues

- Review a random selection of each registrars cases - Plan
- TQIP based conference call and registrar quizzes - Do
- TMD and TPM hold weekly reviews of TQIP definitions - Do
  - Comorbids
  - Injuries
  - Complications
- Observe subsequent reports for improvement – Study
- Implement ongoing registrar education - Act

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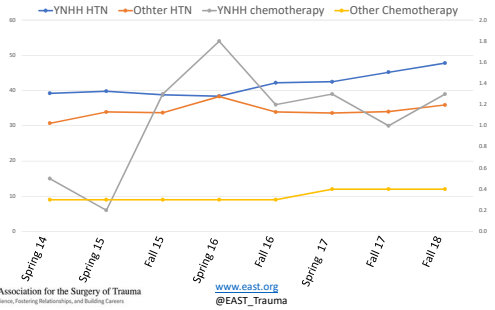
Comorbid conditions over time



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Other events

- New trauma program manager
- New trauma medical director
- Many new registry staff
- TQIP continues to add centers

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Missing procedures

			Surgery for Hemorrhage Control [1]		Angiography [2]		Neither	
		Patients	N	%	N	%	N	%
Hemorrhagic Shock	All Hospitals	1,752	778	45.2	240	13.8	786	46.2
	Your Hospital	6	4	66.7	0	0.0	2	33.3

	Patients	Surgery for Hemorrhage Control [1]		Angiography [2]		Neither	
Group	N	N	%	N	%	N	%
All Hospitals	3,053	1,396	46.5	453	15.0	1,353	45.4
Your Hospital	12	7	58.3	2	16.7	4	33.3

	Patients	Surgery for Hemorrhage Control [1]		Angiography [2]		Neither	
Group	N	N	%	N	%	N	%
All Hospitals	3,724	1,708	46.4	587	15.9	1,639	44.8
Your Hospital	14	6	42.9	2	14.3	6	42.9

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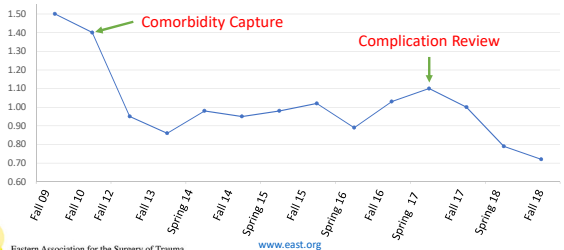
Risk adjusted mortality over time



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First, do no harm

- Major complications had not undergone formal review
- Major complications deemed "not a complication" remained in the submission fields
- Major complications did not meet dictionary definition

1. Acute Kidney Injury
2. Acute Respiratory Distress Syndrome
3. Cardiac Arrest with CPR
4. CLABSI
5. CAUTI
6. Pressure Ulcer
7. Deep Surgical Site Infection
8. Myocardial Infarction
9. Organ/Space Surgical Site Infection,
10. Ventilator Acquired Pneumonia
11. Pulmonary Embolus
12. Severe Sepsis
13. Stroke/CVA
14. Unplanned Return to OR
15. Unplanned Admission to ICU

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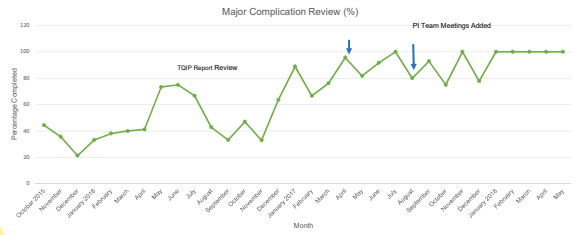
Major complication review timeline



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Complication review

Monthly staff meetings to discuss opportunities in data capture
Monthly Trauma Registry Lecture Series
- Data Dictionary Development Series
- Complication Review
- Clinical topics
- Updates to care standards/clinical guidelines
- New care processes

One on one feedback:
- PI team
- Audit reports

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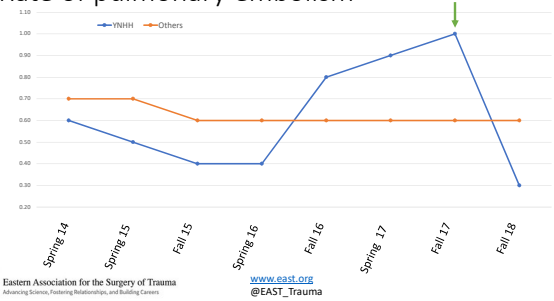
Rate of pulmonary embolism

Complication Review



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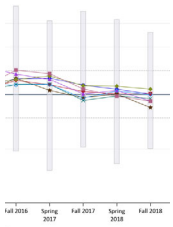
Trends in major complications



- Favorable trends on report
- Report indicates few missing data fields

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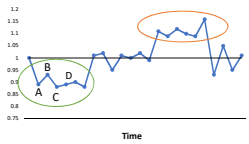
Principles of interpreting run charts

- Shifts
  - A 50% chance <1
  - A & B 75% chance <1
  - A & B & C 87.5% chance < 1
  - A & B & C & D 96.9% chance < 1
  - Ignore points on the line



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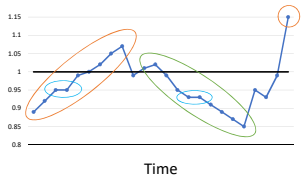
Principles of interpreting run charts

- Trends
  - Five or more points are necessary to define a trend
  - Don't count points that don't change
- Outliers should be considered carefully and in some cases may be ignored
- Line should cross median regularly



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Real targets for quality improvement

- Ideally separated from interventions with respect to data quality
- Should not be based entirely on odds ratios
- SMART goals
  - Specific, significant, stretching
  - Measurable, meaningful, motivational
  - Agreed upon, attainable, acceptable, action-oriented
  - Realistic, relevant, reasonable, rewarding, results-oriented
  - Time based, time-bound, timely, tangible, trackable

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Using Data to Change Practice

Bruce Crookes, MD FACS
Chief, Division of General Surgery
Associate Chief Quality Officer
Associate Professor of Surgery
Medical University of South Carolina

Disclosures

- None
  - (except that I really like this stuff!)

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"ex·pert ('ek,spərt): *noun*

someone who flies in from out of town with a lot of slides."

–Bruce Crookes

"To go from good to great requires transcending the curse of competence."

–Jim Collins, Good to Great

Objectives

- Understand how to use your data to "transcend the curse of competence."
  - Understand the different measures of quality
    - setting
    - delivery
    - result
  - Understand how to change practice depending upon the type of data that you are utilizing

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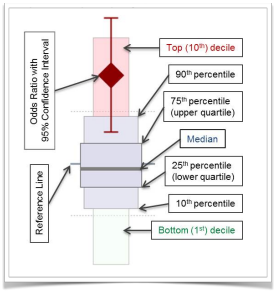
Using Data for Quality:
not just TQIP



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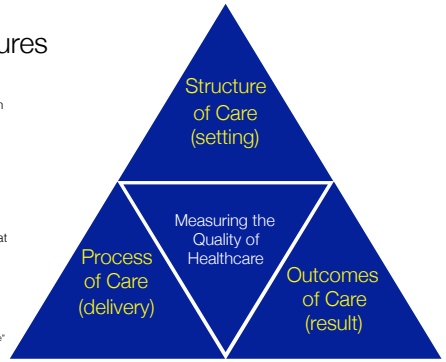
"In a learning system, prior experiences improve future performance."

–Cresswell et al. "Why Every Health Care Organization Needs a Data Science Strategy" catalyst.nejm.org

Quality Measures

- If we are "measuring" quality in healthcare, there are three main areas of measurement:
  - The Structure of Care
    - "the setting"
  - The Process of Care
    - "the delivery of care"
  - The Outcomes of Care
    - "the result of the care that was rendered."



"Using data to support change in clinical practice" The Royal College of Surgeons, 2017

Choosing the right data to measure performance

- Setting, delivery, and result:
  - In combination, these factors can provide a useful picture of performance
  - If used alone, each is likely to miss other aspects of quality
- In healthcare, we historically measured "quality" purely on process.
- In trauma, we have historically measured "quality" with outcomes
  - TQIP
  - Morbidity and Mortality Conference
  - A focus on outcomes alone can miss key positive and negative aspects of the patient journey.

To ensure meaningful measurement, some aspects of all three forms of quality measurement should be incorporated into individual and service reviews.

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Choosing the right data to measure performance

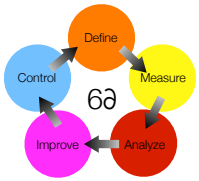
- "Data"
  - Trends are important:
    - add context and indicate whether outcomes or cost performance is sustained or may represent a blip in time.
  - Statistical significance is important:
    - guides conclusions
    - helps to separate signal from noise

"Anyone who has worked in health care analytics has heard a physician say, "The data is wrong." In our experience, the best way to win physician buy-in is to short-circuit that objection. After preparing a preliminary data set, we deliver it to physicians and say, "We know the data is wrong; now help us make it more useful to you."

Stonewell and Robicsek "Endless Forms in Its Most Beautiful: Evolving towards Higher-Value Care" in Data, Analytics & Outcomes — The Way Forward, NEJM Catalyst, 2018

Choosing the right data to measure performance

- "Data" has two functions:
  - Allows you to identify a problem
    - Benchmarking
    - "Without data, it is difficult to find actionable ways to change."
  - Allows you to monitor the improvement that you have designed
    - Example: Six Sigma



You cannot improve the quality of care of your program without using "data" in both of these formats.

The win…….you have "big data"

- Huesch et a. "Using it or Losing It? The Case for Data Scientists Inside Health Care" catalyst.nejm.org
  - "….as much as 30% of the entire world's stored data is generated in the health care industry."
- *Kelly, K. "Willy Wonka and the Medical Software Factory" NY Times 12/20/2018*
  - "Epic's reach is, well, epic. Its systems contain records for more than 50% of United States medical patients."

"The value of big data in health care is realized only when this raw information is covered into knowledge that changes practice."

Management Strategies for Quality Improvement:

What, and Which, and Who

"How can you get very far
If you don't know Who You Are?
How can you do what you ought
If you don't know What You've Got?
And if you don't know Which to Do
Of all the things in front of you
Then what you'll have when you are through
Is just a mess without a clue
Of all the best that can come true
If you know What and Which and Who."

-**The Tao of Pooh**: Hoff, B. Dutton, NY 1982

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"How do I use data to know where to start my quality improvement efforts?"

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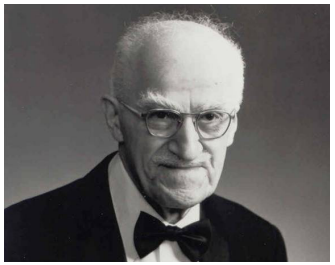
"What and Which and Who?": *the 80/20 rule*

- "80/20 Rule"
  - "The Pareto Principle" (1906)
    - 80% of the property in Italy was owned by 20% of the people
  - Joseph Juran
    - "in any population that contributes to a common effect, a relative few of the contributors - the vital few - account for the bulk of the effect."



"Vital few projects provide the bulk of the improvement, so they should receive top priority."

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"What and Which and Who?": *the 80/20 rule*

- Plenty of opportunity!
  - a small number of carefully selected and tightly focused projects can be expected to yield more benefit than others.
  - Wright and Bates:
    - 80% of medical problems came from 12.5% of diagnosis
    - 80% of prescriptions came from 11.8% of possible choices
    - 100% of laboratory tests came from 4.5% of choices
  - Hill et al.
    - 70% of deviations from heart care curricula came from 30% of possible deviation types

Wright et al. "Distribution of problems, medications and lab results in an electronic health records: the Pareto Principle at work." *Apply Clin Inform* 2010; 1:32-37
Hill et al. "A focused approach to assessing program fidelity." *Prev Sci* 2007; 8: 25-34

"What and Which and Who?": *benchmarking*

- Use benchmarks to target quality improvement Initiatives
  - "Benchmarking"
    - 1989: Robert C. Camp
      - tasked with reviving an increasingly noncompetitive Xerox corporation
      - "the continuous process of measuring products, services, and practices against the toughest companies viewed as industry leaders."

A trauma program chooses a metric, identifies best practice by surveying comparators, and mimics the optimal paradigm to improve the quality of its product or service.

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

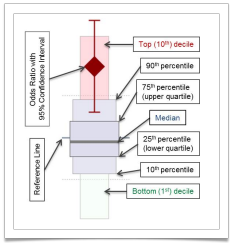
"What and Which and Who?": *benchmarking*

- Benefits:
  - Intra-Institutional comparison
    - demonstrates the full range of possible performance among peers with similar constraints
    - example
      - surgeon-specific surgical site infection rates (SSI) at your hospital
  - Inter-institutional comparison
    - lets you know how good (or bad) you are relative to your peers
    - example
      - your trauma center's VTE rates compared to other TQIP hospitals

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

"What and Which and Who?": *benchmarking*

- Barriers
  - Unlike consumer products, not all patients are the same!
    - must appropriately adjust (stratify) by patient differences
    - compare "like to like"
      - needs standardized definitions (i.e. ISS scoring)
      - needs lots of patients for statistical power (i.e. Trauma Quality Improvement Project (TQIP))



Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

"What and Which and Who?": *root cause analysis*

- Root Cause Analysis (RCA)
  - mechanism to retrospectively review negative events that happen, to learn form them and how to prevent them in the future
  - mandated by the Joint Commission for sentinel events since 1997
    - "events resulting in death or major permanent loss of function unrelated to a patient's illness."

The aim of the process is to identify latent systems failures to develop strategies to correct them and, thereby, to prevent future harm.

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

"What and Which and Who?": *root cause analysis*

- Root Cause Analysis (RCA): cont.
  - Structured process
    - data collection followed by multi-disciplinary team analysis of the steps leading up to the erroneous event
  - Allows identification of
    - active steps that may have caused the incident
    - passive systems processes that were insufficient to prevent its occurrence

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

"What and Which and Who?": *root cause analysis*

- Root Cause Analysis (RCA): cont.
  - Despite widespread use, very few data about efficacy
  - Common problems:
    - focus on the event that resulted in the most harm rather than those events from which the most could be learned (external mandate)
    - significant bias from those involved in the process
    - inability to prove a causal link between the root cause and the event

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

"What and Which and Who?": *failure and effects mode analysis*

- Failure Mode and Effects Analysis (FEMA)
  - Conceived by the Department of Defense in 1949
  - Structured approach to the identification of:
    - potentially error-prone steps (failures)
    - their causes (modes)
    - their potential negative impacts (effects)
  - Proactive (as opposed to RCA)

FEMA for use in health care is largely focused on evaluation and improvements of processes for which there is concern that errors affecting patient safety may arise.

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

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"What and Which and Who?": *failure and effects mode analysis*

- Failure Mode and Effects Analysis (FEMA): cont.
  - Step 1:
    - Clear identification of the process to be studied
  - Step 2:
    - Creation of a multi-disciplinary team
      - must include members with different perspectives on the process
  - Step 3:
    - Team then develops a process map
    - Identifies all steps and subsets in the process

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

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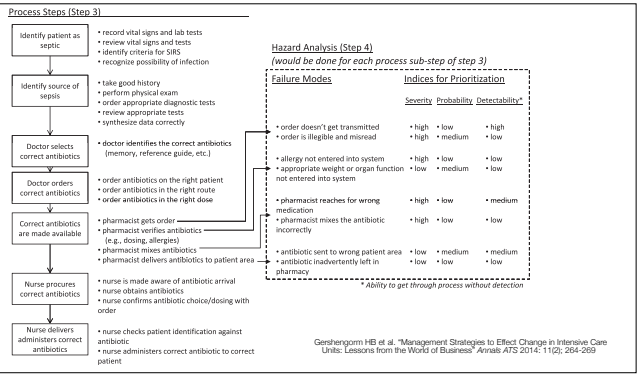
"What and Which and Who?": *failure and effects mode analysis*

- Failure Mode and Effects Analysis (FEMA): cont.
  - Step 4:
    - Hazard analysis is conducted
      - all mechanisms by which the process may go awry ("failure modes") are listed and graded
        - severity of impact
        - probability of occurrence
        - ability to go undetected
    - Step 5:
      - team decides which failure modes to focus upon to affect meaningful change

Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269



Gershengorm HB et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business" *Annals ATS* 2014: 11(2); 264-269

"OK….I have used data to choose where to improve…..how do I know what data to collect to measure my improvement?"

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Understanding: *Determining which data to collect*

- One of the most difficult challenges in measuring performance objectively is deciding what specific metrics to use:
  - Avedis Donabedian ("the father of quality assurance")
    - Choosing a concrete outcome is appealing
      - precise (i.e. mortality)
      - importance to patients, clinicians
      - sometimes problematic
        - does mortality matter in the anoxic brain injury patient?
    - Measuring process compliance and/or setting structure may sometimes be preferable
      - i.e. how many units of PRBCs are transfused to patients with a Hg > 7?

Understanding: *Determining which data to collect*

- Capturing the data:
  - Registries
    - Rely on
      - trained individuals to go through the medical record manually
      - pre-determined, defined data definitions
    - Examples: NSQIP, TQIP
    - Pros:
      - reliable, extensive, allows comparisons to national peers, allows for review of clinician thought processes
    - Cons:
      - expensive, labor-intensive, limited by work product of the individual

Understanding: *Determining which data to collect*

- Capturing the data:
  - Electronic Medical Records (EMR):
    - Essentially, each EMR is a giant spreadsheet
      - Pro:
        - every "defined" input is a data point (variable)
        - i.e. Blood Pressure, times, Yes/No checkboxes
      - Con:
        - cannot rapidly identify clinician thought process unless you read the chart (textual information)
        - usually requires analytics support to generate the data that you need (non-clinical)
        - risk provider burnout by including too many mandatory data entry points

Understanding: *Determining which data to collect*

- No single method for selecting and collecting performance data best serves all circumstances!
  - Birkmeyer:
    - paradigm for consideration of relevant metrics
      - based upon the degree of risk associated with the frequency of the process being studied
  - Define metrics in an iterative manner
    - start with outcome
    - progress to process and structure
    - work toward identification of a good starting metric

Birkmeyer et al. "Measuring the quality of surgical care: structure, process, or outcomes?" *JACS* 2004; 198:626-32

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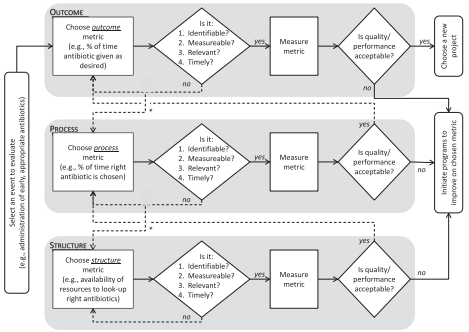
Understanding: *How best do you capture the data?*

Process Type	Evaluation Measure	Example
High-risk, High-Frequency Process?	Evaluate by Outcome	Geriatric Trauma Mortality
High-risk, Low-Frequency Process?	Structure-Based Evaluations	Emergency Tracheostomy
Low-risk, High-Frequency Process?	Evaluate with Process Measures	Alcohol Intervention

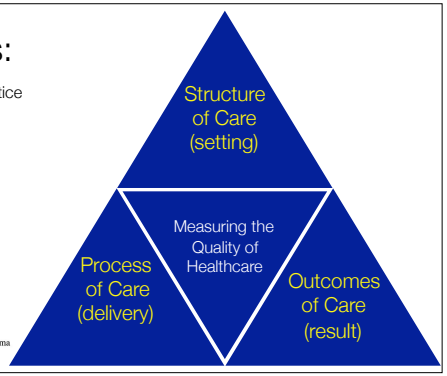
Birkmeyer et al. "Measuring the quality of surgical care: structure, process, or outcomes?" *JACS* 2004; 198:626-32



Gershengorn et al. "Management Strategies to Effect Change in Intensive Care Units: Lessons from the World of Business, Part II Quality Improvement Strategies" *Annals ATS* 2015; 11 (3): 444-453

Conclusions:

Using data to Change Practice



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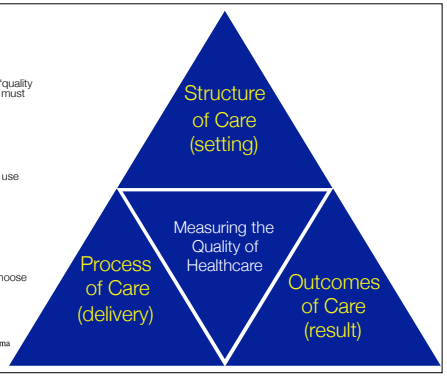
Conclusions

- To get a complete picture of the "quality of the Care" that you render, you must measure
  - Structure of Care
  - Process of Care
  - Outcomes of Care
- There are many different ways to use data to identify areas to improve
  - Pareto Principle
  - Benchmarking
  - FEMA
  - RCA
- Look at your "process type" to choose your evaluation measure



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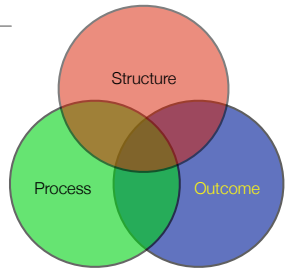
Avedis Donabedian

"Systems awareness and systems design are important for health professionals, but they are not enough. They are enabling mechanisms only. It is the ethical dimensions of individuals which are essential to a system's success. Ultimately, the secret of quality is love."



Multi-Disciplinary Peer Review: Structure and Process

Christopher J Dente MD FACS
Professor of Surgery, Emory University

EAST Annual Meeting, Short Course on Quality and Safety

1

Disclosure

I have no relevant disclosures

2

Goals

- Describe the requirements in the Orange Book for a Multidisciplinary Peer Review Committee
- Define the optimal structure of the MTPR committee
- Describe some common process issues and difficulties with peer review

3

Multidisciplinary Peer Review

4

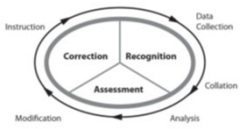
Multidisciplinary Peer Review

PIPS Program (Chapter 16, Orange Book, pg 116)

"the concept of monitoring, evaluating, and improving the performance of a trauma program. There is no precise prescription for trauma performance improvement and patient safety (PIPS). However, the American College of Surgeons Committee on Trauma (ACS-COT) calls for each trauma program to demonstrate a continuous process of monitoring, assessment, and management directed at improving care"

5

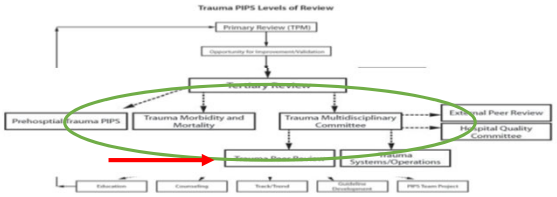
Multidisciplinary Peer Review



- Primary Review
- Secondary Review
- Tertiary Review
- Quaternary Review

6

Multidisciplinary Peer Review



7

Multidisciplinary Peer Review

Goals of Tertiary Review (Orange Book, pg 128)

1) review the efficacy, efficiency, and safety of the care provided by the trauma center;
(2) provide focused education; and
(3) provide peer review

8

Multidisciplinary Peer Review

General Requirements (pg 117)

- Regular intervals – "timely"
- Integrate with hospital quality program and local/regional quality system
- Externally validated in intervals
- Endorsed and empowered by hospital
- Led by TMD and multidisciplinary
- Providers must attend 50% of meetings

9

Multidisciplinary Peer Review

Structure/Personnel

- TMD (Chair)
- Trauma Panel Members/General Surgery
- Subspecialty Liaisons
  - Emergency Medicine
  - Orthopaedics
  - Critical Care
  - Anesthesia
  - Neurosurgery/Radiology (I, II)

10

Multidisciplinary Peer Review

Goals of Committee = Goals of Tertiary Review
(Orange Book, pg 128)

1) review the efficacy, efficiency, and safety of the care provided by the trauma center;
(2) provide focused education; and
(3) provide peer review

11

Multidisciplinary Peer Review

HOW DO YOU MAKE THIS WORTHWHILE?

Issues:

- Educational vs. Punitive
- Control of the care by the trauma program and providers rather than the hospital
- Optimal Patient Care

12

Multidisciplinary Peer Review

Issues to Consider

- How often do you meet? How long are meetings?
- How do cases get referred to Peer Review?
- What are expectations of the members of the committee in terms of pre-meeting preparation?
- How do cases get presented?
- How do cases get adjudicated?
- How does follow-up occur?

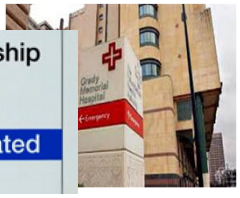
INDIVIDUALIZED

13

Multidisciplinary Peer Review

Grady Memorial Hospital

- Largest Trauma Center in SE
- 1 of 2 Level I
  - ~ 6 million
- ~3000 admis
- Recently ACS decades
- Two schools coverage to integrated service



14

Frequency and Length of Mtg

- Conference held at least monthly – "timely" (pg 130)
  - People forget the important details quickly
  - Wrangling subspecialists/involved providers to a meeting
- Keep meeting at 1 hour (1.5 hours at most)
  - 3-5 cases
  - Time to discuss active issues/loop closure ? Mortality overview
- Same time and day of week. Cancel rather than move

15

What Cases Get Referred

- Ultimately under the discretion of the TMD/TPM
- Mortalities:
  - "All trauma-related mortalities must be systematically reviewed and those mortalities with opportunities for improvement identified for peer review." (pg 119)
- Core Measures (pp. 119-126): Delay in care (panel members, subs), provider issues, multidisciplinary issues
- Involved providers should be present or made aware

16

What Cases Get Referred

- Do we need to review all mortalities in MTPR?

  "All trauma-related mortalities must be systematically reviewed and those mortalities with opportunities for improvement identified for peer review."

- Tends to bog down meeting – summary of DOA/no OFI identified at secondary review

17

Expectations for Prep?

- Do the providers need to review all cases beforehand?
  - They won't unless they are directed to do so (and they probably won't even if they are directed)
- Need to attend 50%
- Behavioral issues…difficult discussions to lead

18

How do cases get presented?

- Rotating list of presenters
  - Include subspecialists where appropriate
  - Pick people who aren't invested in the process often
  - Use senior personnel for cases that will be especially controversial or may lead to further review/discipline
- Make sure presenting providers are given ample time to review cases (2 days at a minimum)

19

How do cases get adjudicated?

Adjudication (Chapter 16, Orange Book, pg 131)

"…the committee should determine the definition and classification of these events in a manner consistent with the trauma center's institution-wide performance improvement program. Mutually agreed upon nomenclature to allow for integration with the institution-wide PIPS process should be used."

20

How do cases get adjudicated?

Nomenclature

"Not prescriptive unless they don't like it"

Provider/care:
- Acceptable
- Acceptable with reservation
- Unacceptable

Outcome:
- Anticipated
- Unanticipated
- With or without OFI

21

How do cases get adjudicated?

Who decides?

- Trauma Medical Director/Program Leadership
- Consensus/Majority of Group
- Voting (blind or open)

22

How do cases get adjudicated?

- Provider: Focus on appropriateness and timeliness of care
- Outcome: Identify and document OFIs
- Loop closure: What to do about "unacceptable" or "(Un)anticipated with OFI"

23

Loop closure beyond "trend"

- Provider Issues:
  - Education
  - Guideline Creation
  - Referral to Hospital Quality/Punitive Actions
- OFIs:
  - Education
  - Guideline Creation
  - Letters/Requests to Hospital for Resources

24

Loop closure beyond "trend"

- Most difficult part
- Leave time to discuss open items each meeting
- Set specific timelines…give everyone projects based on their interests (and educational needs!)

25

What do we do at Grady?

- Twice a month, Monday 3-4[30] pm
  - Mortality overview (10 min)
  - 3 cases (1 hour)
  - Loop closure discussion (20 min)
- TMD (Secondary review) on Thursday afternoon. Presenting providers notified on Thursday before COB

26

What do we do at Grady?

- Neutral site
- Circular table set-up
- EMR available
- Senior personnel don't run meeting but try to keep meetings moving

27

What do we do at Grady?

Nomenclature

- Provider: Acceptable, Acceptable with reservations, Unacceptable
- Outcome: Anticipated or unanticipated with or without OFI

Adjudication: TMD/Program Leadership but have tried multiple models

28

What do we do at Grady?

Loop Closure

- Tracking/Trending
- Provider or Panel Education
- Guideline creation
- Letters to Hospital
- Referral for external review (quaternary)
- (Removal of Panel Members)

29

Multidisciplinary Peer Review

30

Creating the PI Agenda

Sean M. Elwell, MSN, RN, NE-BC, TCRN, EMT

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1

Learning Objectives

- Review aspects of performance improvement processes.
- Discuss some of the possible ways to structure performance improvement meetings.

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2

Disclosure

- Presenter discloses no conflict of interest relative to this educational activity.

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3

Disclosure Statement

- Presenter is sharing information as researched and is not inclusive.
- Not all performance improvement processes are the same. You may have different needs.
- There are many best practices for performance improvement.

4

About Me

- Alfred I duPont Hospital for Children
  - Level 1 Pediatric Trauma Center
  - Level 1 Pediatric ED-EMSC Recognition Program
- Society of Trauma Nurses Board of Directors
  - Leadership Program
  - Allied Organizations (BCEN BOD)
  - President
- Elsinboro Fire Company
  - Firefighter/EMT/Rescue Diver
  - Past EMS/Rescue Captain, Deputy Chief
  - Chief

5

Nemours/AIDHC

Nemours
Children's Health System

6

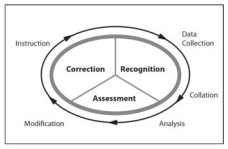
STN

- To promote optimal trauma nursing care to all people globally
- **Advocacy**—Promote excellence in trauma care through advocacy and public policy.
- **Knowledge-sharing**—Provide exceptional education and resources for trauma professionals.
- **Leadership**—Provide leadership opportunities and resources for STN and its members.
- **Quality**--Develop and execute initiatives that promote excellence and quality across the continuum of trauma care.
- **Alliance-building**—Develop and maintain coalitions to advance STN's strategic initiatives and create a culture of alliance building.

7

Why Performance Improvement?

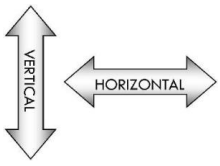
- Continuous process of monitoring, assessment, and management directed at improving care.
- Standardization
  - Allows us to tackle everyday problems
- Engaged in the work
  - PI is the everyday work
  - Integrated into workflows and processes



8

Horizontal and Vertical

- Vertical
  - From top to the frontline
  - From frontline to the top
- Horizontal
  - Across service lines



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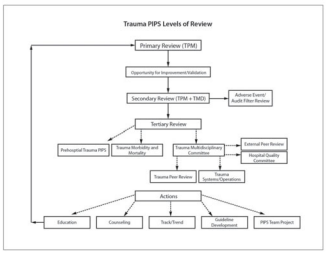
Levels of PI



PI Meetings

- Pre-Hospital PIPS Committee
  - Open dialogue between prehospital and hospital
  - Patient care
  - Handoff procedures
  - Communications
- Audience
  - Prehospital personnel
  - Trauma representation

PI Meetings

- Mortality and Morbidity Review
  - Specific indicators for review
  - Deaths
  - Unexpected outcomes
  - Feeds peer review committee
- Audience
  - Closed venue
  - Immediate peers

PI Meetings

- Multidisciplinary Trauma Systems/Operations Committee
  - Operational events
  - Hospital operations
  - All phases of care
- Audience
  - Physicians
  - Prehospital personnel
  - Nurses
  - Technicians
  - Administrators
  - Other ancillary personnel

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PI Meetings

- Multidisciplinary Trauma Peer Review
  - Mortality review and data
  - Adverse events
  - Problem trends
  - Selected cases involving multiple specialties
- Audience
  - Trauma Medical Director
  - General Surgeons
  - Liaisons from
    - Emergency Medicine
    - Orthopedics
    - Neurosurgery
    - Anesthesia
    - Critical Care
    - Radiology

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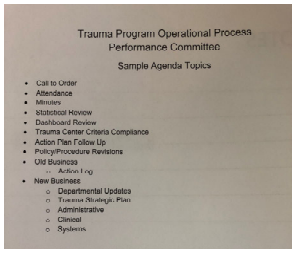
PI Agenda

- Systems
  - Admissions and volume
  - Transfers in and out
  - Events
  - Occurrences
  - Mortality
  - Outcomes: LOS, ICU, etc
  - Activations
- Peer Review
  - Physician's review
  - Diagnostic reports
  - Autopsy
  - Trended reports
  - Correspondence
  - Medical Record
    - Pre-hospital
    - Inpatient
    - Referral facility
    - Rehab

15

Sample Agenda



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Dashboard

Indicators	Acceptable Threshold	Goal	Target this Period Versus Previous Year	Trend	1Q18	2Q18	3Q18	4Q18	Year End Total/Average
Total Patients					146	168	177		
Pre-Hospital									
Pre-hospital EMS Activations: codes and alerts	Trend	Trend	Increase		23/32	16/24	31/39		
Activations: Called from home not entering									
Trauma Team Response									
Trauma attending arrival for Codes	≥ 80%	100%	≥CY		7/7	7/8	11/11		
< 15 minutes from patient arrival per flowsheet					100%	88%	100%		
Anesthesia provider arrival for Codes	≥ 80%	100%	≥CY		7/7	8/8	11/11		
< 15 minutes from patient arrival per flowsheet					100%	100%	100%		
History and Physical Completed	80%	90%	Increase		41/94	49/72	74/81		
Signed by noon following day of patient admission					44%	68%	91%		
Emergency Department									
Accuracy of Flowsheets (paper as of 4/1/2016)	≥ 70%	80%	Increase		28/32	20/24	33/39		
Time Called					88%	83%	85%		
Accuracy of Flowsheets (paper as of 4/1/2016)	≥ 70%	80%	Increase		26/32	20/24	28/39		
Arrival Time					81%	83%	72%		
Trauma team documented all Codes/Alerts	≥ 90%	100%	≥CY		29/32	19/24	31/39		
Within 10 minutes of patient arrival					91%	80%	79%		
Initiation of Trauma Order Set	≥ 70%	80%	Increase		30/32	20/20	24/29		
Within 5 minutes of patient registration					94%	83%	83%		
Documentation of Time Blood Arrived in ED for Codes	≥ 70%	80%	Increase		0/0	1/2	0/0		
Documentation completed/4 codes						100%	100%		
Documentation of Pain assessment and treatment	≥ 90%	100%	Increase		17/25	10/19	22/24		
Document pain score on arrival and time to 1st intervention (or NA)					68%	53%	92%		
Documentation of GCS for any Head Trauma and AMS	≥ 90%	100%	Increase		11/11	20/24	28/28		
Within 1 min of pt arrival and with each set of vital signs					85%	90%	100%		
PICU									
Unplanned Extubation Re-Intubation	10%	0%	≥CY		0/18	0/8	0/8		
#Unplanned Extubations					0%	0%	0%		
Ventilator Acquired Pneumonia (VAP)	10%	0%	TQIP		0/10	0/8	0/8		
#VAP/Trauma patients in PICU					0%	0%	0%		
Central Line Associated Blood Stream Infections (CLABSI)	10%	0%	TQIP		0/8	0/8	0/8		
#CLABSI/Trauma patients in PICU					0%	0%	0%		
Catheter Associated Urinary Tract Infections (CAUTI)	10%	0%	TQIP		0/8	0/8	0/8		

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Focus

Number of Goals (In addition to the whirlwind)	2-3	4-10	11-20
	↓	↓	↓
Goals Achieved With Excellence	2-3	1-2	0

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Home Plate

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- Which of the following would you not expect to discuss during a performance improvement committee meeting?
- A. Verification readiness
- B. Process-focused opportunities for improvement
- C. Program-related services
- D. Salary changes for TMD

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- D. Salary changes for TMD

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- The trauma program manager is creating the agenda for the trauma operations committee meeting. Which of the following is not an important component of the meeting agenda?
- A. Action plan of outstanding issues
- B. Trauma strategic plan update
- C. Review of trauma peer review cases
- D. Department trends/statistics

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- C. Review of trauma peer review cases

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Thank You

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Resources

- ACS-Resources for Optimal Care of the Injured Patient
- Trauma Outcomes and Performance Improvement Course-2017 Edition

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STN SOCIETY OF TRAUMA NURSES

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Peer Review: Institutional Integration & Risk Management

Jose J. Diaz, MD, CNS, FACS, FCCM
Vice Chair Quality and Safety, Department of Surgery
Professor and Chief Acute Care Surgery
Program Director Acute Care Surgery Fellowship
R Adams Cowley Shock Trauma
University of Maryland Medical Center

Quality/Safety for the 2019 EAST Meeting: Short Course

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Disclosure

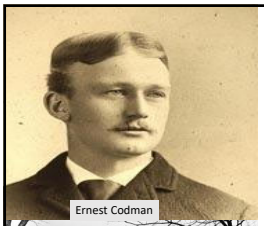
- Nothing to disclose

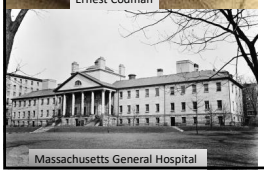
2

History of Peer Review

- 1st description of a medical peer review process is found in the "*Ethics of the Physician"* written by **Ishap bin Ali al-Rahawi** (854–931) of al-Raha, Syria.
- His work states that a visiting physician must always make duplicate notes of a patient's condition on every visit.
- When the patient was cured or had died, the notes of the physician were examined by a local medical council of other physicians, who would review the practising physician's notes to decide whether his or her performance met the required standards of medical care.
- If their reviews were negative, the practicing physician could face a lawsuit from a maltreated patient.

3


Ernest Codman


Massachusetts General Hospital

Surgery M&M Conference

- M&M conferences has been part of the practice of medicine, originated in the early 1900s with Ernest Codman at Massachusetts General Hospital in Boston
- 1st M&M conference established at Harvard and was a founder of the American College of Surgeons (1916) and the forerunner of the Joint Commission.
- Surgeon and hospital outcomes should be made public so that patients could make an informed choice
- 1983, ACGME began requiring accredited residency programs conduct a weekly review of all complications and deaths

4

The Joint Commission on Accreditation requires hospitals to conduct peer review to retain accreditation. (1952)

Despite the intended purpose of improving quality medical care, the peer review process has suffered several setbacks throughout its tenure.

AMA lobbied for confidentiality and legal immunity for healthcare peer review processes

Congress enacted the Health Care Quality Improvement Act (HCQIA) granting comprehensive legal immunity for peer reviewers to increase participation.

5

Cross Roads of Quality, Safety, & Risk

6

Code of Conduct Process – Medical Staff Services

- Purpose | Membership | Reporting | Screening Process | Committee Meeting | Sanctions | Written record | "Proxy" complaints | Acts of Retribution | Appeals | Feedback

7

What is peer review?

Peer review - the process where doctors evaluate the quality of their colleagues' work in order to ensure that standards of care are being met

Dating back to the early 20th century when the American College of Surgeons began using peer review as a means of defining minimum standard of care requirements for hospitals and their medical staff

The ultimate decision making authority often lies with the hospital board of directors, often followed by recommendations of the review committee

The process has continued to grow in the 20th century and is now required by the JCAHO for hospital accreditation

8

The Joint Commission High Reliability Healthcare

OPPE and FPPE: Tools to help make privileging decisions

Ongoing Professional Practice Evaluation (OPPE) – screening tool	Focused Professional Practice Evaluation (FPPE)
• Review of operative and other clinical procedure(s) performed and their outcomes • Pattern of blood and pharmaceutical usage • Requests for tests and procedures • Length of stay patterns • Morbidity and mortality data	• FPPE is the follow up process to determine the validity of any positives (whether true or false) found through OPPE. • This process is applied only to the small number of clinicians who were identified by OPPE.

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9

Three main reasons peer reviews are conducted throughout the United States

1st - maintain accreditation; hospitals are required to initiate peer reviews for all privileges requested for new physicians and any new requests by existing physicians for new privileges

2nd - initiation of peer reviews can often be triggered by substandard physician performance as required by JCAHO, physician colleague and hospital administrators can often request peer reviews of specific physicians that can be granted or denied by the hospital's peer review committee

3rd - hospitals have used peer review to improve quality by randomly selecting cases or designing schemes looking at poor outcome cases in order to determine root causes

10

The Health Care Quality Improvement Act of 1986, as amended
42 USC Sec. 11101 01/26/98

Congressional reasons for law enactment

(1) The increasing occurrence of medical malpractice and the need to improve the quality of medical care have become nationwide problems that warrant greater efforts than those that can be undertaken by any individual State.

(2) There is a national need to restrict the ability of incompetent physicians to move from State to State without disclosure or discovery of the physician's previous damaging or incompetent performance.

(3) This nationwide problem can be remedied through effective professional peer review.

(4) The threat of private money damage liability under Federal laws, including treble damage liability under Federal antitrust law, unreasonably discourages physicians from participating in effective professional peer review.

(5) There is an overriding national need to provide incentive and protection for physicians engaging in effective professional peer review.

11

National Practitioner Data Bank (NPDB) reporting

- A confidential information clearinghouse created by Congress to improve health care quality, protect the public, and reduce health care fraud and abuse in the U.S. Federal legislation and regulations are the foundation of the NPDB.
- Hospitals are mandated by law to query practitioner's request of clinical privileges, or admission to the medical staff and re-queries are required every 2 years for any clinician on staff

The Health Care Quality Improvement Act of 1986, as amended
42 USC Sec. 11101 01/26/98

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Causes of reports to the National Practitioner Data Bank (Satiani 2004)

- Adverse actions (17%)
- Peer review findings adversely affect the clinical privileges of physicians or dentist for more than 30 days
- Privileges are restricted or surrendered while under peer review investigation for possible incompetence or improper professional conduct
- Privileges are restricted or surrendered in exchanged for peer reviewers not conducting an investigation
- Physician's or Dentists' license are revoked, suspended, or surrendered
- Physicians or Dentists are censured, reprimanded, or put on probation
- Malpractice payments (82%)
- Insurers settling claims or judgments relating medical malpractice on behalf of physicians
- Medicare/medicaid exclusion reports (1%)

Percentage refers to proportion of reports attributable to 132896 physicians in the National Practitioner Data Bank in 2002.

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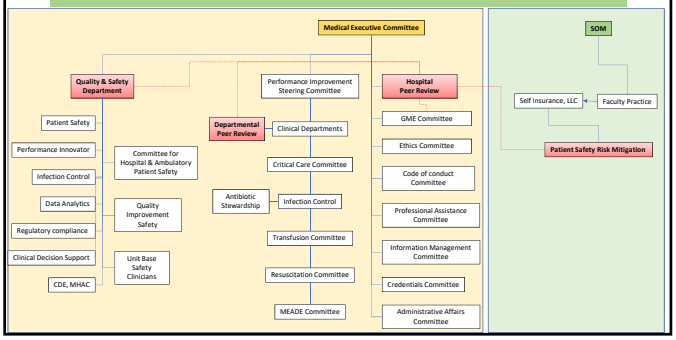
Hospital & SOM Leadership Diagram



14

Medical Executive Committee: *Authority*

- Ultimately responsible for the quality of health care provided
- MEC delegates the responsibility of ensuring a high level of quality of care to the CMO,
  - Peer Review Committee: review all quality concerns referred to it, provide educational feedback to the involved practitioners, to report findings to the CMO
  - Make recommendations to the CMO for credentialing, re-credentialing, and reduction, suspension or termination of individual practitioner privileges
- CMO acts in a manner providing for maximum protection for documentation from legal discovery and protection of the identity of individual practitioners.

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Medical Executive Committee: *Recommendations* may take the following form

1. No finding of deviation from accepted standards of care and no recommendation to the practitioner is made.
   a) The practitioner is informed in a letter of the negative finding the committee.
2. No finding of a deviation from the accepted care.
   b) However, the committee may make recommendations for improvement in care delivery that does not require any response from the practitioner.
   c) Communicated in a letter to the practitioner.
3. Finding of a deviation from the standard of care and the committee will request in a letter a plan of correction by the practitioner.
   c) The committee will evaluate the plan of correction and provide interval (generally 3-6 months) review of the practitioner.
   d) The matter will not be referred to the MEC unless the situation cannot be corrected at the UMMC Peer Review level.
4. Committee finding of a deviation from the standard of care is so serious as to merit the possible action affecting Medical Staff privileges by the MEC.
   4. This may be because the original corrective plan has not resulted in improvement or the matter is of sufficient seriousness to represent a major risk to patient safety or may require actions affecting medical staff privileges.

16

Culture of Safety

Varies widely, evolves, is measurable and can be improved

- Culture
- Process
- Technology

Increasing Awareness & Trust

VERY HIGH
Patient Safety is Job #1 - we live and breath it, and Culture, Processes, and Technology are aligned to support it.

HIGH
Offense - Actively anticipate and mitigate most safety concerns.

MODERATE
Actively evaluating and implementing systems to address some safety concerns.

LOW
Defense - Safety is important. We do a lot every time we have an accident.

VERY LOW
Pervasive patient safety threats.

Where is Yours?

Modified from Prof. Patrick Hudson, Univ. Leiden

17

Just Culture Algorithm

This algorithm is a guide and should be used after performing an objective assessment of the event. It helps to differentiate between individual and organizational accountability. If you cannot answer a question, it is recommended to pause and try to establish facts through the individual involved or individuals present for the event. If you end at a colored box, flip to the other side for guidance on next steps. Offer support to team member(s) involved; team member may be encouraged to seek support through programs such as RISE or EAP.

START HERE

Was the action deliberate? — NO → Does there appear to be evidence of ill health, substance use, or other impairment? — NO → Did the employee depart from applicable and current standards of care, current policies, protocols, or procedures? — NO → Would another individual from the same profession, with comparable qualifications and experience behave the same way in same circumstances? — YES → **Consider**
- System Failure
- Cultural Drift
- Known Complication

YES ↓

Was the action intended to cause harm? — YES → **Deliberate Harm** Involve HR immediately

NO ↓

Is there a known/disclosed physical or mental medical condition? — YES → Refer team member to Employee Health and/or initiate next steps according to HR policy

NO ↓

Was the standard of care, policy, procedure, or protocol available, workable, intelligible, and routinely used? — YES → Did the employee consciously disregard a risk they understood to be substantial and unjustifiable? — YES → **Reckless Behavior** Consider remedial or corrective action — Also assess for System Failure

NO ↓

Were there deficiencies in training, experience, or supervision? — NO → Did employee choose the behavior? — NO → **Human Error** Perform Human Error Assessment & console employee — Also assess for System Failure

YES → **At-Risk Behavior** Perform At-Risk Behavior Assessment & coach employee — Also assess for System Failure

For *repetitive* errors

Are the individual's behavioral choices making errors more likely? — *Also assess for system factors — YES* → Develop individual performance improvement plan

NO → Involve HR to help determine any individual/performance shaping factors at play

For *repetitive* At-Risk Behaviors

Are there *system* performance shaping factors at play? — NO → Involve HR to help determine any individual/performance shaping factors at play

YES → **System Failure**

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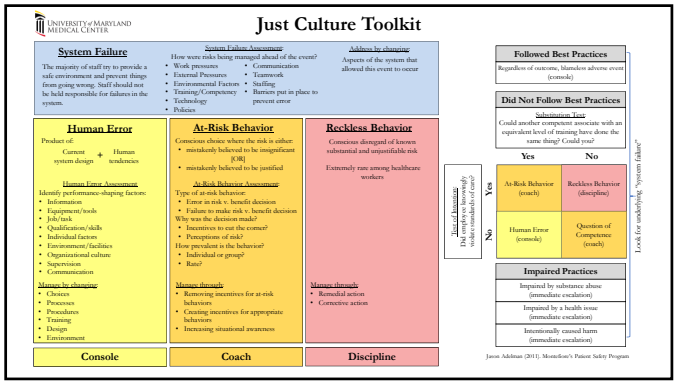
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Just Culture Toolkit
System Failure
The majority of staff try to provide a safe environment and prevent things from going wrong. Staff should not be held responsible for failures in the system.
System Failure Assessment
How were risks being managed ahead of the event?
• Work pressures
• External Pressures
• Environmental Factors
• Training/Competency
• Technology
• Policies
• Communication
• Teamwork
• Staffing
• Barriers put in place to prevent error
Address by changing:
Aspects of the system that allowed this event to occur
Human Error
Product of:
Current system design + Human tendencies
Human Error Assessment
Identify performance-shaping factors:
• Information
• Equipment/tools
• Job/task
• Qualification/skills
• Individual factors
• Environment/facilities
• Organizational culture
• Supervision
• Communication
Manage by changing:
• Choices
• Processes
• Procedures
• Training
• Design
• Environment
At-Risk Behavior
Conscious choice where the risk is either:
• mistakenly believed to be insignificant
[OR]
• mistakenly believed to be justified
At-Risk Behavior Assessment
Type of at-risk behavior:
• Error in risk v. benefit decision
• Failure to make risk v. benefit decision
Why was the decision made?
• Incentives to cut the corner?
• Perceptions of risk?
How prevalent is the behavior?
• Individual or group?
• Rate?
Manage through:
• Removing incentives for at-risk behaviors
• Creating incentives for appropriate behaviors
• Increasing situational awareness
Reckless Behavior
Conscious disregard of known substantial and unjustifiable risk
Extremely rare among healthcare workers
Manage through:
• Remedial action
• Corrective action
Console
Coach
Discipline
Did Error Originate Deviation from Locally-wide standards of Care?
Followed Best Practices
Regardless of outcome, blameless adverse event (console)
Did Not Follow Best Practices
Substitution Test
Could another competent associate with an equivalent level of training have done the same thing? Could you?
Yes
No
Yes
No
At-Risk Behavior (coach)
Reckless Behavior (discipline)
Human Error (console)
Question of Competence (coach)
Look for underlying "system failure"
Impaired Practices
Impaired by substance abuse (immediate escalation)
Impaired by a health issue (immediate escalation)
Intentionally caused harm (immediate escalation)
Jason Adelman (2011). Montefiore's Patient Safety Program

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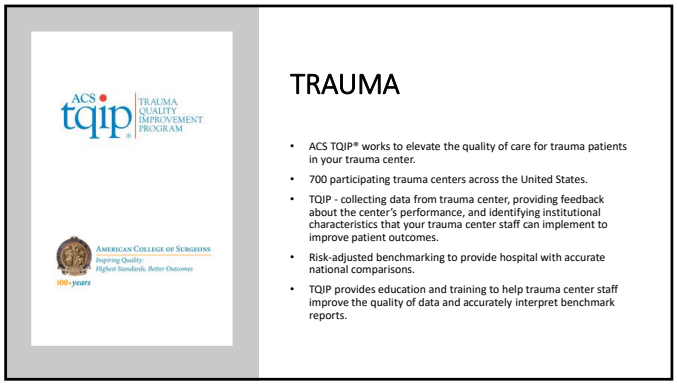
ACS tqip TRAUMA QUALITY IMPROVEMENT PROGRAM
AMERICAN COLLEGE OF SURGEONS
Inspiring Quality: Highest Standards, Better Outcomes
100-years
TRAUMA
• ACS TQIP® works to elevate the quality of care for trauma patients in your trauma center.
• 700 participating trauma centers across the United States.
• TQIP - collecting data from trauma center, providing feedback about the center's performance, and identifying institutional characteristics that your trauma center staff can implement to improve patient outcomes.
• Risk-adjusted benchmarking to provide hospital with accurate national comparisons.
• TQIP provides education and training to help trauma center staff improve the quality of data and accurately interpret benchmark reports.

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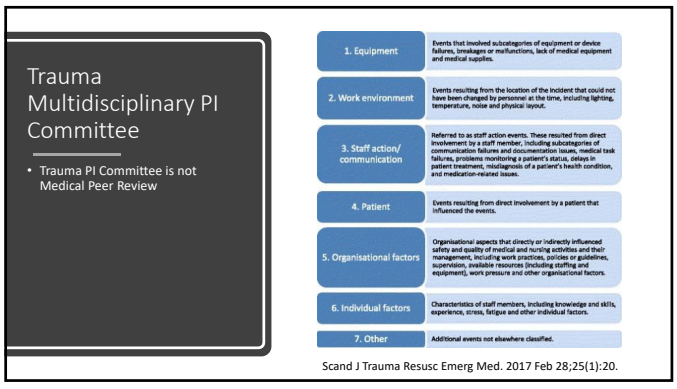
Trauma Multidisciplinary PI Committee
• Trauma PI Committee is not Medical Peer Review
1. Equipment
Events that involved subcategories of equipment or device failures, breakages or malfunctions, lack of medical equipment and medical supplies.
2. Work environment
Events resulting from the location of the incident that could not have been changed by personnel at the time, including lighting, temperature, noise and physical layout.
3. Staff action/ communication
Referred to as staff action events. These resulted from direct involvement by a staff member, including subcategories of communication failures and documentation issues, medical task failures, problems monitoring a patient's status, delays in patient treatment, misdiagnosis of a patient's health condition, and medication-related issues.
4. Patient
Events resulting from direct involvement by a patient that influenced the events.
5. Organisational factors
Organisational aspects that directly or indirectly influenced safety and quality of medical and nursing activities and their management, including work practices, policies or guidelines, supervision, available resources (including staffing and equipment), work pressure and other organisational factors.
6. Individual factors
Characteristics of staff members, including knowledge and skills, experience, stress, fatigue and other individual factors.
7. Other
Additional events not elsewhere classified.
Scand J Trauma Resusc Emerg Med. 2017 Feb 28;25(1):20.

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Overview of the ACS COT Trauma Quality Programs

Quality programs from the ACS COT aim to improve care for the injured patient by:

- Setting standards that define the structures and processes of care
- Measuring patient outcomes through risk-adjusted benchmarking
- Promoting best practices
- Adhering to performance improvement principles

The Trauma Quality Programs include the Verification, Review, and Consultation (VRC) Program; Trauma Quality Improvement Program, National Trauma Data Bank®, Trauma Systems Consultation Program, and Performance Improvement and Patient Safety.

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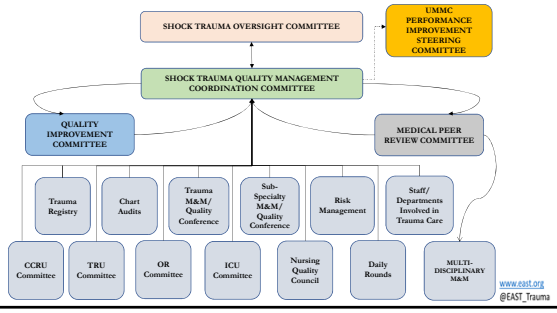
R Adams Cowley Shock Trauma Center
University of Maryland

QUALITY MANAGEMENT PROGRAM



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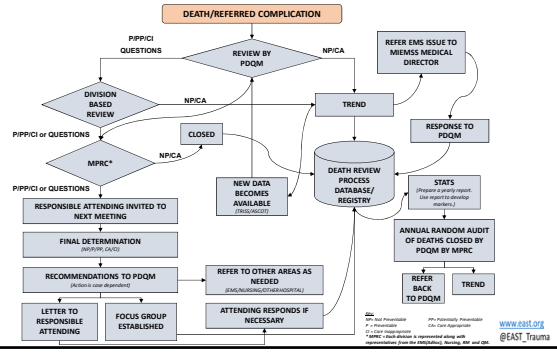
MORTALITY/MORBIDITY REVIEW PROCESS



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COMPREHENSIVE INSURANCE PROGRAM

FPI
PATIENT SAFETY RISK MITIGATION PROGRAM

UMMC Surgical Quality Safety Council

A JOINT VENTURE BETWEEN UNIVERSITY OF MARYLAND MEDICAL SYSTEM AND UNIVERSITY OF MARYLAND FACULTY PHYSICIANS INC.

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COMPREHENSIVE INSURANCE PROGRAM

FPI
PATIENT SAFETY RISK MITIGATION PROGRAM

- **Purpose**
  - Program initiated with approval of MMCIP Board in response to increased losses FY11-13
  - Intent of holding departments more accountable for frequency of preventable adverse events and defensibility of medical malpractice suits.
- **Structure and Process**
  - All clinical departments establish patient safety and risk mitigation as the highest priority.
  - Strengthen and standardize department quality, risk management, patient safety, & peer review process.
  - Submit PSRM plan, appoint Patient Safety Leader, & implement PSRM process.
  - Develop PSRM Patient Safety and Risk Issues Inventory and Action Plans.
- **Objective**
  - Reduce the frequency of high severity adverse events and claims.
  - Improve the ability to defend defensible medical malpractice suits.

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Formal PSRM Plan Components

- Patient safety, quality, and risk mitigation process– stand alone or embedded in existing quality plan
- Ongoing risk issues included in process with action plans to mitigate and prevent
- Patient safety champion/officer
- Peer Review
- Risk Manager engaged in process

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FPI
PATIENT SAFETY RISK MITIGATION PROGRAM

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COMPREHENSIVE INSURANCE PROGRAM

PSRM Program Implementation Phases

Phase I: PSRM Structure Review: Complete

Phase II: PSRM Process: Complete

- Perform operational gap analysis and gap closure
- Monitor departments for operational effectiveness
- Establish operational effectiveness inventory of departmental, MMCIP risk issues, and profiles
- Pursue timeline for disbursement of incentives based on completion of goals

Phase III: PSRM Outcomes: Begun

- Measure impact on high severity events
- Measure impact on improving case defense
- Institute Rewards and Penalties for Effective PSRM programs

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COMPREHENSIVE INSURANCE PROGRAM

Surgery PSRM Plan Analysis

Strengths	Opportunities
• UMMS safety/quality metrics	• Continuity of care in Transplant
• Department Quality Physician	• Adequate documentation of attending involvement in post op care
• Partnership with Office of Risk Mgmt. ✓ Chair meets with RM ✓ RM member of Peer Review Committee	• Accountability for care of PACU patients
• Functional, robust Peer Review ✓ Triggers ✓ Corrective action plans	• Teamwork and communication in Cardiac Surgery ICU
• Protocol driven care	• Universal protocol compliance
• Resident involvement	• Informed consent compliance
• Physician conduct policy	

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Conclusion

Hospital MEC – Peer Review

SOM / Faculty Practice Plan

Insurance / Risk Mitigation

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Just Culture, Peer Review Privilege & Confidentiality

Glen Tinkoff MD, FACS, FCCM
System Chief, Trauma and Acute Care Surgery
University Hospitals
Professor of Surgery
Case Western Reserve University
1/16/2019

1

Disclosure

- None
- No legal background
- Former TMD
- Former COT PIPS committee chair
- Verification and Consultation Program site reviewer

2

Objectives

- Introduce the concepts of ***"Just" Culture***
- Describe how to incorporate these concepts within a trauma PIPS program
- Discuss key concepts and principles related to ***confidentiality and peer protection*** associated with trauma-related multidisciplinary peer review

3

"There are activities in which the degree of professional skill which must be required is so high, and the potential consequences of the smallest departure from that high standard are so serious, that one failure to perform in accordance with those standards is enough to justify dismissal."

Lord Denning
English Judge

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The single greatest impediment to error prevention in the medical industry is "that we punish people for making mistakes."

Dr. Lucian Leape
Professor, Harvard School of Public Health
Testimony before Congress on
Health Care Quality Improvement

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"People make errors, which lead to accidents. Accidents lead to deaths. The standard solution is to blame the people involved. If we find out who made the errors and punish them, we solve the problem, right? Wrong. The problem is seldom the fault of an individual; it is the fault of the system. Change the people without changing the system and the problems will continue."

Don Norman
Author, the Design of Everyday Things

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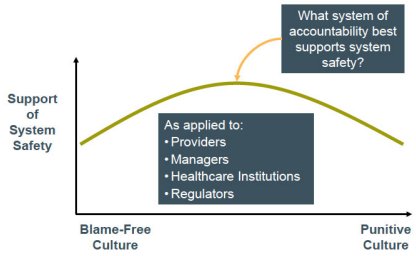
The Problem Statement



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What do we mean by "Just Culture"?

- Traditionally, health care's culture has held individuals accountable for all errors or mishaps that befall patients under their care
- A just culture recognizes that individual practitioners should not be held accountable for system failings over which they have no control.
- A just culture also recognizes many errors represent predictable interactions between human operators and the systems in which they work. Recognizes that competent professionals make mistakes.
- Acknowledges that even competent professionals will develop unhealthy norms (shortcuts, "routine rule violations").
- A just culture has zero tolerance for *reckless* behavior.

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It's About a Proactive Learning Culture

- Often, Events are Seen as Things to be Fixed

- Events Should Be Seen as Opportunities to Inform Our Risk Model
  - –System risk
  - –Behavioral risk

Where management decisions are based upon where our limited resources can be applied to minimize the risk of harm, knowing our system is comprised of sometimes faulty equipment, imperfect processes, and fallible human beings

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The Behaviors We Can Expect

- Human error - inadvertent action; inadvertently doing other that what should have been done; slip, lapse, mistake.
- At-risk behavior – behavioral choice that increases risk where risk is not recognized or is mistakenly believed to be justified.
- Reckless behavior - behavioral choice to consciously disregard a substantial and unjustifiable risk.

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JUST Culture

Human Error	At-Risk Behavior	Reckless Behavior
Inadvertent action: slip, lapse, mistake	*A choice: risk not recognized or believed justified*	*Conscious disregard of unreasonable risk*
Manage through changes in:	Manage through:	Manage through:
Processes	emoving incentives for At-Risk Behaviors	Remedial action
Procedures	reating incentives for healthy behaviors	Punitive action
Training		

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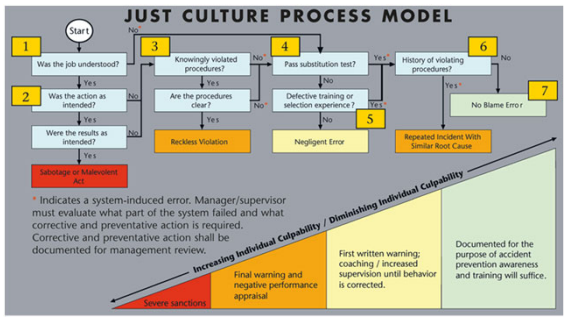

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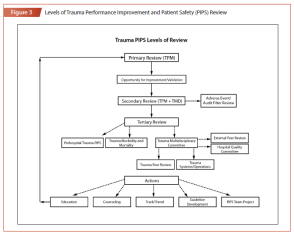
"TRAUMAFICATION" OF JUST CULTURE PROCESS MODEL

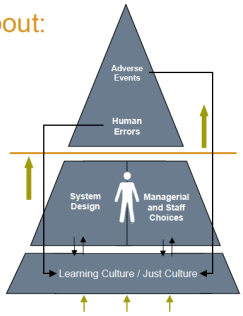
Provider-related issues
- Education & mentoring
- Counseling
- Change in privileges

System-related issues
- Guidelines & protocols
- Education
- Enhanced resources



Just Culture is about:

- Creating an open, fair, and just culture
- Creating a learning culture
- Designing safe systems
- Managing behavioral choices



Peer Review Privilege & Confidentiality

ABMS

Professionalism - a belief system in which group members ("professionals") declare ("profess") to each other and the public the shared competency standards and ethical values they promise to uphold in their work and what the public and individual patients can and should expect from medical professionals

Medical Professionalism

- Requisite knowledge and technical skills
- Ethical value system grounded in service
- Self-regulatory

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Peer Review

- Essential to self-regulation and quality assurance
- Process by which "peers" evaluate the professional competence and conduct of other "peers"
- Promoted and promulgated by E.A. Codman MD
- Regulatory requirement of the Joint Commission and Medicare

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Peer Review

Three assumptions:

- Only "peers" can properly evaluate other "peers"
- Commitment to maintain high standards and act in good faith
- An environment supportive of candid communication

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Health Care Quality Improvement Act - 1986

- Response to:
  - Increasing occurrence of medical malpractice
  - Ability of incompetent physicians to move from State to State
  - Threat of private damage liability under federal statute
- Provided incentives and protection to physicians engaging in professional peer review

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Health Care Quality Improvement Act (HCQIA)

Two sections:

- Granted hospitals and reviewers immunity from litigation
- Established the National Practitioner Data Bank (NPDB).
  - Adverse actions
  - Malpractice payments
  - Medicare/Medicaid exclusion reports

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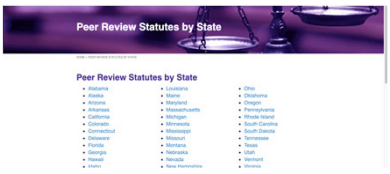
State Peer Review Statutes

- Immunity
- Evidentiary privilege
- Confidentiality



www.hortyspringer.com/peer-review-statutes-by-state

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State Peer Review Statutes

- Evidentiary "peer review" privilege
  - Privilege addresses a person's right not to have another testify as to certain matters as part of a judicial process
  - Evidence concerning peer review proceedings is inadmissible in court and not subject to discovery
  - No analogous federal statutory privilege

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State Peer Review Statutes

- Evidentiary "peer review" privilege
  - Prevents medical malpractice plaintiffs from using evidence generated by the peer review process
  - Scope varies as to meeting type, health facility or organization, information and legal granted privilege
  - Scope varies as to the type of actions to which privilege is extended

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Confidentiality

- Addresses the obligation to refrain from disclosing information to third parties other than as part of legal process
- May be imposed by law or by agreement
- If there is a privilege against testifying, there is also a requirement to keep information confidential (i.e. physician-patient privilege)
- Scope varies

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Peer Review Privilege & Confidentiality

- Hallway discussions or informal consultations may be completely discoverable in litigation
- All communication for peer review should be done with the expectation of privacy and confidentiality
- No casual conversations with respect to matters being peer reviewed

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Peer Review Privilege & Confidentiality

- Documents and records should be secured in confidential files and clearly marked
- Refrain from making any written documentation or comments regarding the quality of health care, other than formal submissions to a peer review committee.
- No email commentary regarding the quality of care

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Peer Review Privilege & Confidentiality

CONFIDENTIALITY AND NONDISCLOSURE AGREEMENT
This Confidentiality and Non-Disclosure Agreement (this "Agreement") is made as of **[DATE]**, 20__ by and between **[UH ENTITY]** ("UH"), and **[OTHER PARTY]** ("Contracting Party").

RECITALS
UH and Contracting Party (each a "party", and collectively, "parties") are contemplating a transaction whereby **[INSERT BRIEF DESCRIPTION OF POTENTIAL ARRANGEMENT OR CONTRACT, E.G., "CONTRACTING PARTY WOULD PROVIDE CONSULTING SERVICES TO UH"]** (the "Transaction");

Confidential Quality Assurance Peer Review Report Privileged Pursuant to O.R.C. Sections 2305.24, 2305.25, 2305.251 and 2305.252

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Summary

- Just Culture
  - Balance between *Punitive* and *Blameless* Cultures
  - Establishes a framework for managing **Provider-Related issues**
    - ***Human Error***
    - ***At-risk Behavior***
    - ***Reckless Behavior***
  - Encourages the development of a *Learning Culture*
  - Adaptable to the trauma PIPS process

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Summary

- Peer review is foundational to medical professionalism
- Assumptions related to peer review:
  - "*Peers*" evaluate "*Peers*"
  - Commitment to high standards and act in **good faith**
  - Environment **supportive** of **candid communication**
- Immunity, Privilege, Confidentiality

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