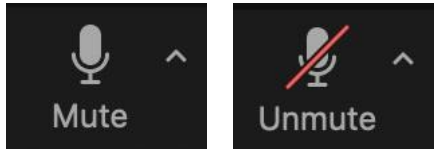
Abstractor Education Event

Virtual
December 8, 2023

Disclosures

Salary support for MTQIP from BCBSM/BCN and the MDHHS



Meeting Logistics

- Join via computer
- Please use your full name
- Mute all microphones
- Feedback opportunities at the section ends
- Unmute your own microphone

Slides

SLIDES

MEETING SLIDES

2023 |	Feb	May	June	Oct

Available 7 Business Days

Event Agenda

- Announcements
- Practical Applications of Technology for Data Abstractors
- Data Validation & Lessons Learned
- Break
- Challenging/Frequently Asked/Validation Questions 2023
- Meeting Evaluation

Announcements

- Upcoming events
- Updates video
- Data validation
- Performance index

Data Submission

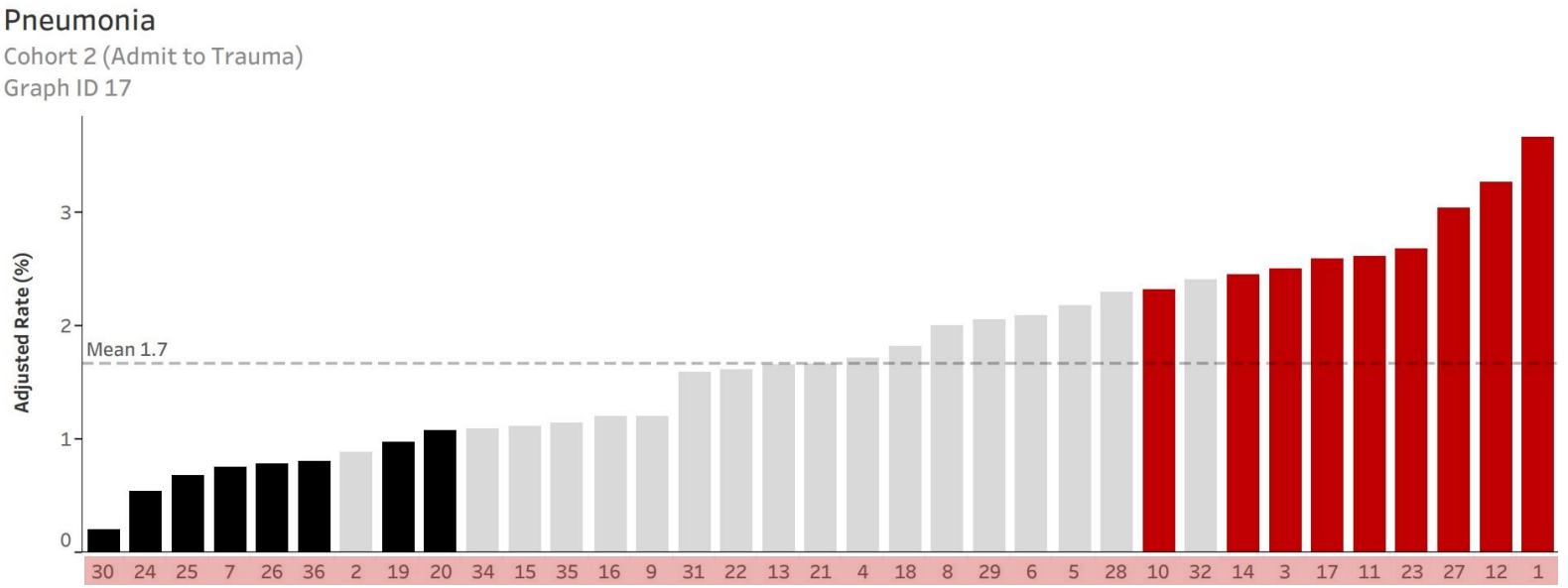
- **Due: 2/2/24**
- **Minimum interval: 7/1/22 – 10/31/23**
- **First submission: 1/1/16**

Abstractor Meeting

- **Date: 6/4/24**
- **Time: 10:00 AM – 1:00 PM**
- **Location: Ann Arbor Marriot Ypsilanti**
- **Website: mtqip.org > calendar**

Level 3 De-identified IDs Created

- **In-person meeting identified (XX)**
- **Online slides de-identified (00)**
- **Questions to Sara Samborn**



AIS 2015 Transition

Announce

ACS TQIP April email. MTQIP May and June meetings.

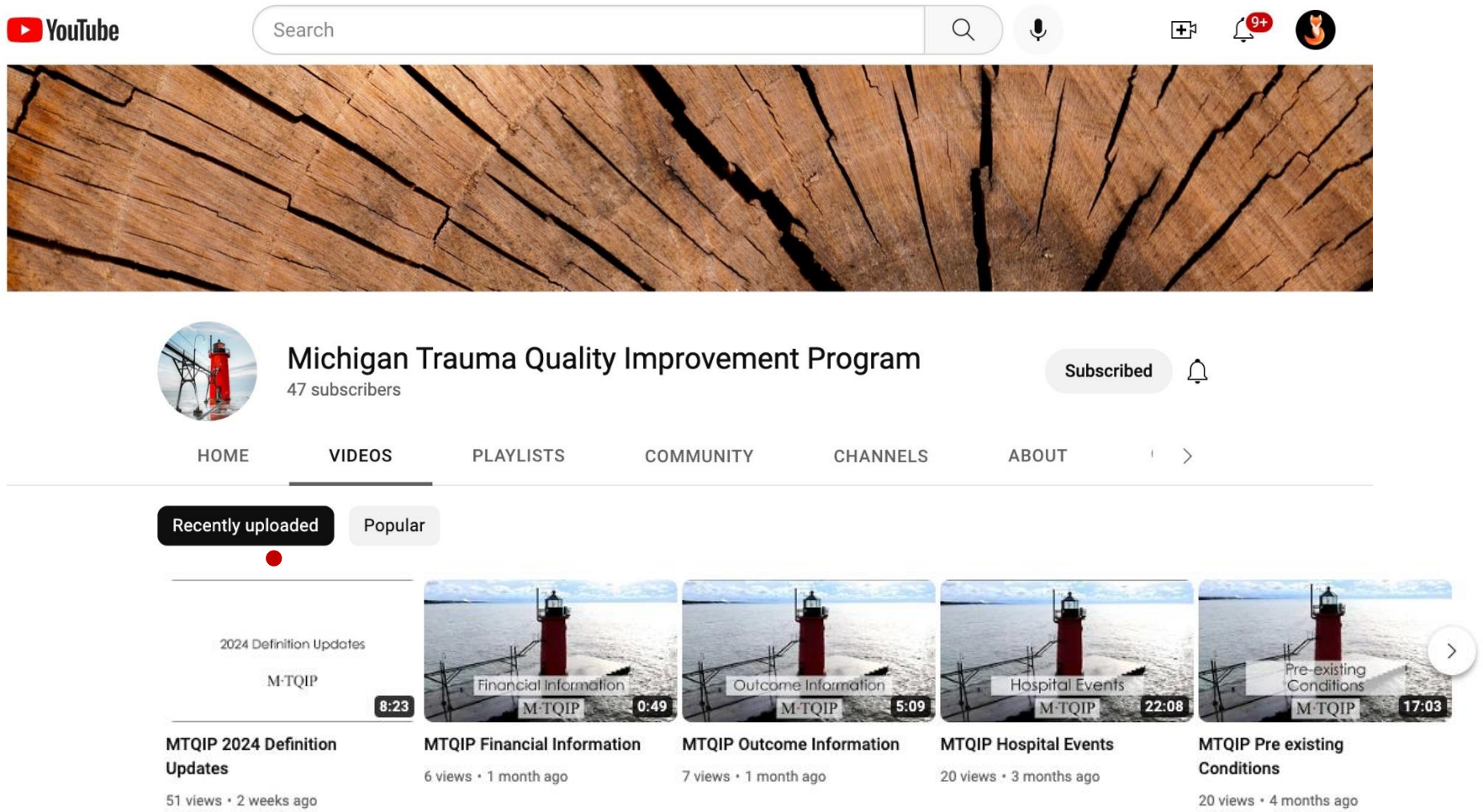
Implement

Work with your registry vendor. Staff training. Code/model updates.

Go Live

All MTQIP centers transition to AIS 2015 together with Jan 1, 2025 admissions.

Updates Video



Available Now

2024 Validation Centers Selected

- Ascension Borgess Hospital
- Ascension Genesys Hospital
- Ascension Providence Hospital - Novi
- Ascension Providence Hospital - Southfield
- Bronson Methodist Hospital
- Corewell Health Beaumont Troy Hospital
- Corewell Health Butterworth Hospital
- Corewell Health Dearborn Hospital
- Corewell Health Farmington Hills Hospital
- Corewell Health Trenton Hospital
- Detroit Receiving Hospital
- Henry Ford Allegiance
- Henry Ford Hospital
- Hurley Medical Center
- McLaren Lapeer Regional Medical Center
- McLaren Macomb
- McLaren Northern Michigan Hospital
- McLaren Oakland
- Michigan Medicine
- Munson Medical Center
- MyMichigan Medical Center Midland
- Sinai-Grace Hospital
- Trinity Health Saint Mary's - Grand Rapids
- University of Michigan Health - West
- UP Health System Marquette

2024 Validation Centers Deferred

- **Ascension St. John Hospital**
- **Ascension St. Mary's Hospital**
- **Corewell Health William Beaumont University Hospital**
- **Covenant HealthCare**
- **Henry Ford Macomb Hospital**
- **Sparrow Hospital**
- **Trinity Health Ann Arbor Hospital**
- **Trinity Health Livonia Hospital**
- **Trinity Health Muskegon Hospital**
- **Trinity Health Oakland Hospital**

2024 Data Validation

- **None**

Form Changes

Updated Validation Process Successful

- **4 hour visit → 1 hour visit**
- **EMR tutorial streamlined**
- **EMR Source Hierarchy online**

mtqip.org/node/32/#education

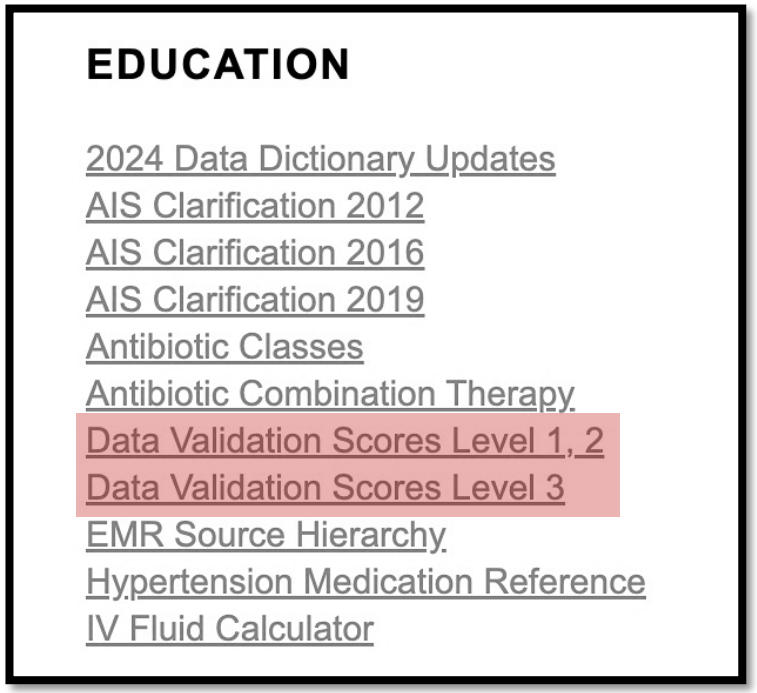
EMR Source Hierarchy

emr	epic emr job	access pathway	ed trauma response	trauma surgeon	trauma surgeon arrival date time	initial vital signs - full or partial	initial vital signs - consult
allscripts sunrise		sr: top left corner my applications > acute care / find pt > id > mrn > choose admit date mrv > triagle ! = to change patient	lev 1 and 2: mrv > trauma flowsheet consults: sr > docs > consults, orders, ed, h&p	mrv > tfs	mrv > tfs	mrv > tfs pg 2	sr > flowsheets > vs measurement (date range = start of chart / *retain selections for next pt)
cerner		powerchart > pt > search > fin > choose dates	notes > Misc pt care > Misc assess (Scanned Trauma Flow Sheet)	notes > Misc pt care > Misc assess (Scanned Trauma Flow Sheet)	notes > Misc pt care > Misc assess (Scanned Trauma Flow Sheet)	1) notes >Emergency Department > ED triage, part 1 2) notes > Misc pt care > Misc assess (Scanned Trauma Flow Sheet)	1) notes >Emergency Department > ED triage, part 1
cerner		powerchart > pt > search > fin > choose dates	notes > ed notes > scanned trauma flowsheet, Trauma H&P	notes > ed notes > scanned trauma flowsheet, Trauma H&P	notes > ed notes > scanned trauma flowsheet, Trauma H&P	2) notes > triage 1) notes > ed notes > scanned trauma flowsheet	1) notes > triage 2) interactive view > vital signs > change date
cerner		pre-populated patient list	1) cn > ed > trauma > tfs 1) cn > h&p(top)	cn > ed > trauma > tfs > page 1	cn > ed > trauma > tfs > page 1	1) cn > ed > trauma > tfs > page 4 (grid)	1) cn > ed > triage 2) cn > ed > ed provider
cerner		1) full /partial: clin docs > acute care > emerg dept note / data (2) clin docs > acute care > H&P or emergency treatment note	1) full /partial: clin docs > acute care > emerg dept note / data (2) clin docs > acute care > H&P or emergency treatment note	1) full /partial: clin docs > acute care > emerg dept note / data (2) clin docs > acute care > H&P	1) full /partial: clin docs > acute care > emerg dept note / data (2) results review > vital signs	1) Forms > ED triage note 2) results review > vs	1) full /partial: clin docs > acute care > emerg dept note / data (2) results review > documentation > gcs
epic		pt station > mrn > choose correct admission date > open chart	chart review (cr) > ed pt care timeline / h&p	1. cr > ed pt care timeline > staff arrived 2. cr > h&p	1. cr > ed pt care timeline > staff arrived 2. cr > h&p	cr > ed pt care timeline / vs flowsheet	cr > ed pt care timeline / vs flowsheet

mtqip.org/node/32/#education

Data Validation Scores

- **Updated online Level 1-3**



mtqip.org/node/32/#education

Performance Index Updates

Michigan Trauma Quality Improvement Program (MTQIP)
2023 Performance Index
January 1 to December 31, 2023

Measure	Weight	Measure Description	Points	
#5	10	**Timely LMWH VTE Prophylaxis in Trauma Admits** (18 mo: 1/1/22-6/30/23)		PERFORMANCE (70%)
		≥ 52.5 % of patients (≤ 48 hr)	10	
		≥ 50.0 % of patients (≤ 48 hr)	8	
		≥ 45.0 % of patients (≤ 48 hr)	5	
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#6	10	**Timely Surgical Repair in Geriatric (Age ≥ 65) Isolated Hip Fxs** (12 mo: 7/1/22-6/30/23)		
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#8	10	**Serious Complication Z-Score Trend in Trauma Admits** (3 yr: 7/1/20-6/30/23)		
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#5B	2	**Weight Based LMWH Protocol in Use** (12mo: 7/1/23-6/30/24)		
		Yes	2	
		No	0	
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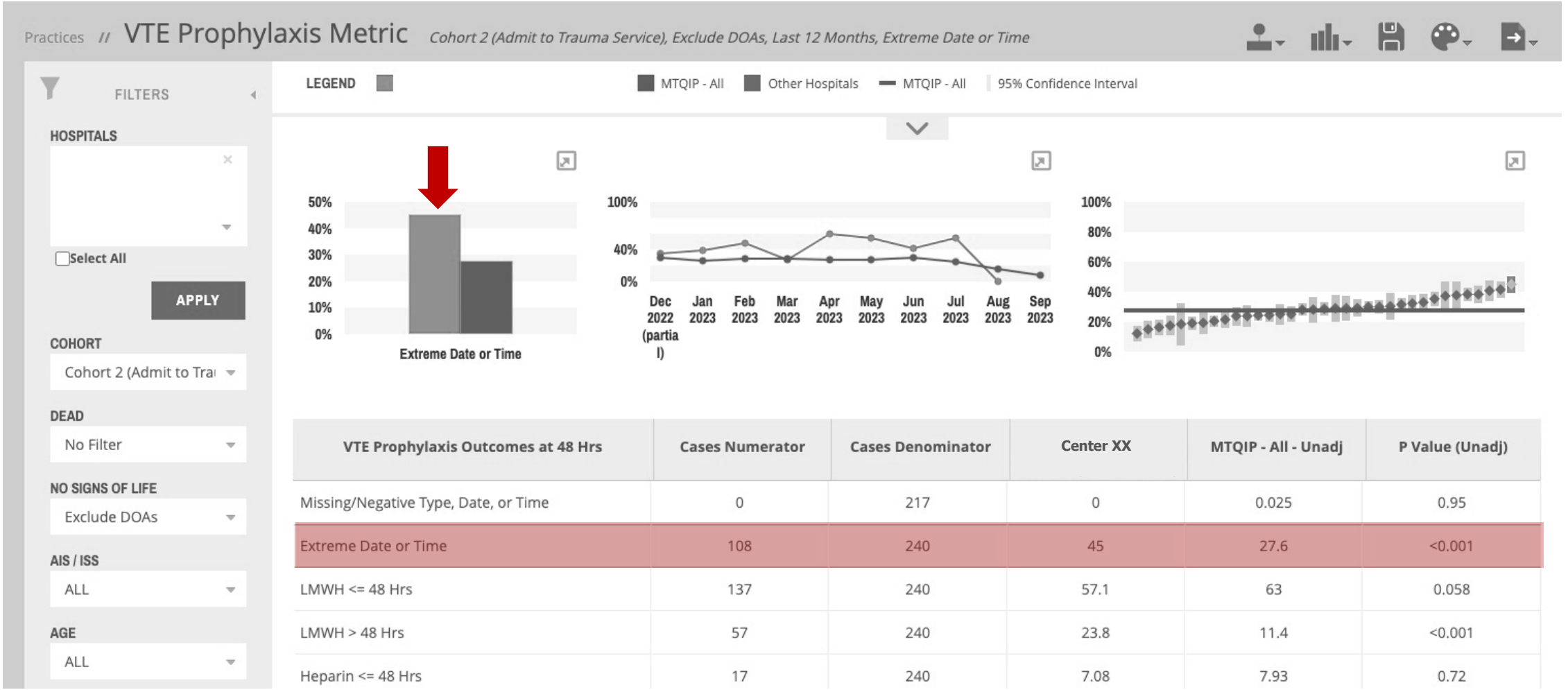
Performance Index Updates

What do I need to know?
- **Coming soon in ArborMetrix**
- **Easily identify nonsensical data issues**
- **Extreme Data or Time**
- **Example: LOS 2 days, Time to prophy 4 days**



VTE Prophylaxis Outcomes at 48 Hrs	Cases Numerator	Cases Denominator	Center XX	MTQIP - All - Unadj	P Value (Unadj)
Missing/Negative Type, Date, or Time	0	217	0	0.025	0.95
Extreme Date or Time	108	240	45	27.6	<0.001
LMWH <= 48 Hrs	137	240	57.1	63	0.058
LMWH > 48 Hrs	57	240	23.8	11.4	<0.001
Heparin <= 48 Hrs	17	240	7.08	7.93	0.72

Performance Index Updates

What do I need to know?

- **Center submits protocol and 5 cases**
- **Submit by 12/6/24**
- **Details and video demo on index page 3**
- **Questions to Judy Mikhail**

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		< 85.0 % of patients (≤ 42 hr)	0	
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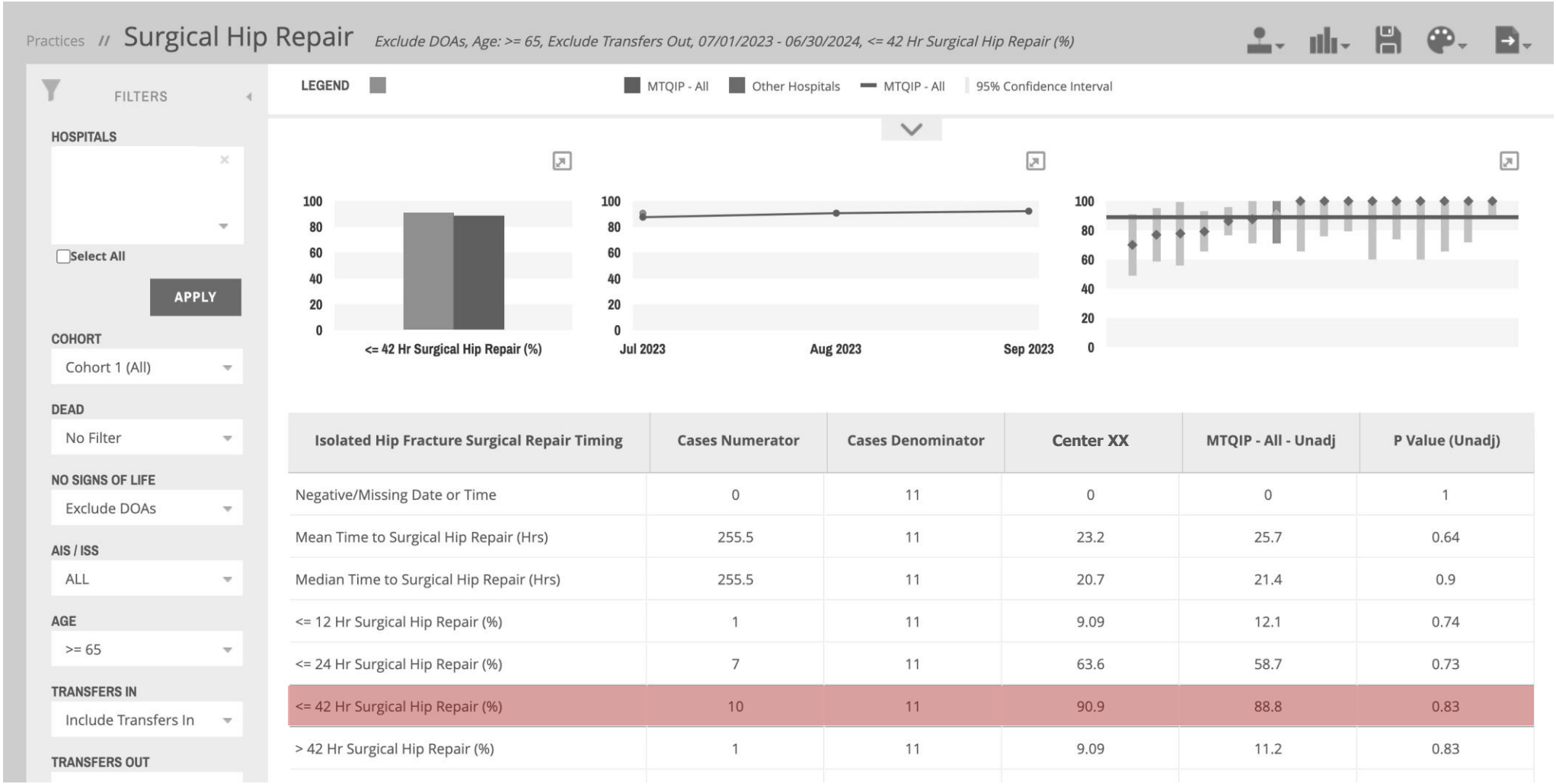
		Weighted Mean Points in Patients Transfused ≥ 5 Units 1st 4 hr		
#8	10	**Serious Complication Z-Score Trend in Trauma Admits** (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
		-1 to 1 or serious complications low outlier (average or better rate)	7	
		> 1 (rates of serious complications increased)	5	
#9	10	**Mortality Z-Score Trend in Trauma Admits** (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
		-1 to 1 or mortality low outlier (average or better)	7	
		> 1 (rates of mortality increased)	5	
#10	5	**Patient Reported Outcomes Participation** (12 mo: 7/1/23-6/30/24)		
		Signed agreement and ≥90% of patients contact information submitted	5	
		No agreement OR Signed agreement and <90% of patients contact information submitted	0	
#11	10	**Timely Antibiotic in Femur/Tibia Open Fractures - COLLABORATIVE WIDE MEASURE** (12 mo: 7/1/23-6/30/24)		
		≥ 85% patients (≤ 90 min)	10	
		< 85% patients (≤ 90 min)	0	
		Total (Max Points) =	100	

Performance Index Updates

What do I need to know?
- **Now available in ArborMetrix**
- **Easily see IHF at 42 hours**
- **10 cases/11 cases w/in 42 hours**
- **90.9% of patients for this center**



Isolated Hip Fracture Surgical Repair Timing	Cases Numerator	Cases Denominator	Center XX	MTQIP - All - Unadj	P Value (Unadj)
Negative/Missing Date or Time	0	11	0	0	1
Mean Time to Surgical Hip Repair (Hrs)	255.5	11	23.2	25.7	0.64
Median Time to Surgical Hip Repair (Hrs)	255.5	11	20.7	21.4	0.9
<= 12 Hr Surgical Hip Repair (%)	1	11	9.09	12.1	0.74
<= 24 Hr Surgical Hip Repair (%)	7	11	63.6	58.7	0.73
<= 42 Hr Surgical Hip Repair (%)	10	11	90.9	88.8	0.83
> 42 Hr Surgical Hip Repair (%)	1	11	9.09	11.2	0.83

Performance Index Updates

What do I need to know?

- **Center submits agreement**
- **>= 90% patients w/valid format email or phone**
- **Details on index page 3**
- **Questions to Jill Jakubus**

Michigan Trauma Quality Improvement Program (MTQIP)
2023 Performance Index
January 1 to December 31, 2023

Measure	Weight	Measure Description	Points	
#5	10	**Timely LMWH VTE Prophylaxis in Trauma Admits** (18 mo: 1/1/22-6/30/23)		PERFORMANCE (70%)
		≥ 52.5 % of patients (≤ 48 hr)	10	
		≥ 50.0 % of patients (≤ 48 hr)	8	
		≥ 45.0 % of patients (≤ 48 hr)	5	
		< 45.0 % of patients (≤ 48 hr)	0	
#6	10	**Timely Surgical Repair in Geriatric (Age ≥ 65) Isolated Hip Fxs** (12 mo: 7/1/22-6/30/23)		
		≥ 92.0 % of patients (≤ 48 hr)	10	
		≥ 87.0 % of patients (≤ 48 hr)	8	
		≥ 85.0 % of patients (≤ 48 hr)	5	
		< 85.0 % of patients (≤ 48 hr)	0	
#7	10	**RBC to Plasma Ratio in Massive Transfusion** (18 mo: 1/1/22-6/30/23)	0-10	
		Weighted Mean Points in Patients Transfused ≥ 5 Units 1st 4 hr		
#8	10	**Serious Complication Z-Score Trend in Trauma Admits** (3 yr: 7/1/20-6/30/23)		
		< -1 (major improvement)	10	
		-1 to 1 or serious complications low outlier (average or better rate)	7	
		> 1 (rates of serious complications increased)	5	
#9	10	**Mortality Z-Score Trend in Trauma Admits** (3 yr: 7/1/20-6/30/23)		
		< -1 (major improvement)	10	
		-1 to 1 or mortality low outlier (average or better)	7	
		> 1 (rates of mortality increased)	5	
#10	5	**Timely Head CT in TBI Patients on Anticoagulation Pre-Injury** (12 mo: 7/1/22-6/30/23)		
		≥ 90% patients (≤ 120 min)	5	
		≥ 80% patients (≤ 120 min)	4	
		≥ 70% patients (≤ 120 min)	3	
		< 70% patients (≤ 120 min)	0	
#11	10	**Timely Antibiotic in Femur/Tibia Open Fractures - COLLABORATIVE WIDE MEASURE** (12 mo: 7/1/22-6/30/23)		
		≥ 85% patients (≤ 90 min)	10	
		< 85% patients (≤ 90 min)	0	
		Total (Max Points) =	100	

Michigan Trauma Quality Improvement Program (MTQIP)
2024 Performance Index
January 1 to December 31, 2024

Measure	Weight	Measure Description	Points	
#5A	8	**Timely LMWH VTE Prophylaxis in Trauma Admits** (18 mo: 1/1/23-6/30/24)		PERFORMANCE (70%)
		≥ 52.5 % of patients (≤ 48 hr)	8	
		≥ 50.0 % of patients (≤ 48 hr)	6	
		≥ 45.0 % of patients (≤ 48 hr)	3	
		< 45.0 % of patients (≤ 48 hr)	0	
#5B	2	**Weight Based LMWH Protocol in Use** (12mo: 7/1/23-6/30/24)		
		Yes	2	
		No	0	
#6	10	**Timely Surgical Repair in Geriatric (Age ≥ 65) Isolated Hip Fxs** (12 mo: 7/1/23-6/30/24)		
		≥ 92.0 % of patients (≤ 42 hr)	10	
		≥ 87.0 % of patients (≤ 42 hr)	8	
		≥ 85.0 % of patients (≤ 42 hr)	5	
		< 85.0 % of patients (≤ 42 hr)	0	
#7	10	**RBC to Plasma Ratio in Massive Transfusion** (18 mo: 1/1/23-6/30/24)	0-10	
		Weighted Mean Points in Patients Transfused ≥ 5 Units 1st 4 hr		
#8	10	**Serious Complication Z-Score Trend in Trauma Admits** (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
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		< -1 (major improvement)	10	
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		> 1 (rates of mortality increased)	5	
#10	5	**Patient Reported Outcomes Participation** (12 mo: 7/1/23-6/30/24)		
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		≥ 85% patients (≤ 90 min)	10	
		< 85% patients (≤ 90 min)	0	
		Total (Max Points) =	100	

Patient-Reported Outcomes Signed Agreement

- Corewell Health Beaumont Troy Hospital
- Corewell Health Butterworth Hospital
- Corewell Health Dearborn Hospital
- Corewell Health Farmington Hills Hospital
- Corewell Health Trenton Hospital
- Corewell Health William Beaumont University Hospital
- Covenant HealthCare
- Detroit Receiving Hospital
- Hurley Medical Center
- McLaren Lapeer Region
- McLaren Macomb
- Michigan Medicine
- Munson Medical Center
- Sparrow Hospital
- Trinity Health Ann Arbor Hospital
- Trinity Health Livonia Hospital
- Trinity Health Muskegon Hospital
- Trinity Health Oakland Hospital
- Trinity Health Saint Mary's - Grand Rapids
- University of Michigan Health - West
- UP Health System Marquette

7.7 Trauma Mortality Review—TYPE II

Applicable Levels

LI, LII, LIII, PTCI, PTCII

Definition and Requirements

In all trauma centers, all cases of trauma-related mortality and transfer to hospice must be reviewed and classified for potential opportunities for improvement.

Deaths must be categorized as:

- Mortality with opportunity for improvement
- Mortality without opportunity for improvement

Additional Information

Mortalities include DOA, DIED, and patients who died after withdrawal of life-sustaining care.

The goal of reviewing events is to identify potential opportunities for improvement.

A death should be designated as "mortality with opportunity for improvement" if any of the following criteria are met:

- Anatomic injury or combination of severe injuries but may have been survivable under optimal conditions
- Standard protocols were not followed, possibly resulting in unfavorable consequence
- Provider care was suboptimal

Reviewing each mortality and transfer to hospice provides the greatest assurance that the trauma program will identify opportunities for improvement. Transfers to hospice require review to ensure there were no opportunities for improvement in care that might have significantly changed the clinical course that ultimately led to the decision for hospice care.

Measures of Compliance

Trauma multidisciplinary PIPS committee meeting minutes documenting review of mortalities

Resources

None

References

None

PI Death Determination

2024

17.7 MORTALITY CLASSIFICATION

Reporting Criterion

Report on all deaths.

Description

The mortality classification is determined for all trauma deaths as part of the PIPS process at each trauma center.

Element Values

Reporting bundled

- Unanticipated mortality with opportunity for improvement (UNANTIC.QI.OPP)
- Mortality with opportunity for improvement (OPPORTUNITY)
- Mortality without opportunity for improvement (NO.OPPORTUNITY)
- Not done (NOT)

Additional Information

- Report the final mortality classification as determined by PIPS committee/attending review.
- An unanticipated mortality with opportunity for improvement is defined as patients whose death is unexpected in relation to their injuries and comorbid conditions. These deaths are considered to be potentially preventable and should have opportunities for improvement.
- A mortality with opportunity for improvement is defined as patients in whom death is anticipated, but where potential system or provider improvements/gaps in care could be identified.
- A mortality without opportunity is defined as patients in whom death is anticipated and no system provider improvements/gaps in care could be identified.

2025

17.7 MORTALITY CLASSIFICATION

Reporting Criterion

Report on all deaths.

Description

The mortality classification is determined for all trauma deaths as part of the PIPS process at each trauma center.

Element Values

Definition update

- ~~Unanticipated mortality with opportunity for improvement (UNANTIC.QI.OPP)~~
- Mortality with opportunity for improvement (OPPORTUNITY)
- Mortality without opportunity for improvement (NO.OPPORTUNITY)
- Not done (NOT)

Additional Information

- Report the final mortality classification as determined by PIPS committee/attending review.
- An unanticipated mortality with opportunity for improvement is defined as patients whose death is unexpected in relation to their injuries and comorbid conditions. These deaths are considered to be potentially preventable and should have opportunities for improvement.
- A mortality with opportunity for improvement is defined as patients in whom death is anticipated, but where potential system or provider improvements/gaps in care could be identified.
- A mortality without opportunity is defined as patients in whom death is anticipated and no system provider improvements/gaps in care could be identified.

Feedback

From Data to Decisions

Practical Applications of Technology for Data Abstractors

Jill Jakubus

Patients

Procedures

Systems

M·TQIP

Concern grows around US health-care workforce shortage: ‘We don’t have enough doctors’

By Jacqueline Howard, CNN

5 minute read · Published 11:00 AM EDT, Tue May 16, 2023

Video Ad Feedback

Burnout, stress push nurses to leave workforce

07:34 - Source: CNN

(CNN) — There is mounting concern among some US lawmakers about the nation’s ongoing shortage of health-care workers, and the leaders of historically Black medical schools are calling for more funding to train a more diverse workforce.

As of Monday, in areas where a health workforce shortage has been identified, the United States needs more than 17,000 additional primary care practitioners, 12,000 dental health practitioners and 8,200 mental health practitioners, according to data from the Health Resources & Services Administration. Those numbers are based on data that HRSA receives from state offices and health departments.

Who cares for the people who care?

Initial Design and Adaptation

Early machines were often first introduced into existing workshops and factory setups that were designed for hand labor and not optimized for machine use. This mismatch could lead to inefficiencies as the layout and workflow of these spaces were not initially conducive to the new technology.

Objectives

01 – Tools
02 – Use cases
03 – Methodology
04 – Limitations
05 – Safety
06 – Closing remarks

Goal

Provide insights on practical applications of technology you can use today

Audience Collaboration

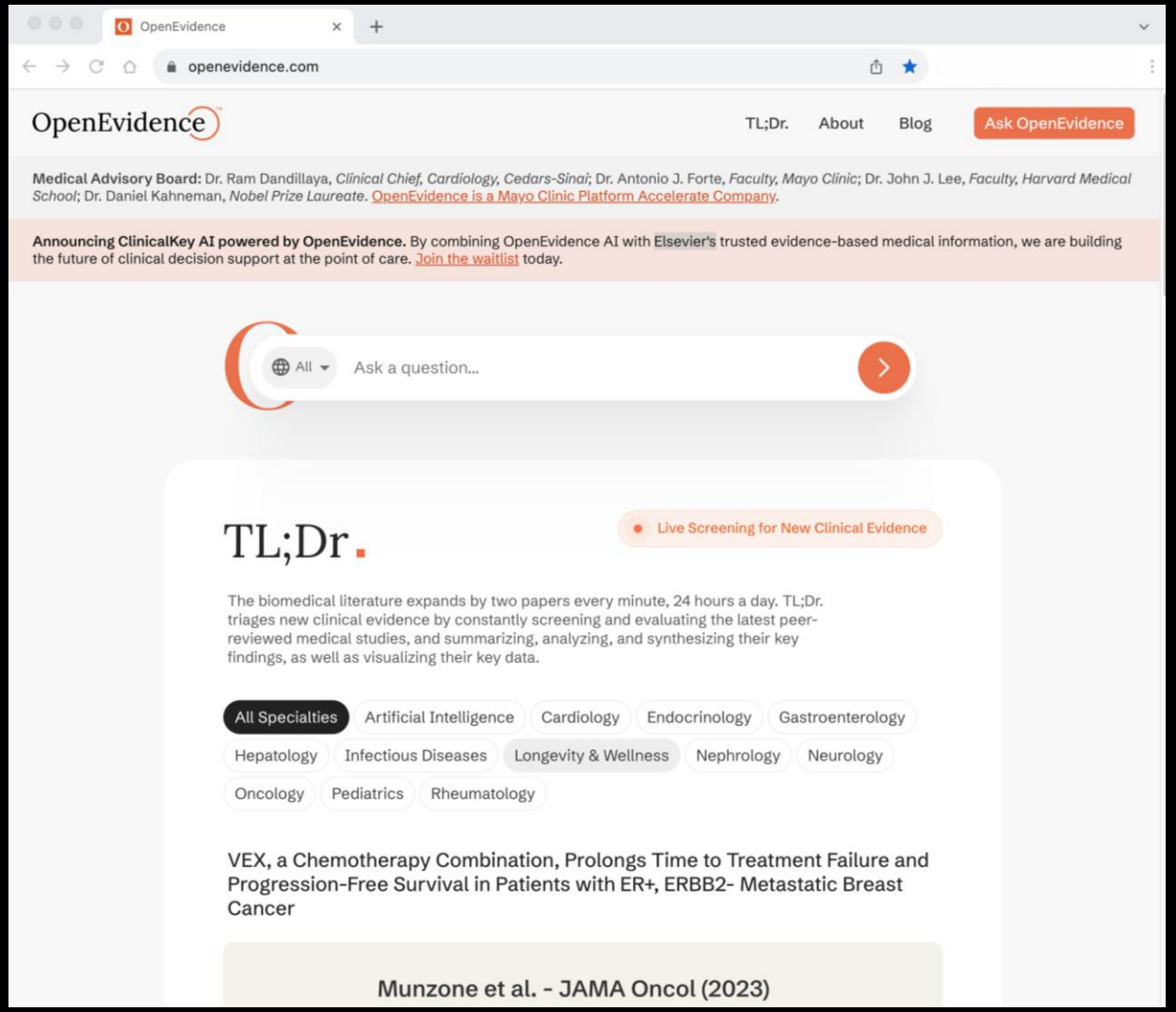
What tools are you currently using?

Tool

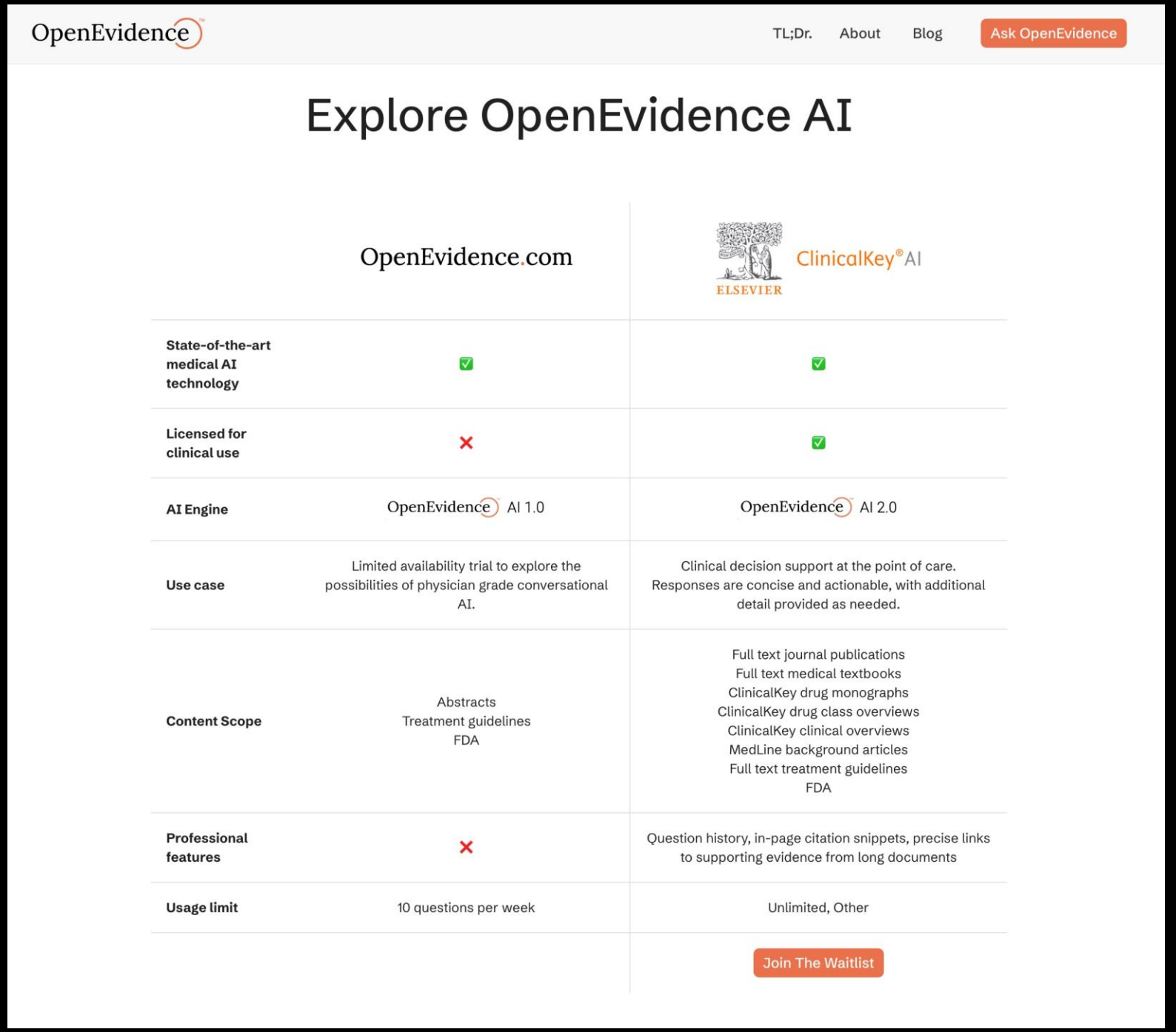
Use
- AI literature search

Oversight
- Medical Advisory Board

Access
- Free w/NPI



Limitations



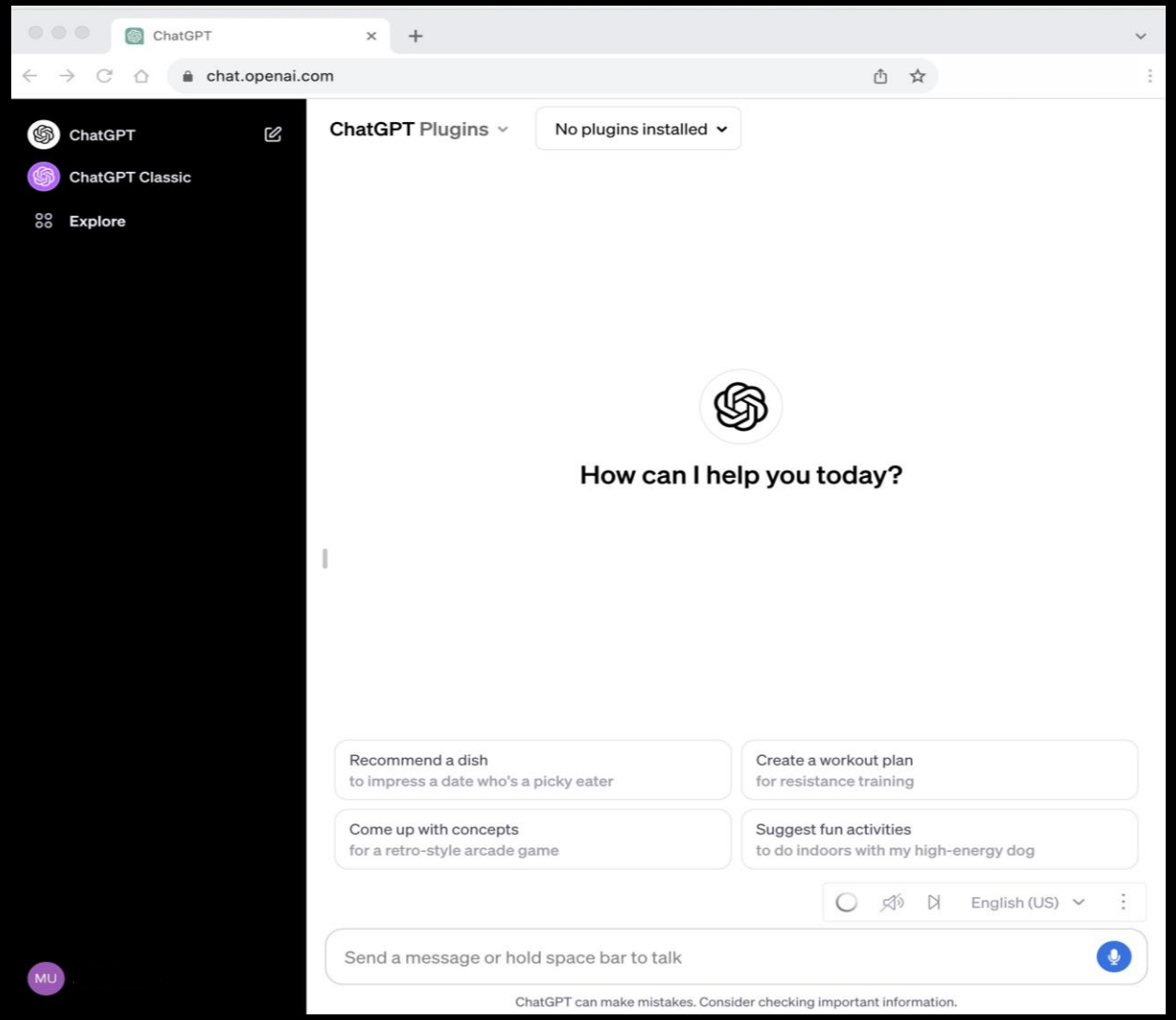
Tool

Use
- Natural language text

Oversight
- OpenAI board

Access
- Free
- Paid subscription $20/mo

Others
- Bard (Gemini) by Google
- Bing Chat by Microsoft



PLOS DIGITAL HEALTH

RESEARCH ARTICLE

Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models

Tiffany H. Kung[1,2], Morgan Cheatham[3], Arielle Medenilla[1], Czarina Sillos[1], Lorie De Leon[1], Camille Elepaño[1], Maria Madriaga[1], Rimel Aggabao[1], Giezel Diaz-Candido[1], James Maningo[1], Victor Tseng[1,4]*

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OPEN ACCESS

Citation: Kung TH, Cheatham M, Medenilla A, Sillos C, De Leon L, Elepaño C, et al. (2023) Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models. PLOS Digit Health 2(2): e0000198. https://doi.org/10.1371/journal.pdig.0000198

Editor: Alon Dagan, Beth Israel Deaconess Medical Center, UNITED STATES

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Published: February 9, 2023

Data Availability Statement: The data analyzed in this study were obtained from USMLE sample questions sets which are publicly available. We have made the question indices, raw inputs, and raw AI outputs, and special annotations available in S1 Data.

Funding: The authors received no specific funding for this work.

Competing interests: The authors have declared that no competing interests exist.

Abstract

We evaluated the performance of a large language model called ChatGPT on the United States Medical Licensing Exam (USMLE), which consists of three exams: Step 1, Step 2CK, and Step 3. ChatGPT performed at or near the passing threshold for all three exams without any specialized training or reinforcement. Additionally, ChatGPT demonstrated a high level of concordance and insight in its explanations. These results suggest that large language models may have the potential to assist with medical education, and potentially, clinical decision-making.

Author summary

Artificial intelligence (AI) systems hold great promise to improve medical care and health outcomes. As such, it is crucial to ensure that the development of clinical AI is guided by the principles of trust and explainability. Measuring AI medical knowledge in comparison to that of expert human clinicians is a critical first step in evaluating these qualities. To accomplish this, we evaluated the performance of ChatGPT, a language-based AI, on the United States Medical Licensing Exam (USMLE). The USMLE is a set of three standardized tests of expert-level knowledge, which are required for medical licensure in the United States. We found that ChatGPT performed at or near the passing threshold of 60% accuracy. Being the first to achieve this benchmark, this marks a notable milestone in AI maturation. Impressively, ChatGPT was able to achieve this result without specialized input from human trainers. Furthermore, ChatGPT displayed comprehensible reasoning and valid clinical insights, lending increased confidence to trust and explainability. Our study suggests that large language models such as ChatGPT may potentially assist human learners in a medical education setting, as a prelude to future integration into clinical decision-making.

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ChatGPT passed the USMLE. What does it mean for med ed?

MAR 3, 2023 • 4 MIN READ By Jennifer Lubell, Contributing News Writer

The medical field is keeping a close eye on ChatGPT (Generative Pretrained Transformer), a large language model developed by OpenAI that leverages huge amounts of data to mimic human conversation and assess language patterns.

ChatGPT could potentially be used as a physician's digital assistant or to enhance clinical decision support systems. A recently published study has spotlighted its ability to pass well-known licensing exams, suggesting a useful role in medical education.

Kimberly Lomis, MD, the AMA's vice president for medical education innovation, is hoping the attention around ChatGPT will elevate the broader issue of AI, not just how it applies to health care delivery but to education of all health professionals across disciplines.

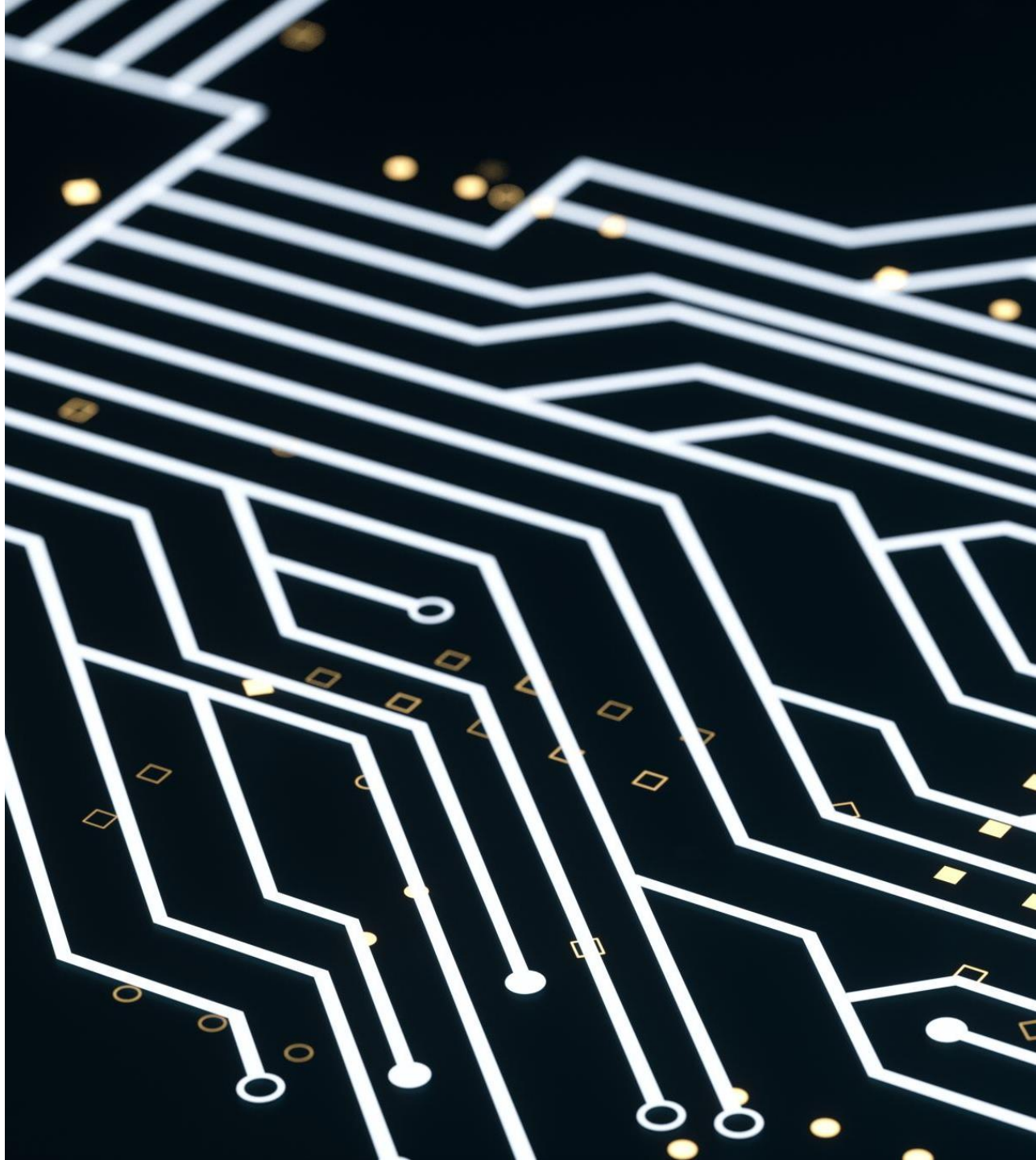
"We have a group of innovators across health professions that's associated with the National Academy of Medicine. We've been trying to encourage the medical education community to get more broadly up to speed on AI," said Dr. Lomis, co-author of a National Academy of Medicine discussion paper that addresses AI's potential to supplement health professions education.

"There's honestly been some hesitance to engage with it," she added.

Abstractor Resource Use

Uses

- Agenda creation
- Article summary
- Email response
- Grammar check
- How to tech support
- Letters of recommendation
- Medical reference
- Outline creation
- Presentations
- Resume updates
- Writing assistant

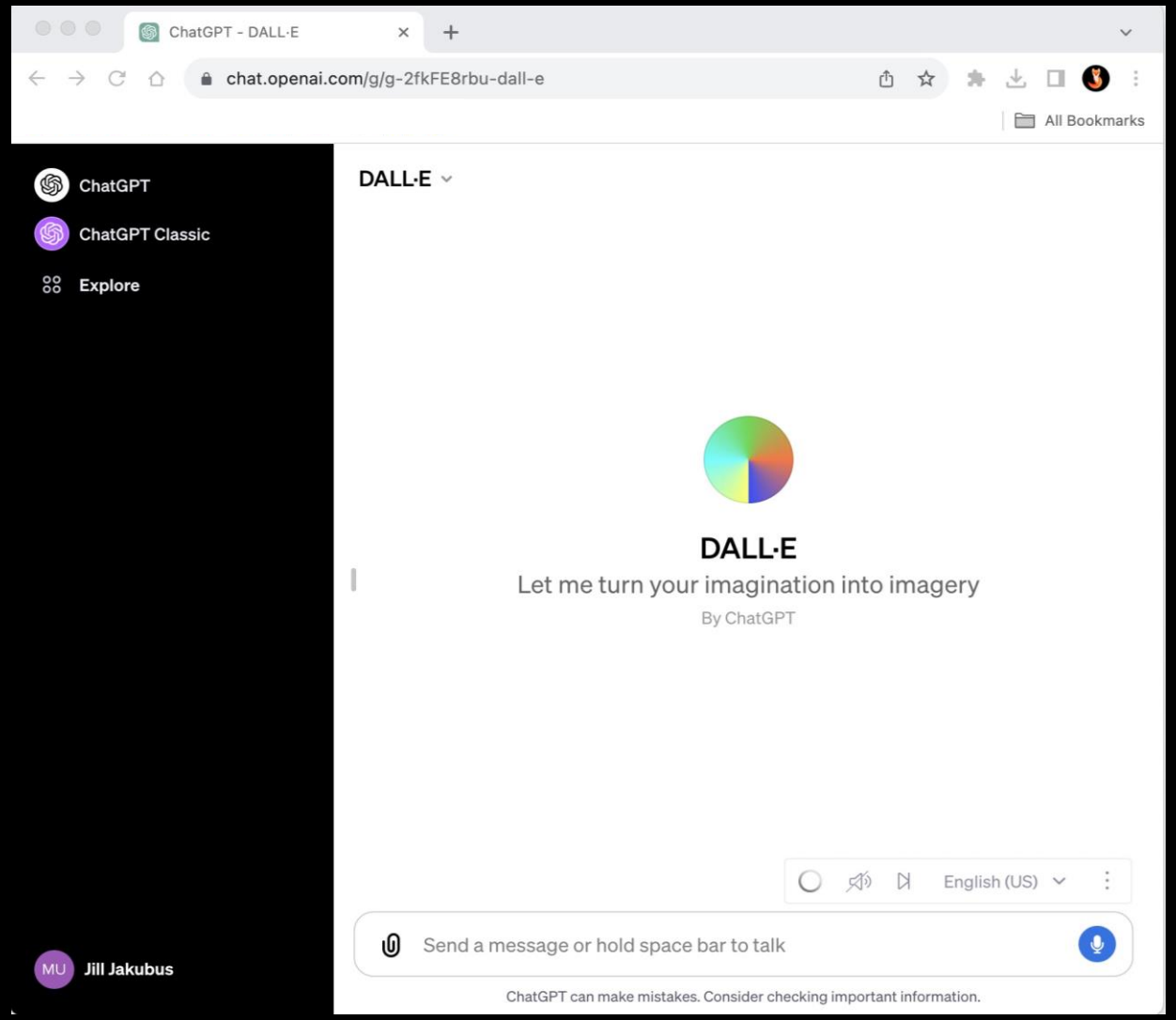


Tool

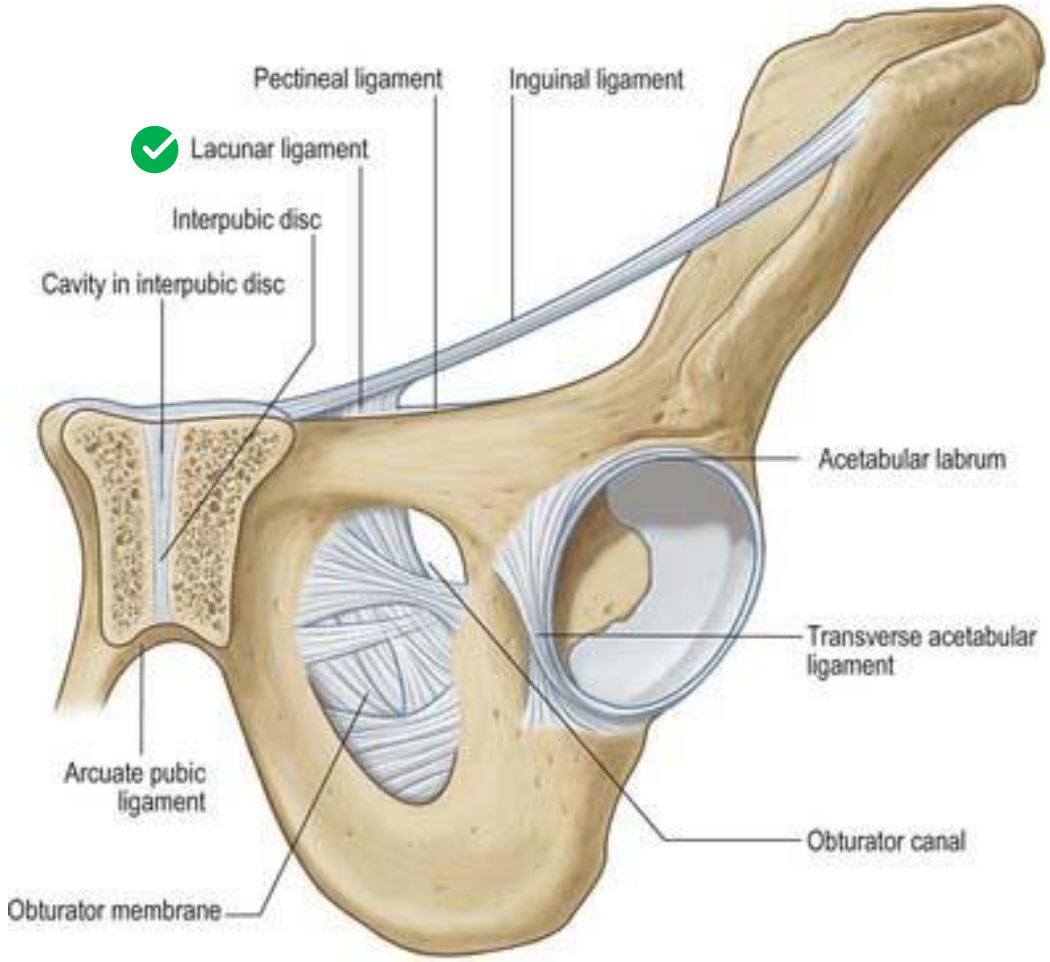
Use
- Creative image generation

Oversight
- OpenAI board

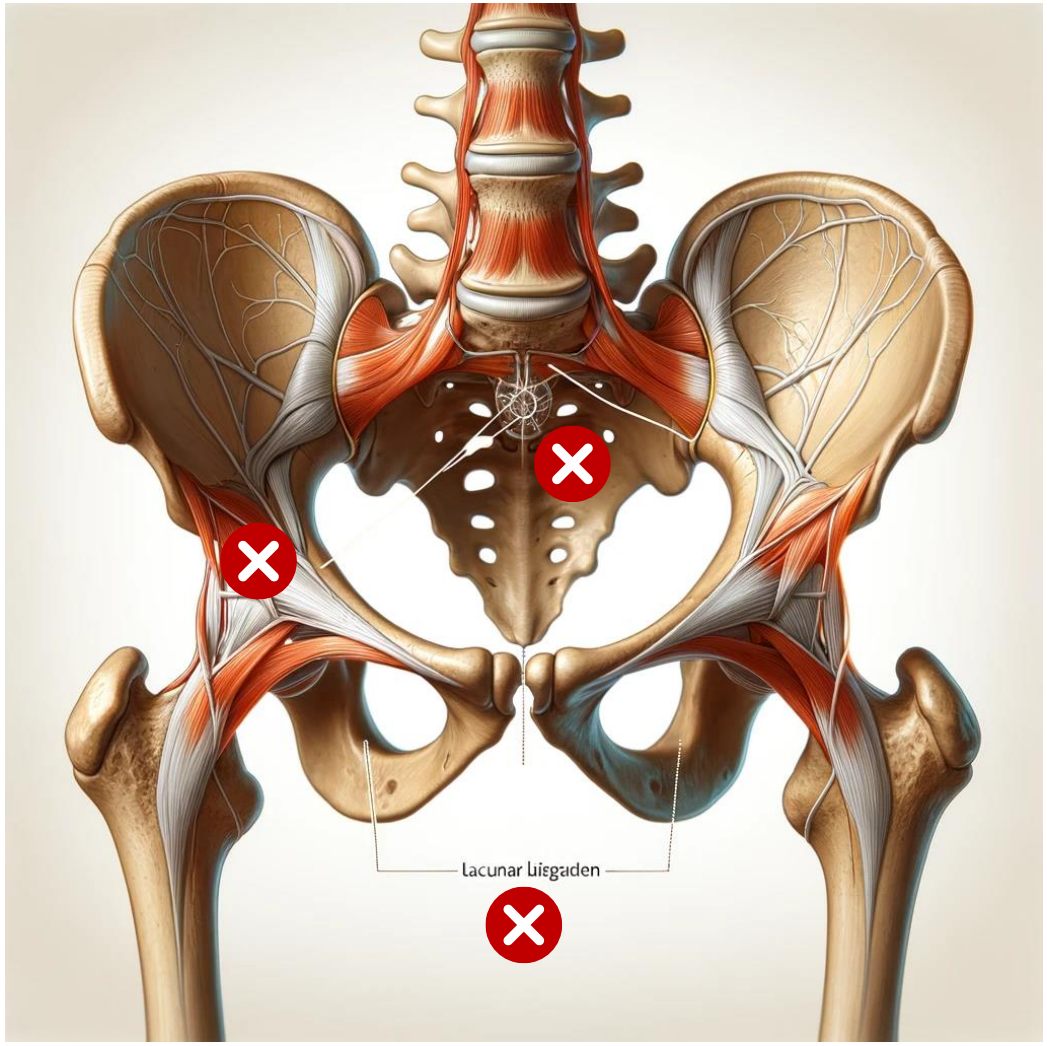
Access
- Paid subscription $20/mo

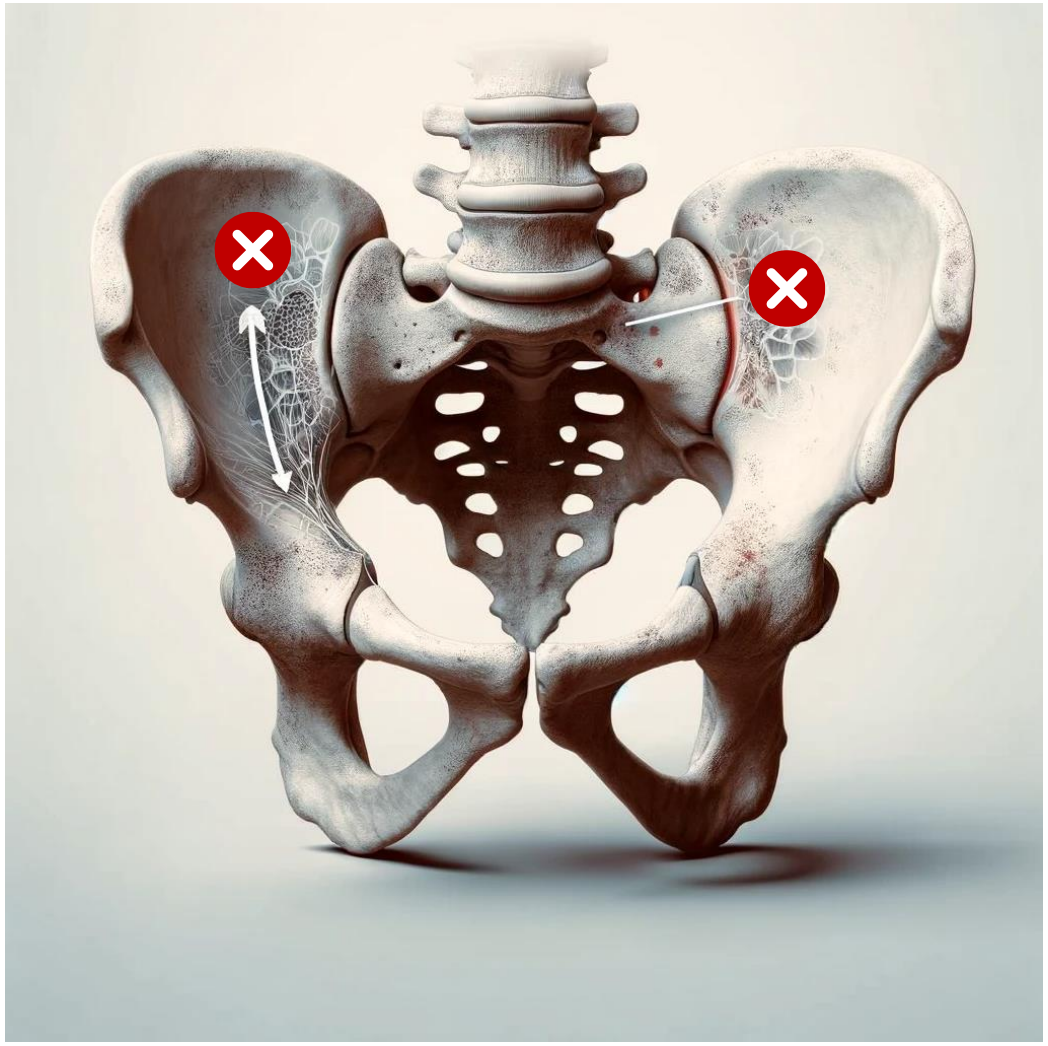


Lacunar Ligament Request



Lacunar Ligament Response





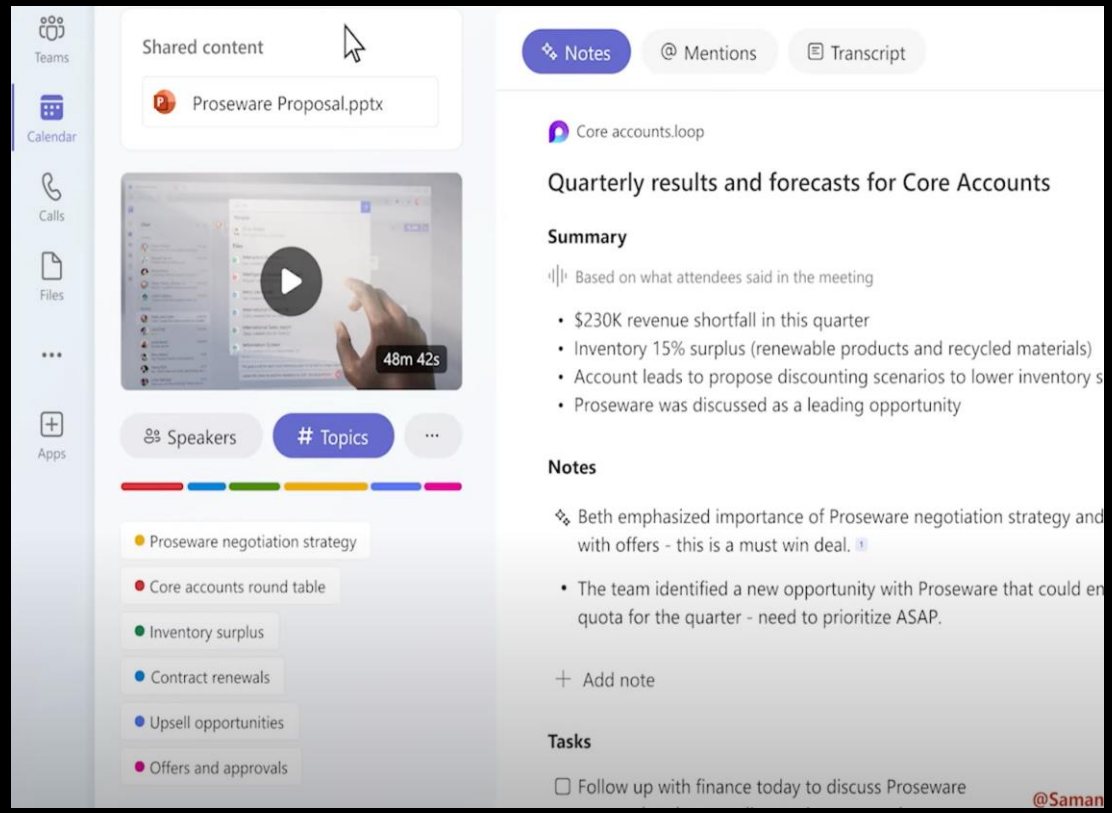
Tool

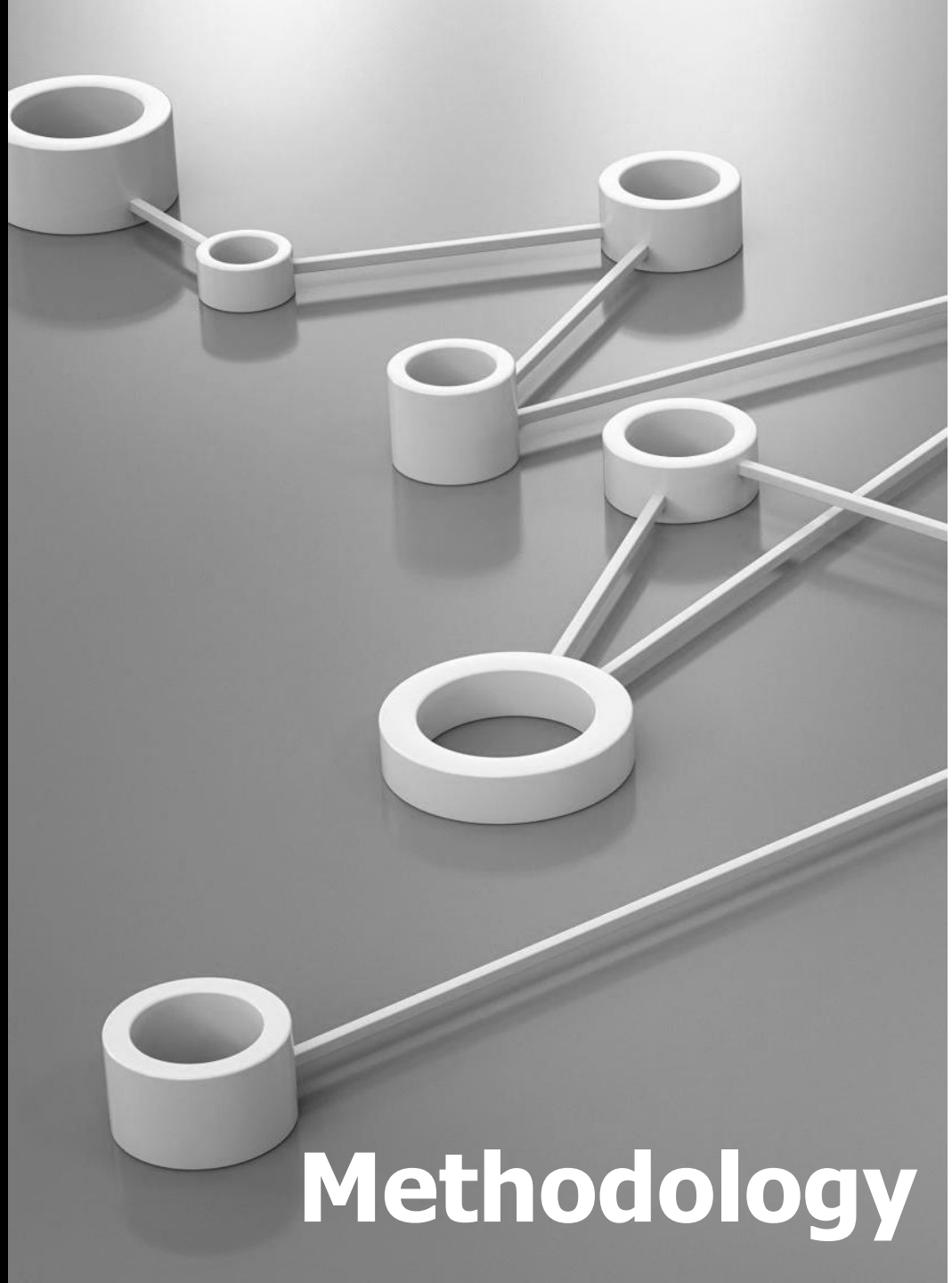
Use Case
- Missed Teams meetings

Use
- Meeting notes/recap

Oversight
- Microsoft BAA

Access
- Windows 10/11
- Enable transcription





Methodology

My favorite pastime _____

1. is curling up with a good book and getting lost in different worlds and stories."
2. is hiking through nature trails, enjoying the peace and beauty of the outdoors."
3. is experimenting with new recipes and flavors in the kitchen, especially baking desserts."
4. is playing guitar and composing music, it's a great way to express creativity and unwind."
5. is playing board games with friends and family, as it's always filled with laughter and friendly competition."

neural network-based language modeling

Limitations

- **Prompt quality**
- **Structured data**
- **Token limits**

Challenges

- **Bias**
- **Hallucinations**
- **Precise math**

The New York Times

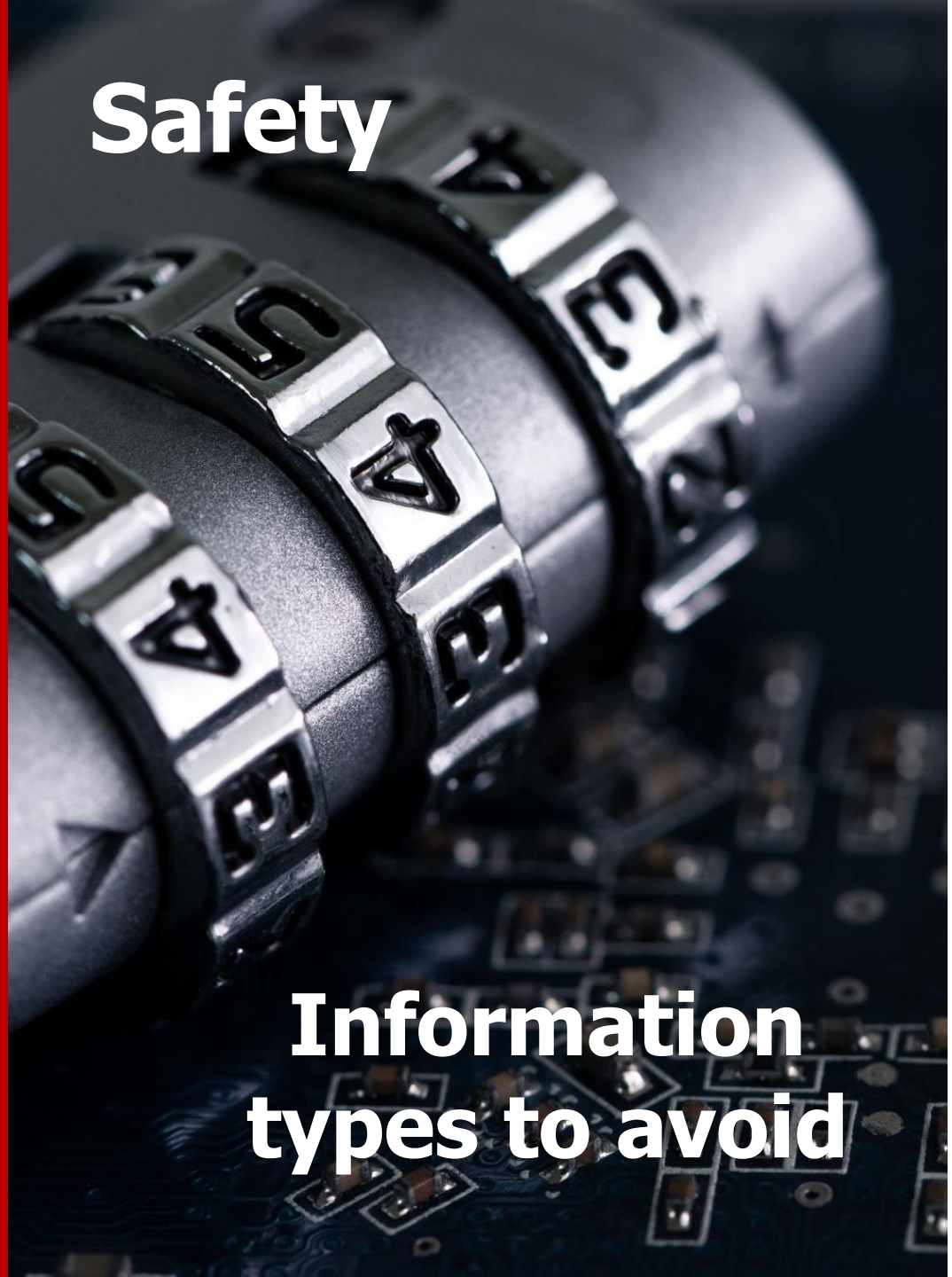
A.I. and Chatbots › | Meet the New ChatGPT | Meta's A.I. Characters | ChatGPT's Image Generator | Google's Bard Extensions

The ChatGPT Lawyer Explains Himself

In a cringe-inducing court hearing, a lawyer who relied on A.I. to craft a motion full of made-up case law said he "did not comprehend" that the chat bot could lead him astray.

Share full article | 267

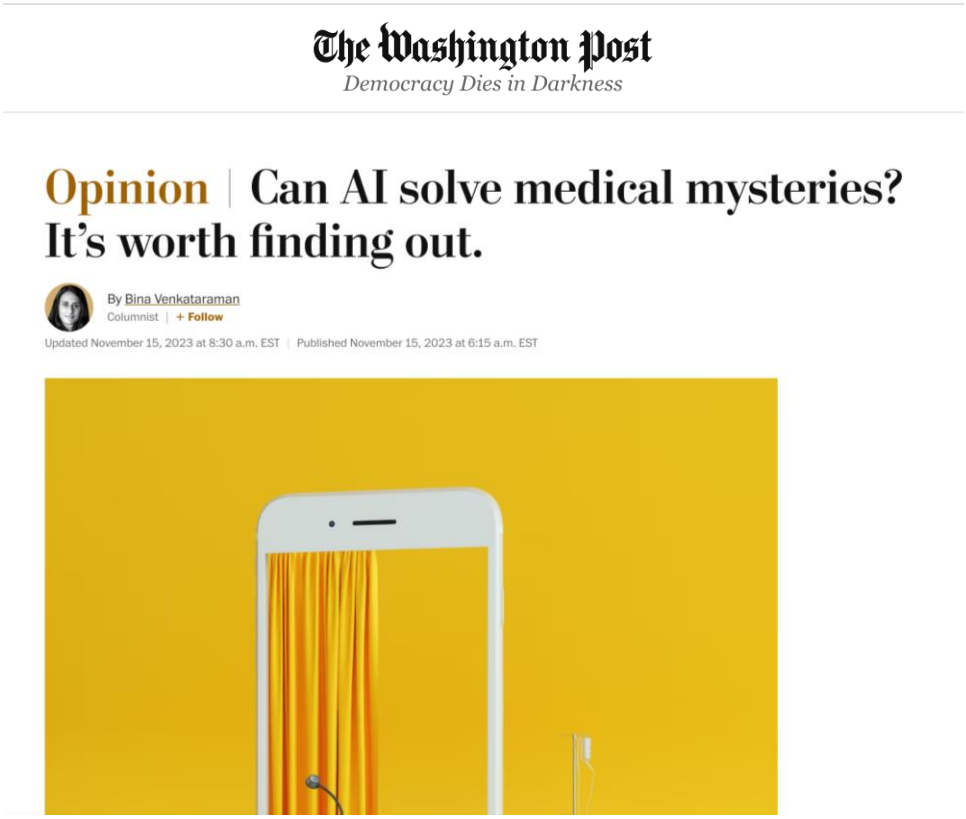
https://www.nytimes.com/2023/06/08/nyregion/lawyer-chatgpt-sanctions.html



- Protected Health Information
- Personal Identifiable Information
- Financial Information
- Passwords and Login Credentials
- Confidential Information
- Intellectual Property

Closing Remarks

- **Artificial General Intelligence**
- **Binary thinking**
- **Augmented intelligence**



The Washington Post
Democracy Dies in Darkness

Opinion | Can AI solve medical mysteries? It's worth finding out.

By Bina Venkataraman
Columnist | + Follow

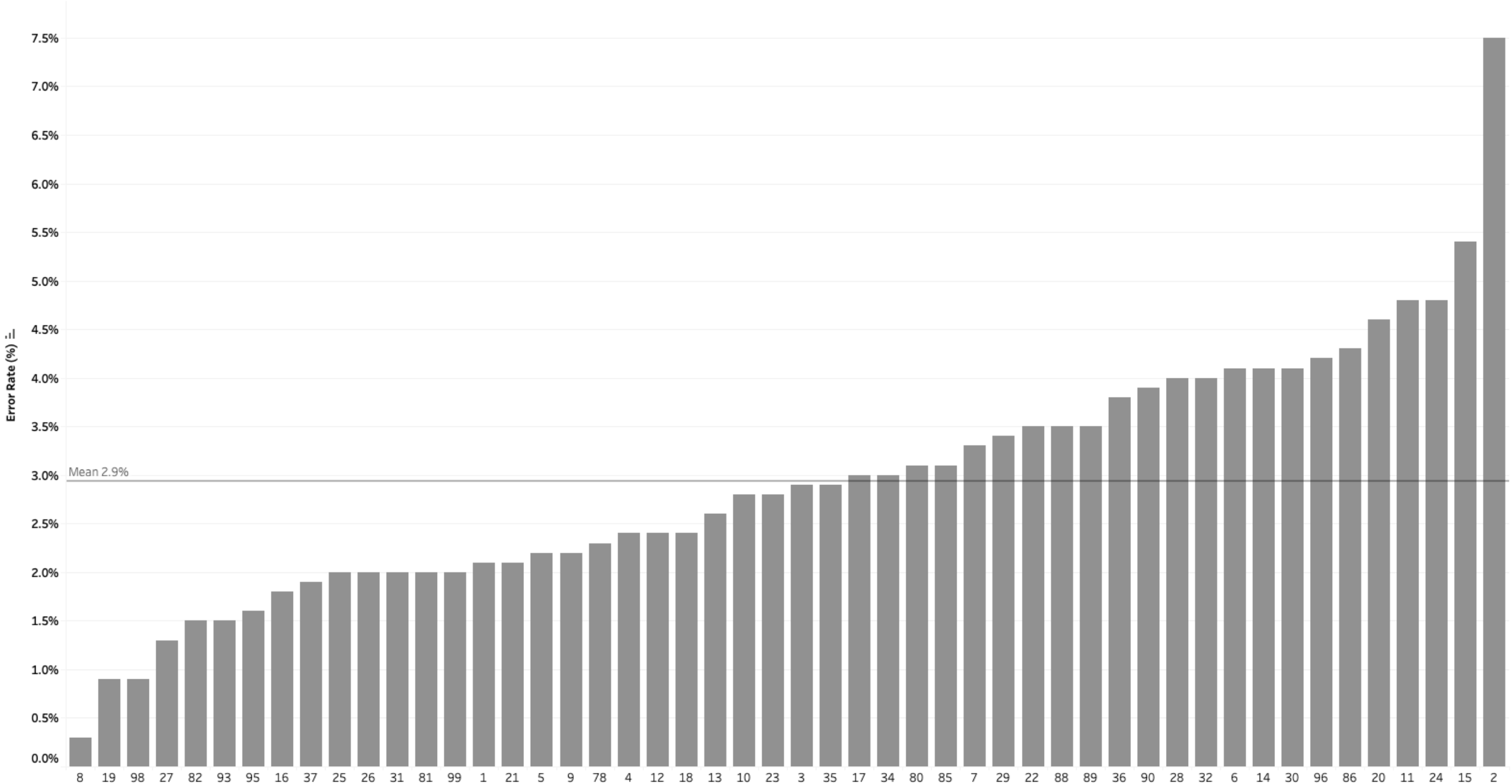
Updated November 15, 2023 at 8:30 a.m. EST | Published November 15, 2023 at 6:15 a.m. EST

Feedback

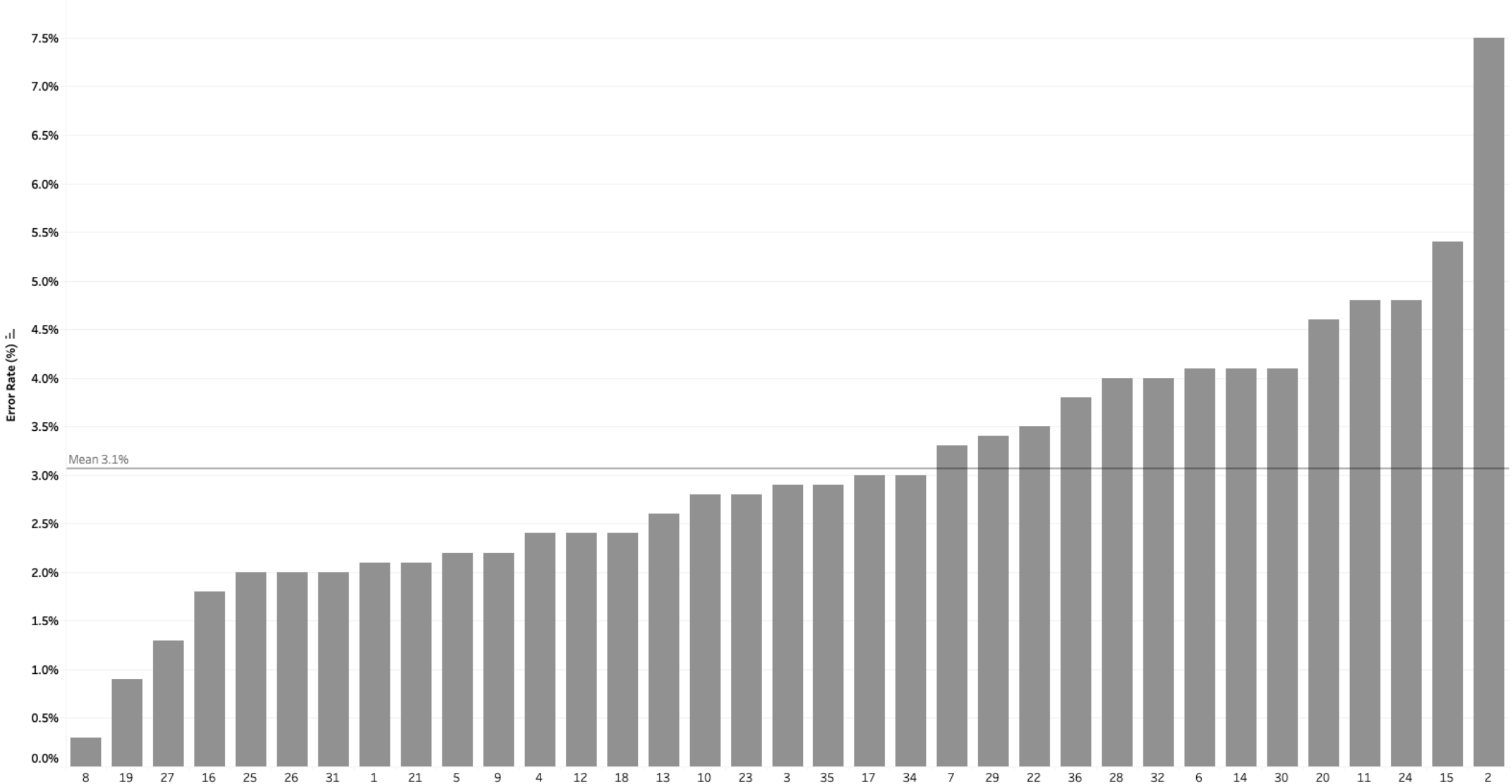
Data Validation & Lessons Learned

Jill Jakubus

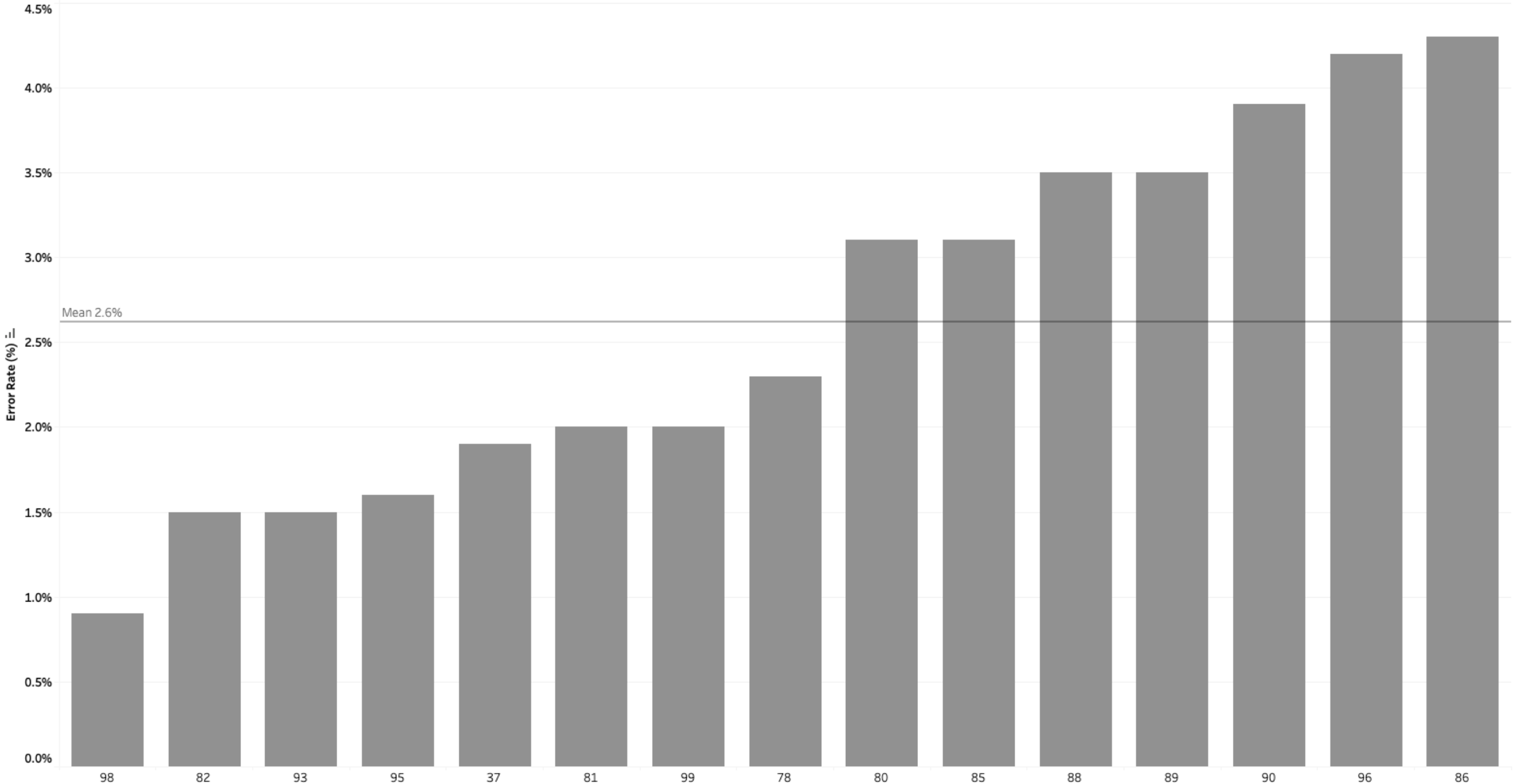
Data Validation
Level I-III Centers



Data Validation
Level I-II Centers



Data Validation
Level III Centers



What did you learn?

Level I-II Lessons Learned

- Use EMR search for hard-to-find diagnoses
- Use quotes and tabs to narrow down EMR search results
- Make sure Care Everywhere is turned on so all data is visible

Level I-II Lessons Learned

2.2 PATIENT'S LAST NAME

Description

The last name of the patient.

Element Values

- Relevant value for data element.

Additional Information

- Report the legal name provided by the patient, including suffix if applicable.
- Report "Unknown" if the legal name is never documented.

Resources

- Orientation

Report the legal name and not the Doe name

Reference the driver's license to find the legal name

Report the suffix with the patient's last name

Level I-II Lessons Learned

Reporting the first intubation location when OSH ED is the location

5.35 INTUBATION STATUS

Description

The location of first intubation.

Element Values

1. Never
2. Field/Scene/En route
3. ED
4. OR
5. ICU
6. Other

Additional Information

- Report Combitube, Hi-Lo, i-gel, King, and LMA airways, and tracheostomy as an intubation.
- Report the endoscopy suite, floor, and radiology as "6. Other."

Resources

Codebook

Source: MTQIP

MTQIP Orientation Video ED Information see timestamp 17:30

Level I-II Lessons Learned

15.3 ANTIBIOTIC 2 TYPE

Reporting Criterion
Report on all patients with open fractures.

Description
The second IV antibiotic class administered to patient during EMS transfer from scene through 24 hours of arrival at your hospital for patient's receiving combination therapy.

Element Values

1. None
2. Penicillin
3. Monobactam
4. Carbapenem
5. Macrolide
6. Lincosamide
7. Aminoglycoside
8. Quinolone
9. Sulfonamide
10. Tetracycline
11. Cephalosporin
12. Other

Additional Information

- Combination therapy is defined as the addition of an antibiotic that provides coverage against a wider spectrum of bacteria.
- Must be administered, not just ordered.
- Exclude antibiotics administered by a transferring hospital.
- Exclude antibiotics administered for indications other than open fracture.

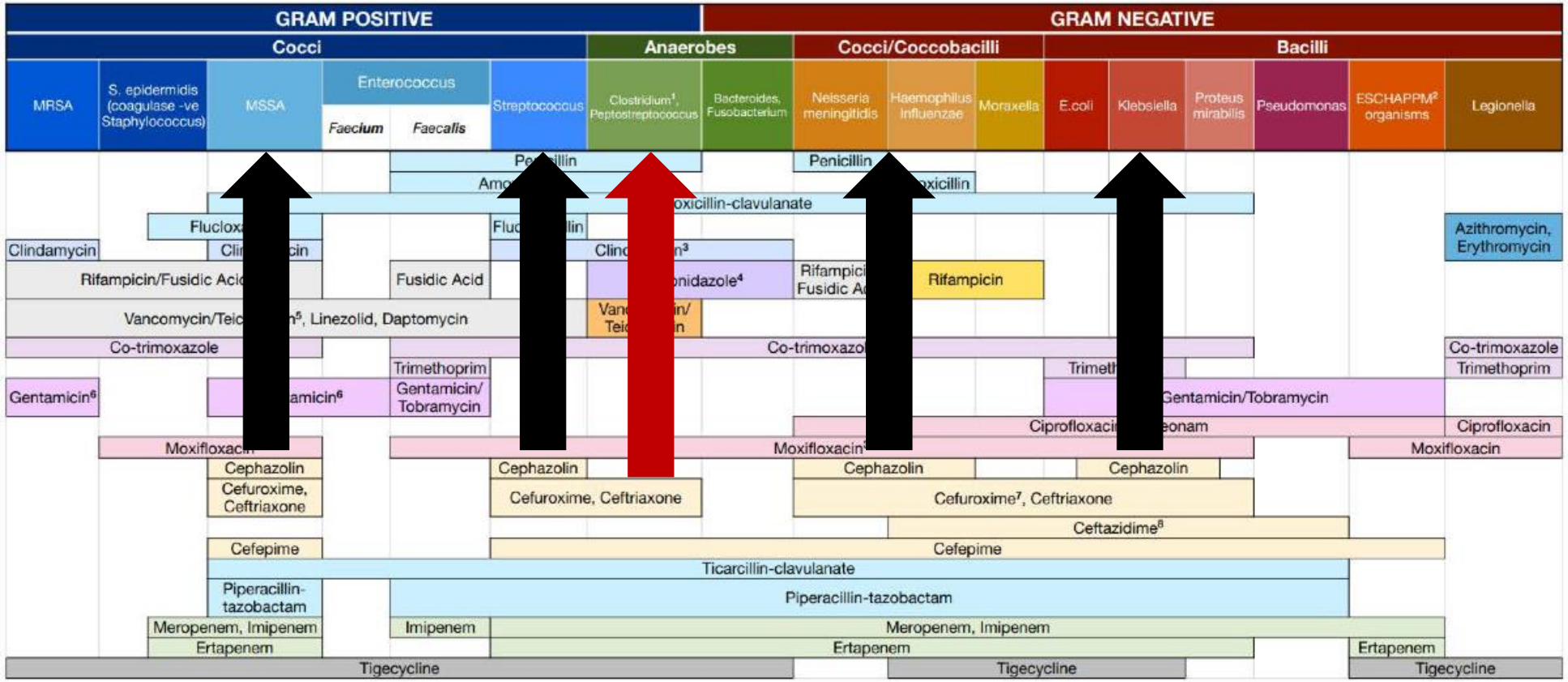
Resources

- Antibiotic Classes
- Combination Therapy
- Drug search
- Open Fracture Codebook

Codebook
Source: MTQIP, Resources for Optimal Care of the Injured Patient

Need to look at multiple sources (TFS, MAR, Anesthesia Record)

Reporting of antibiotic coverage for open fracture if same type but increased coverage



For simplicity, atypical organisms are not included above. Partial columns indicate incomplete coverage. ESBL-producing organisms are not susceptible to most antibiotics containing a beta-lactam ring; carbapenems are the usual agent of choice.

1: *C. difficile* should only be treated with metronidazole or vancomycin. **2:** ESCHAPPM are β-lactamase producing organisms. These are *Enterobacter, Serratia, Citrobacter freundii, Hafnia, Acinetobacter/Aeromonas, Proteus* (**not** *mirabilis*), *Providencia & Morganella morganii*.

3: Not effective against *Clostridium*. **4:** Metronidazole is not effective against *Peptostreptococcus*, **5:** Teicoplanin is not effective against *Enterococcus faecium*, **6:** Gentamicin is not appropriate mono therapy for *Staphylococcus aureus* & should only be used in conjunction with a β-lactam.

7: Due to increasing MIC, Cefuxorime is not recommended therapy for *Moraxella*. **8:** Although it has other actions, Ceftazidime should only be used for *Pseudomonas*.

ANTIBIOTIC CLASS KEY

PENICILLINS	LINCOSAMIDE	MACROLIDES	NITROIMIDAZOLE	RIFAMYCIN	GLYCOPEPTIDES
SULFONAMIDES	AMINOGLYCOSIDES	FLUOROQUINOLONES	CEPHALOSPORINS	CARBAPENEMS	GLYCYLCYCLINE

Scenario

Antibiotic 1
Cephazolin (Cephalosporin)

Antibiotic 2
Ceftriaxone (Cephalosporin)

Level I-II Lessons Learned

Abdominal fascia left open as a hospital event

9.5 ABDOMINAL FASCIA LEFT OPEN

Description

The abdominal wall fascia was left open for any reason following the first exploratory laparotomy.

Element Values

- Abdominal Fascia Left Open (NTDS 3)

Additional Information

Resources

Codebook

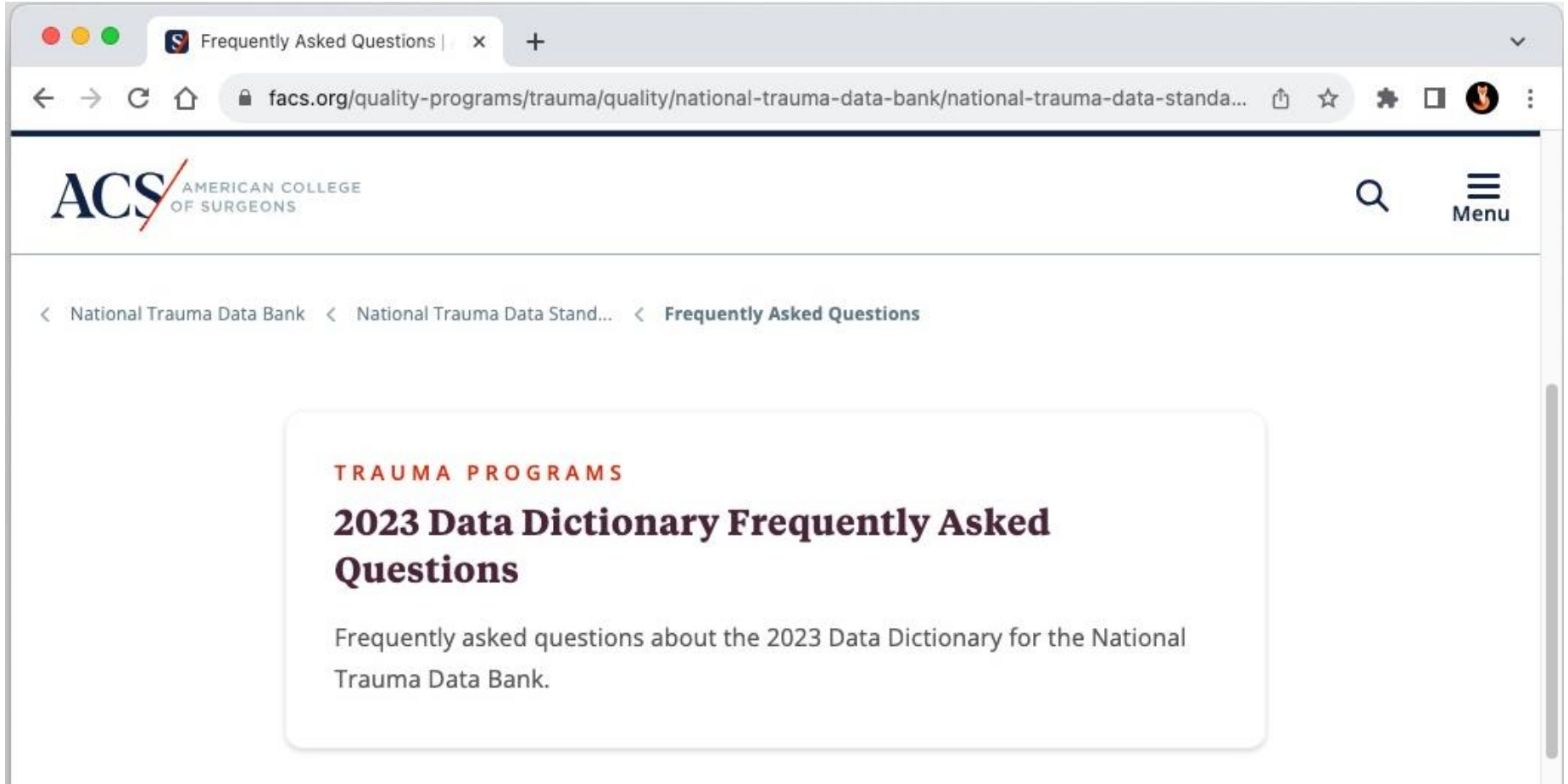
Source: MTQIP

Potential clues
- **AbThera wound VAC use**
- **Return to OR for closure**

Common EMR location
- **Operative note**

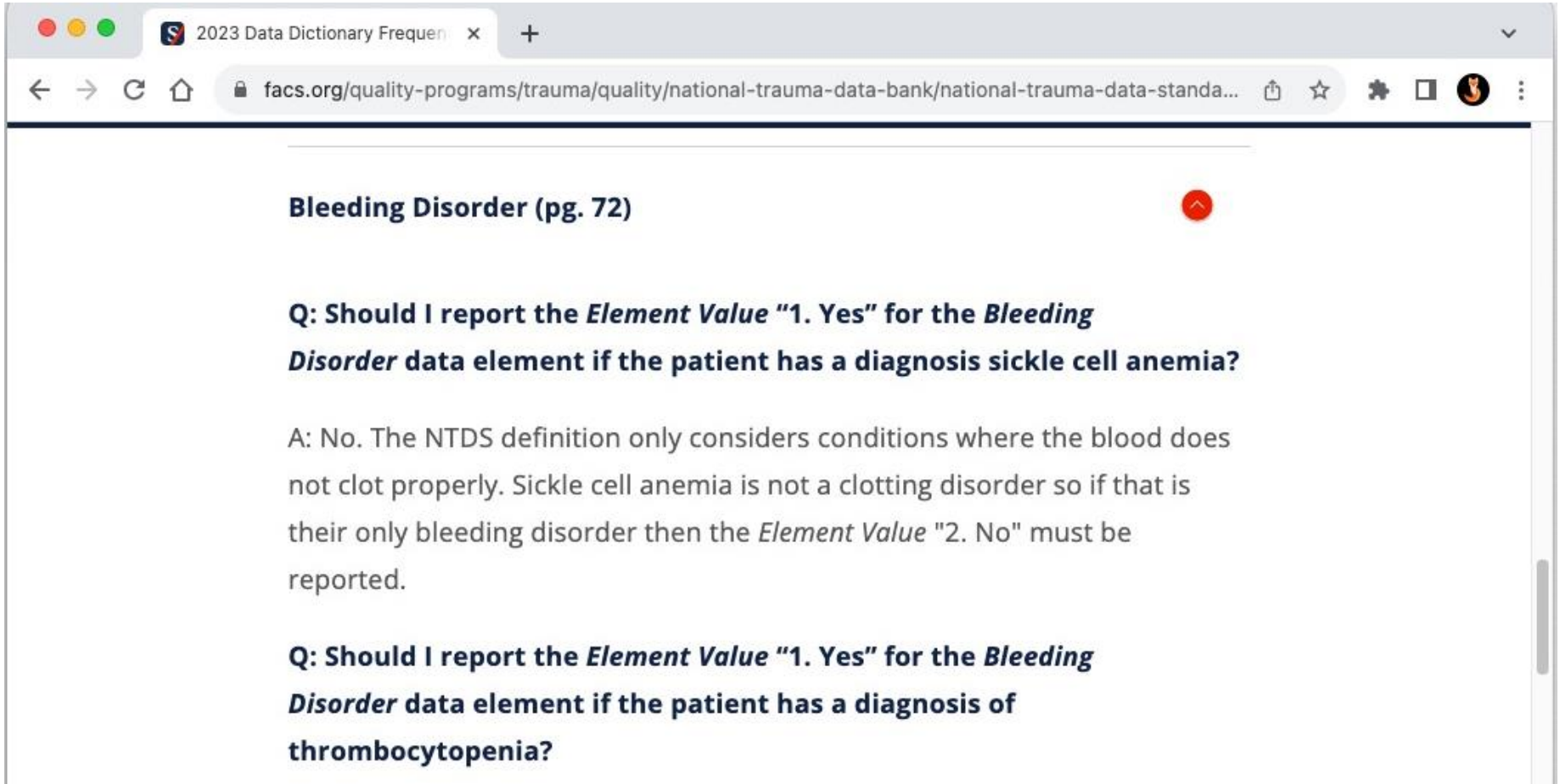
Level III Lessons Learned

NTDB Frequently Asked Questions online resource



Level III Lessons Learned

NTDB Frequently Asked Questions
Bleeding Disorders section



Level III Lessons Learned

Walker documentation (device) for ambulation (ADL)

FUNCTIONALLY DEPENDENT HEALTH STATUS

DESCRIPTION

Pre-injury functional status may be represented by the ability of the patient to complete age-appropriate activities of daily living (ADL).

Assisted living (person) for documented ADL support

ELEMENT VALUES

1. Yes
2. No

ADDITIONAL INFORMATION

- Present prior to injury.
- Activities of daily living include: bathing, feeding, dressing, toileting, and walking.
- Include patients whom prior to injury, and as a result of cognitive or physical limitations relating to a pre-existing medical condition, were partially dependent or completely dependent upon equipment, devices or another person to complete some or all activities of daily living.
- The null value "Not Known/Not Recorded" is only reported if no past medical history is available.

Level III Lessons Learned

AIS external injury reporting

Consider the mechanism in your abstraction

Thank You

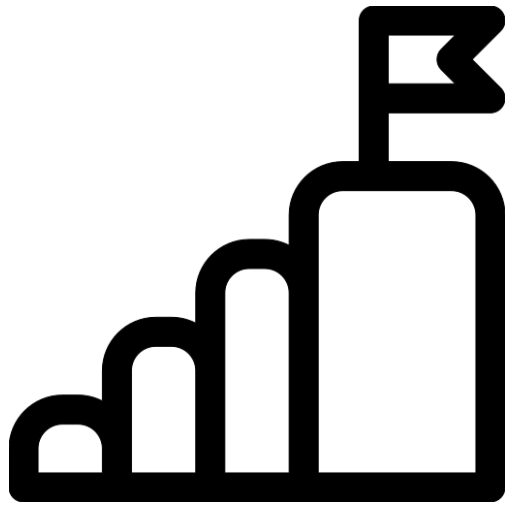
M·TQIP

Challenging/Frequently Asked/Validation Questions 2023

Shauna Di Pasquo

Agenda

- Show questions submitted to MTQIP or that have come up in validation
- Provide definitions where applicable
- Provide responses received from outside agencies where applicable
- Provide answers and reasoning
- Discussion / Questions



Case Lists for Validation

What submission will cases be pulled from for our validation?

- **Every submitted case is eligible for data validation.**
- **This includes a one-year period using the most current available sanitized data submitted**

How can we make sure our data is most accurate in the submission used for case list creation?

- **Do not close out charts that are not ready for submission**
- **Perform internal validations / logic reports on charts that meet selection criteria prior to submissions to catch errors and prevent having to submit change requests for resubmission.**
- **By utilizing the 3 optional submission months, you can cut down on the number of charts needing internal validation at one time.**

Year	Month	Date Range
2024	February	7/1/22 – 10/31/23
2024	April	9/1/22 – 12/31/23
2024	June	11/1/22 – 2/29/24
2024	August	1/1/23 – 4/30/24
2024	October	3/1/23 – 6/30/24
2024	December	5/1/23 – 8/31/24

When do we need to submit a Data Change Request Form?

- When changes are made to previously submitted trauma cases that delete ICD-10 / AIS injury codes, or procedure codes.
- These data elements are "one to many".
- For example, one patient can have many codes in these areas.
- With an element that has multiple options, "deleted" codes need to be manually removed.

DATA RESOURCES

COHORT FORMATION

Cohort Information
Filter Index
Meeting Report
Statistical Methods

DATA DICTIONARY

2024 MTQIP Data Dictionary
2023 MTQIP Data Dictionary
2022 MTQIP Data Dictionary
2021 MTQIP Data Dictionary
2020 MTQIP Data Dictionary
2019 MTQIP Data Dictionary
2018 MTQIP Data Dictionary
2017 MTQIP Data Dictionary
2016 MTQIP Data Dictionary
2015 MTQIP Data Dictionary
2014 MTQIP Data Dictionary
2013 MTQIP Data Dictionary
2012 MTQIP Data Dictionary
Data Change Request Form
Dictionary Change History
Dictionary Suggestion Form

UNIVERSITY OF MICHIGAN

What are the steps to make a change to submitted data?

1. Correct your registry data
2. Resubmit your data
3. Fill out a Data Change Request Form to **delete** ICD-10, AIS, or procedure data

What happens after I submit a data change request form?

After each data submission, MTQIP will pull all submitted data change requests and implement them. If a change is not able to be made, the MTQIP staff will notify you.

Report

1 Main	4 Comorbidities	7 Safety Devices
2 ICD 10 Injuries	5 Procedures	8 Organ Donation
3 AIS Injuries	6 Complications	

Incorrect data exact code (i.e., action the analysts should make)

Correct data exact code (i.e., data the analysts confirm is present)

Frequently Asked / Challenging Questions

Question 1

If additional injuries are found at an OSH after transfer, should they be coded in the registry?

Scenario

- **We transferred a pt from our ED / hospital to an OSH for a higher level of care.**
- **They did additional imaging and reported back injuries that we didn’t diagnosis at our center.**
- **Would we include these additional injuries in our registry?**

Response

Short Answer: No – you would only report the injuries that were diagnosed prior to the patients transfer from your facility.

Long Answer: Report the care and diagnoses that are known at the time of treatment at your facility.

If a patient expires in your ED/hospital, an ME report is also acceptable.

EMAIL ANSWER FROM AAAM > SENT IN BY A REGISTRAR SEVERAL YEARS AGO:

"I have been taught, and it seems logical to me, that we are documenting the care and diagnoses that are known at the time of treatment at our facility (so if urgent care diagnosed a fracture and sent the report along with them, we can include it, as well as additional injuries diagnosed at our facility). But not injuries diagnosed at the next facility (if there was a need for further transfer).

It has been my understanding that the data we report is to be based on the procedures that we do, the evaluations by our physicians, etc.

The one item that I do see that seems to be an acceptable "outside source" is ME reports.

You have been taught correctly, and worded it very well, I just recopied your information as it's the same as I would tell you.

*****IN ADDITION: the information you receive from the other hospital regarding your patient and their final diagnosis can be used in your PI process and can be tracked in your registry under findings from outside facilities but should not be included or coded with your diagnosis to calculate an ISS.**

Question 2

For reporting the Hospital Event of Alcohol Withdrawal Syndrome, how high does the CIWA score need to be to meet capture criteria?

9.9 ALCOHOL WITHDRAWAL SYNDROME

Description

Characterized by tremor, sweating, anxiety, agitation, depression, nausea, and malaise. It occurs 6-48 hours after cessation of alcohol consumption and, when uncomplicated, abates after 2-5 days. It may be complicated by grand mal seizures and may progress to delirium (known as delirium tremens).

Element Values

- Alcohol Withdrawal Syndrom (NTDS 36)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.

Resources

Codebook

Source: NTDS, 2019 World Health Organization (WHO)
Data Base Column Name: A_TCODE, A_TCODE_AS_TEXT
Type of Element: String
Length:
Report: #6

Response

Short Answer: The definition for Alcohol Withdrawal Syndrome does not require a specific CIWA score for reporting.

Long Answer: Please report Alcohol Withdrawal Syndrome when listed signs/symptoms present related to alcohol use.

One resource for finding these signs/symptoms is the CIWA flowsheet but may also be documented in notes.

***Please use the data dictionary definition and your EMR as a guide to determine the patient's true story as each patient's presentation will vary to some degree.**

Question 3

Would I exclude capture of alcohol withdrawal on a patient whose symptoms begin after 48 hours, as the definition specifically lists a 48-hour max time frame?

Scenario

- **I have a patient who had an ETOH level on arrival was 197.**
- **I don't know exactly when their last drink was, but I could conservatively use their arrival time to the hospital.**
- **They had all negative CIWA scores and no charting of any withdrawal symptoms until 50.5 hours after arrival, which is greater than 48 hours from their estimated last drink.**
- **At that time, their CIWA shot up to 12 and we began treating with Ativan.**

9.9 ALCOHOL WITHDRAWAL SYNDROME

Description

Characterized by tremor, sweating, anxiety, agitation, depression, nausea, and malaise. It occurs 6-48 hours after cessation of alcohol consumption and, when uncomplicated, abates after 2-5 days. It may be complicated by grand mal seizures and may progress to delirium (known as delirium tremens).

Element Values

- Alcohol Withdrawal Syndrom (NTDS 36)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.

Resources

Codebook

Source: NTDS, 2019 World Health Organization (WHO)
Data Base Column Name: A_TCODE, A_TCODE_AS_TEXT
Type of Element: String
Length:
Report: #6

Response

Short Answer: Please capture Alcohol Withdrawal Syndrome.

Long Answer: The indication that symptoms begin within 6-48 hours after cessation of alcohol consumption is a generalized timeframe and not an absolute.

There is usually no way to determine exactly when a patient stops drinking or when withdrawal symptoms will start showing.

***If a patient is clearly demonstrating withdrawal, even if outside of this 6–48-hour range, it is the truth of what the patient is experiencing and being treated for and should be reported.**

Question 4

Is it possible to get further clarification on what is considered an in-house injury?

- **Does this mean that hospital visitors that are injured while inside the hospital are excluded? For example, a patient is on his way to the ED because he feels sick and faints, sustaining an injury, before checking in.**
- **Is there a difference between a registered patient vs a non-registered patient who sustain an on-site injury that meets inclusion?**

Response

1. **Definition of In-House Injury**:
    1. Involves a patient already admitted to the ED or acute care area of the hospital, for a separate injury, procedure, or medical issue who sustains an injury while within the hospital premises.
2. **Exclusions from Registry**:
    1. Patients with in-house injuries are excluded from the registry due to skewed data (e.g., admission time, initial vital signs) caused by the new injury's timing.
3. **Inclusion Criteria for Registry**:
    1. Patients in hospital-specific units (e.g., inpatient rehab, geropsych unit) sustaining an injury and subsequently admitted to acute care.
    2. Typically, these cases involve a new account number and admission to a different service.
4. **Visitor or Unregistered Individuals**:
    1. Individuals not previously registered in the ED or hospital who sustain an injury within the premises and subsequently require ED treatment / hospital admission are included in the registry.
    2. Treated similarly to external patients in terms of data collection and treatment.

Question 5

Would this diagnosis on a chest CT meet criteria for the Hospital Event of Pulmonary Embolism?

"Nonocclusive segmental pulmonary emboli within the right middle lobe."

9.25 PULMONARY EMBOLISM

Description

A lodging of a blood clot in the pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system.

INCLUDE:

- Include segmental PE's.
- Include pulmonary imaging positive for fat embolism.

EXCLUDE:

- Exclude subsegmental PE's.

Element Values

- Pulmonary Embolism (NTDS 21)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.
- Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

Resources

Codebook

Source: NTDS
Data Base Column Name: A_TCODE, A_TCODE_AS_TEXT
Type of Element: String
Length:
Report: #6

Response

Short Answer: Please report the hospital event of PE if not diagnosed on arrival.

Long Answer: "Non-occlusive" in the context of a radiologic report, particularly one evaluating for a pulmonary embolism (PE), refers to the fact that while a thrombus (blood clot) may be present, it is not completely obstructing the vessel in which it's located.

The definition does not require complete obstruction for reporting.

Question 6

For an empyema, does it matter where the chest tube was placed?

Are we following the definition of the NHSN operative procedure? Or… if it meets the empyema definition in the data dictionary, do we select "yes" for Organ/space SSI?

The original chest tube was placed in the ED…

Element Values

- Organ/Space Surgical Site Infection (NTDS 19)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.
- An empyema is the result of accumulation or undrained fluid within the pleural cavity that becomes purulent. Enter "YES" for patients that had a chest tube placed and then developed an empyema that required management with placement of a new chest tube (empyema tube), VATS drainage, or thoracentesis with positive culture.

Resources

- CDC NHSN Manual, Chapter 9
- CDC FAQ SSI Events

Codebook

Source: CDC, NTDS
Data Base Column Name: A_TCODE, A_TCODE_AS_TEXT
Type of Element: String
Length:
Report: #6

Definition of an NHSN Operative Procedure:

An NHSN Operative Procedure is a procedure:

- that is included in the ICD-10-PCS and/or CPT NHSN operative procedure code mapping
  And
- takes place during an operation where at least one incision (including laparoscopic approach and cranial Burr holes) is made through the skin or mucous membrane, or entry is through an existing incision (such as an incision from a prior operative procedure)
  And
- takes place in an operating room (OR), defined as a patient care area that met the Facilities Guidelines Institute's (FGI) or American Institute of Architects' (AIA) criteria for an operating room when it was constructed or renovated[10]. This may include an operating room, C-section room, interventional radiology room, or a cardiac catheterization lab.

Response

Short Answer: Please report Organ/Space SSI for this scenario.

Long Answer: The wording under Additional Information regarding reporting an empyema resulting from chest tube placement and then requiring management with placement of a new chest tube, VATS drainage, or thoracentesis with positive culture is an "or" statement.

***Very few chest tubes are placed in an OR/surgical setting due to the often-emergent nature and yet are invasive and can cause problems such as an empyema.**

We are attempting to capture the true picture of the patient and what is occurring during their hospital stay.

Question 7

We have a patient with a self-inflicted stab wound who had a thoracotomy done in the ED prior to transport to the OR. The thoracotomy was for hemorrhage control.

Should we capture the time the thoracotomy was done in the ED or the time he got to the OR for SURGERY FOR HEMORRHAGE CONTROL?

14.25 SURGERY FOR HEMORRHAGE CONTROL TIME

Reporting Criterion

Report on all patients with transfused packed red blood cells or whole blood within first 4 hours after ED/hospital arrival.

Description

Time of first surgery for hemorrhage control within first 24 hours of ED/hospital arrival.

Element Values

- Relevant value for data element.

Additional Information

- Reported as HH:MM military time.
- Procedure start time is defined as the date the incision was made (or the procedure started).
- If unclear if surgery was for hemorrhage control, then consult TMD or operating/consulting/relevant surgeon.
- The null value "Not Applicable" is reported if the data element Surgery for Hemorrhage Control Type is Element Value "1. None."
- The null value "Not Applicable" is reported for patients that do not meet the reporting criterion.

Resources

Codebook

Source: TQIP
Data Base Column Name: MTQIP_SURG_TM
Type of Element: Time (HH:MM Format)
Length: 5
Report: #1

Response

Short Answer: Please capture the time of the first "surgery" for hemorrhage control. In this case, the ED thoracotomy.

Long Answer: A thoracotomy is one of the most invasive procedures that could be done and the only reason it's not performed in the OR is because it was too emergent to wait.

***Many thoracotomy patients do not make it to the OR, and this would be their only surgery.**

Question 8

We are encountering cases that are listing thrombocytopenia as an admission diagnosis. There has been a lot of discussion regarding whether all patients who present with thrombocytopenia are marked as having a Pre-existing Condition of Bleeding Disorder.

I think we are getting hung up on the fact that the labs indicated an event on arrival (therefore present prior to arrival). However, the diagnosis is being made after arrival.

7.10 BLEEDING DISORDER

Description

A group of conditions that result when the blood cannot clot properly.

Element Values

- Bleeding Disorder (NTDS 4)

Additional Information

- Present prior to injury.
- Examples include Factor V Leiden, Hemophilia, thrombocytopenia, and von Willebrand Disease.
- Exclude unspecified bleeding disorders and sickle cell disease.

Resources

Codebook

Source: American Society of Hematology 2015, MTQIP, NTDS
Data Base Column Name: A_COMORCODE
Type of Element: String
Length:
Report: #4

Response

Short Answer: There is a difference between acute and chronic (or PMH) of thrombocytopenia in relation to Pre-existing Conditions.

Long Answer: For the reporting of Pre-existing Conditions, labs alone are not enough to diagnose a bleeding disorder as "past medical history" without a documented diagnosis by a physician noting it as historical.

If a patient truly has this type of chronic disorder, it should be noted in prior charting.

***If this is an issue you are seeing on a frequent basis, it may be something worth feeding back to your providers to help you with clarification and more accurate capture.**

Scenarios

- Pt arrives thrombocytopenic. History and treatment by heme / oncology > YES
- Pt arrives, thrombocytopenic. Review of chart shows long history of thrombocytopenia in labs, no reported diagnosis in past > NO
- Pt arrives, thrombocytopenic. Review of chart shows no history of abnormal labs, no diagnosis in past > NO
- Pt arrives thrombocytopenic. Historically has low platelets at some points, normal at others > NO

Question 9

Can you please clarify whether this would be “Yes” or “No” for Emergency Operation?

We have a patient whose first operation was not emergent but had a second operation after necrotic bowel was found 6 days later. The patient went emergently to the OR for that second surgery. There is no time frame in the definition, nor does it specify if it is only for the first OR visit.

6.7 EMERGENCY OPERATION

Description

An emergency case is commonly performed as soon as possible after the patient sustained an injury.

Element Values

- Yes (Y)
- No (N)

Additional Information

- This is identified as emergent by the American Society of Anesthesiologists (ASA) Class.
- The presence of an "E" after ASA Class indicates an emergent operation. Report Element Value "Yes (Y)" if the surgeon and/or anesthesiologist report the case as emergent after arrival to your hospital.

Resources

- ASA Physical Status Classification System

Codebook

Source: MTQIP
Data Base Column Name: MTQIP_E_OPERATE
Type of Element: String
Length: 1
Report: #1

Response

Short Answer: Please report "Yes" for Emergency Operation.

Long Answer: There is no specification of time included in the definition for Emergency Operation. If anesthesia or surgery documents that a surgery is emergent it would be captured regardless of date / time this occurs.

The wording of "commonly performed as soon as possible after the patient sustained an injury" is a guideline and what is usual for emergent ORs for trauma patients but is not an absolute.

Question 10

For the Pre-existing Condition of Cerebrovascular Accident, is it enough for the medical record to say "CVA with residual deficits," but not have details about what those deficits are, for us to capture as a pre-existing condition?

We have run into a case where "CVA with residual deficits" is documented in the chart but there are no details from nursing, therapies, or providers about the specifics of those deficits.

7.11 CEREBROVASCULAR ACCIDENT (CVA)

Description

A history prior to injury of a cerebrovascular accident (embolic, thrombotic, or hemorrhagic) with persistent residual motor, sensory, or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory).

Element Values

- Cerebrovascular Accident (NTDS 10)

Additional Information

- Present prior to injury.

Resources

Codebook

Source: NTDS
Data Base Column Name: A_COMORCODE
Type of Element: String
Length:
Report: #4

Response

Short Answer: Please do not report CVA as a Pre-existing Condition

Long Answer: If there is not enough documentation or evidence to support the patient has persistent residual motor, sensory, or cognitive dysfunction because of the CVA, then you would not report this pre-exiting condition.

If you find that this is a documentation issue across patients, you may consider initiating a PI project.

TQIP Response

Hi Shauna,

Thank you for reaching out to us for assistance. For reference, CVA is defined on page 73 of the 2023 NTDS Data Dictionary, released July 2022.

If there is not enough documentation or evidence to support the patient has persistent residual motor sensory or cognitive dysfunction because of the CVA, then you must report Element Value "2. No." for the CVA data element.

If you find that this is a documentation issue across patients, you may consider initiating a PI project.

Thought Journey

Areas to look at for residual deficits caused by CVA:

- **H&P**
- **ED Provider Note**
- **Consults**
- **PT /OT notes (usually good place to look)**
- **Case Management notes**
- **Nursing assessments**

Feedback

Data Abstraction Staff Meeting

Ann Arbor, MI
June 6, 2023

Announcements

Jill Jakubus

Disclosures

Salary support for MTQIP from BCBSM/BCN and the State of Michigan

- **Shauna Di Pasquo**
- **Jill Jakubus**

No Photos Please

Slides Online

M·TQIP

Home | Membership | Calendar | Resources | Leadership | Contact Us

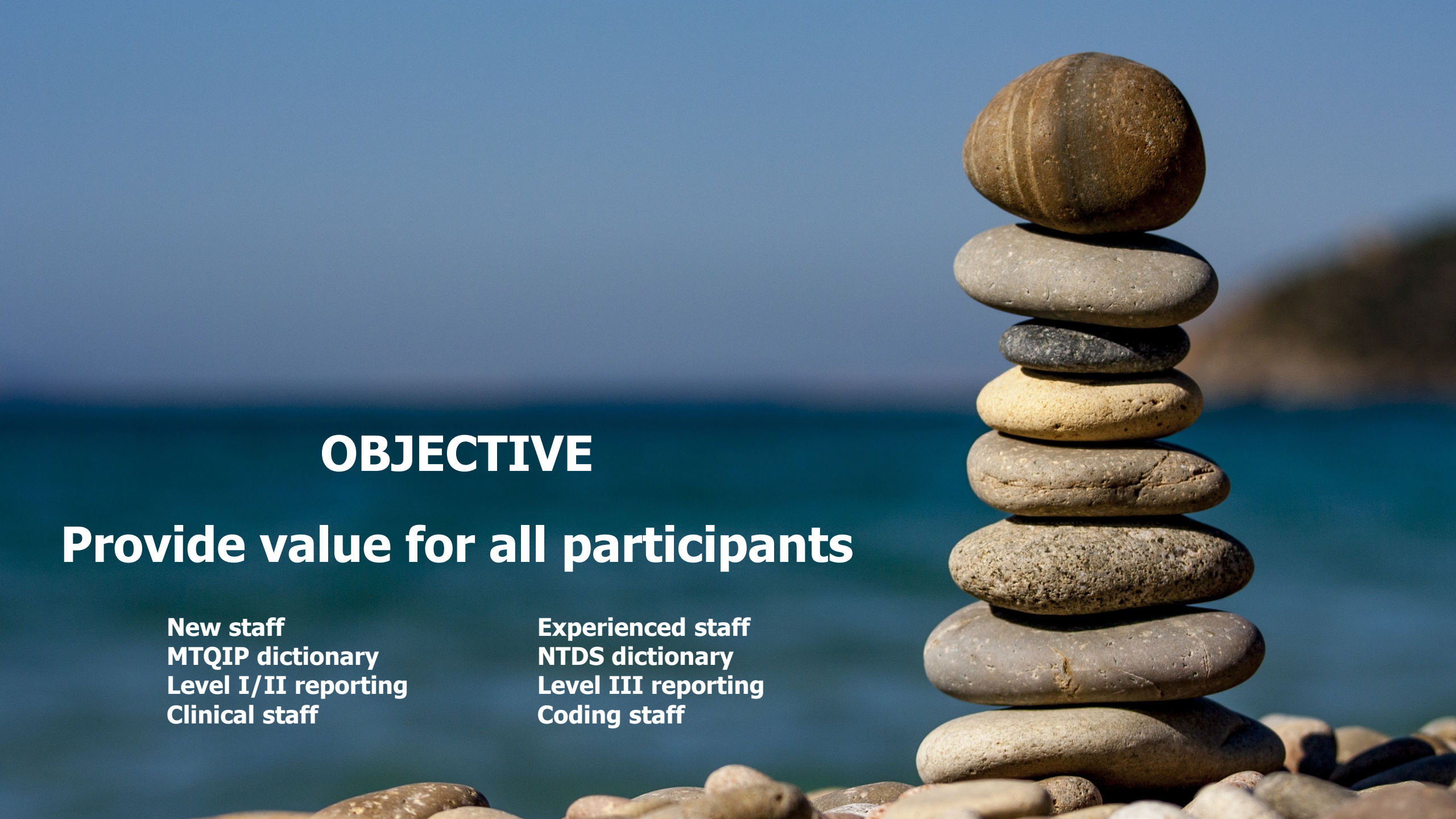
SLIDES

MEETING SLIDES

2023	**|**	Feb	May	June	Oct
2022	**|**	Feb	May	June	Oct

7 business days

Stop the line



OBJECTIVE

Provide value for all participants

New staff
MTQIP dictionary
Level I/II reporting
Clinical staff

Experienced staff
NTDS dictionary
Level III reporting
Coding staff

Content Distribution

- **2.25 hours – In person education (June)**
- **0.75 hours – In person networking (June)**
- **2.00 hours – Virtual education (Dec)**

5 hrs.

Agenda

- Announcements
- 2023 Performance Index Progress
- Challenging Questions
- Lunch
- 2024 Performance Index Updates
- 2024 MTQIP Data Dictionary Requests

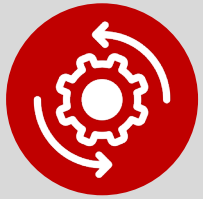
Events

- **July – State of Michigan report release**
- **Aug 4 – Optional data submission due**
- **Dec – Abstraction staff education event**

AIS 2015 Transition

Announce

ACS TQIP April email. MTQIP May and June meetings.



Implement

Work with your registry vendor. Staff training. Code/model updates.

Go Live

All MTQIP centers transition to AIS 2015 together with Jan 1, 2025 admissions.

Research in Progress

- **Highlights work members**
- **MTQIP collaborative dataset**
- **Improve care**

Major article

Reusing personal protective equipment (PPE) did not increase surgical site infection in trauma surgical patients during the COVID-19 pandemic: A retrospective cohort study in Michigan Trauma Centers

Evan Gorgas MD *, Heather Klepacz MD #, Shawn Dowling DO, Roger Ramcharan MD, PhD, Laszlo Hoesel MD, Jeffrey Walker MD, William J. Curtiss MD

Department of Trauma, Acute, and Critical Care Surgery, Trinity Health, Ann Arbor, MI

Key words:
Surgical mask
SSI
Injury
Michigan Trauma Quality Improvement Program
Operative trauma

A B S T R A C T

Background: Reuse of personal protective equipment (PPE), masks more specifically, during the COVID-19 pandemic was common. The primary objective of this study was to compare pre-pandemic surgical site infection (SSI) rates prior to reuse of PPE, to pandemic SSI rates after reuse of PPE in trauma surgical patients.
Methods: A retrospective cohort analysis collected from the Michigan Trauma Quality Improvement Program database was performed. The pre-COVID cohort was from March 1, 2019 to December 31, 2019 and post-COVID cohort was March 1, 2020 to December 31,2020. Descriptive statistics were used to assess differences between variables in each cohort.
Results: Nearly half (49.8%) of our cohort (n = 48,987) was in the post-COVID group. There was no significant difference in frequency of operative intervention between groups ($p > .05$). There was no significant increase ($p > .05$) between pre- and post-COVID cohorts for superficial, deep, or organ space SSI when reuse of masks was common.
Conclusion: Reuse of PPE did not lead to an increase in SSI in surgical patients. These findings are consistent with previous studies, but the first to be described in the trauma surgical patient population. Studies such as this may help inform further discussion regarding PPE usage as we continue to emerge from the current pandemic with the continuous threat of future pandemics.

Center	Author(s)	Topic	Status
Corewell Butterworth	Chapman/Eickholtz	Cracked Ribs and COVID: The effect of COVID-19 on rib fracture patients in Michigan	Accepted 69th Annual MCOT & MCACS
	Miller	Outcomes of simultaneous versus staged IMN nailing fixation of multiple long bone lower extremity fractures	Manuscript accepted to Injury
	Chapman	Trauma Volume, Mechanism, Race and Socioeconomic Status Pre and Post COVID	Manuscript update
	Chapman	Mental Health and Substance Use of Trauma Patients Pre and Post COVID	Manuscript update
Covenant Health Care	Sharpe	Incidence of pulmonary embolism in liver trauma	New
DMC Detroit Receiving	Lee	Impacts of COVID-19 on spinal cord injuries	New
Hurley Medical Center	Daswani	Resuscitation efficiency by dedicated trauma nurses in the ED	Data analysis
Michigan Medicine	Chung	Hand trauma: A geospatial analysis	Revising submission
Trinity Health Ann Arbor	Hecht	The Clinical Effects Of Chronic Antiplatelet And Anticoagulant Use On Thoracoabdominal Trauma	Accepted 18th Annual Academic Surgical Congress Manscript to follow
	Hecht/Westfall	A Multicenter Study of DDAVP versus Platelet Transfusions for Antiplatelet Agent Reversal in Patients with Traumatic Brain Injury	Accepted 69th Annual MCOT & MCACS Manuscript to follow
	Hecht	Effect of antiplatelet and anticoagulant agents on outcomes following emergent orthopedic surgery for trauma	Manuscript preparation
	Hoesel	Rib fractures in the elderly	Manuscript preparation
	Hecht	Need for 4-Factor prothrombin complex concentrate vs. Andexanet Alfa for the reversal of traumatic brain injuries	Manuscript under review
	Curtiss/Hecht	Is Reversal of Anticoagulants Necessary in Neurologically Intact Traumatic Intracranial Hemorrhage?	Submitted AAST

Center	Author(s)	Topic	Status
Henry Ford	Johnson	EMS vs. private car effect on outcomes	
	Kabbani	Impact of COVID-19 on outcomes in trauma patients	
Michigan Medicine	Oliphant	Infection and long-term outcomes in trauma patients	Analysis
	Scott	Long-term outcomes and trauma policy	
U of M Health - West	Mitchell	Blunt cerebral vascular injury	

Michigan OPEN Collaboration

- Gap patient opioid refill practices
- OPEN has access to MAPS data
- Link MTQIP data to MAPS
- Understand patient refill practices
- Email opt out sent 6/5/23

OPEN

Evidence. Resources. Engagement.

2023 Performance Index Progress

Jill Jakubus

Approach

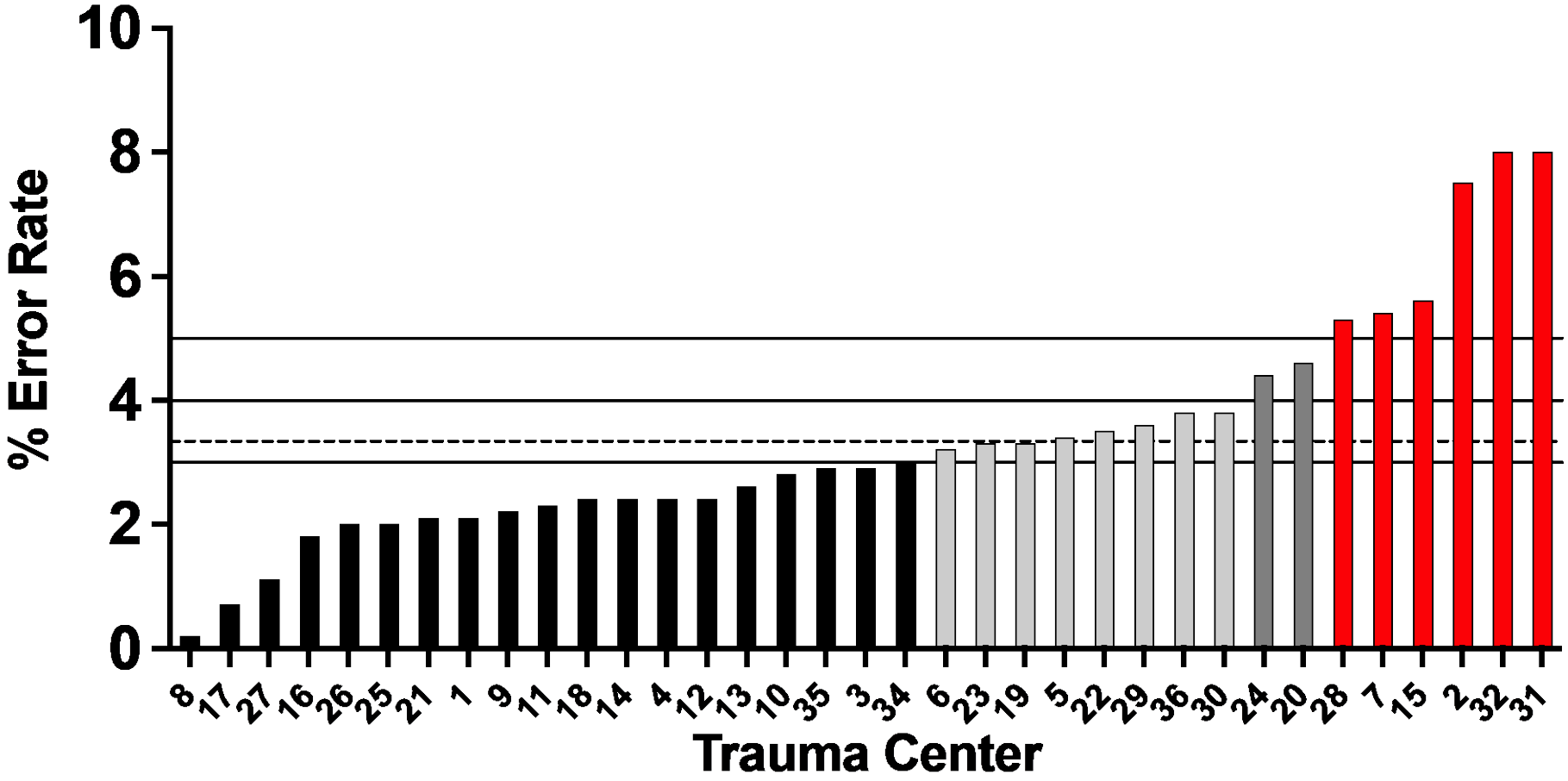
- MTQIP Members receive support for performance
- Show metric
- Center clinical performance
- Data quality performance/helpful feedback
- Concept to optimize data quality
- We all have opportunities for improvement

Aim phone camera to see index on your phone

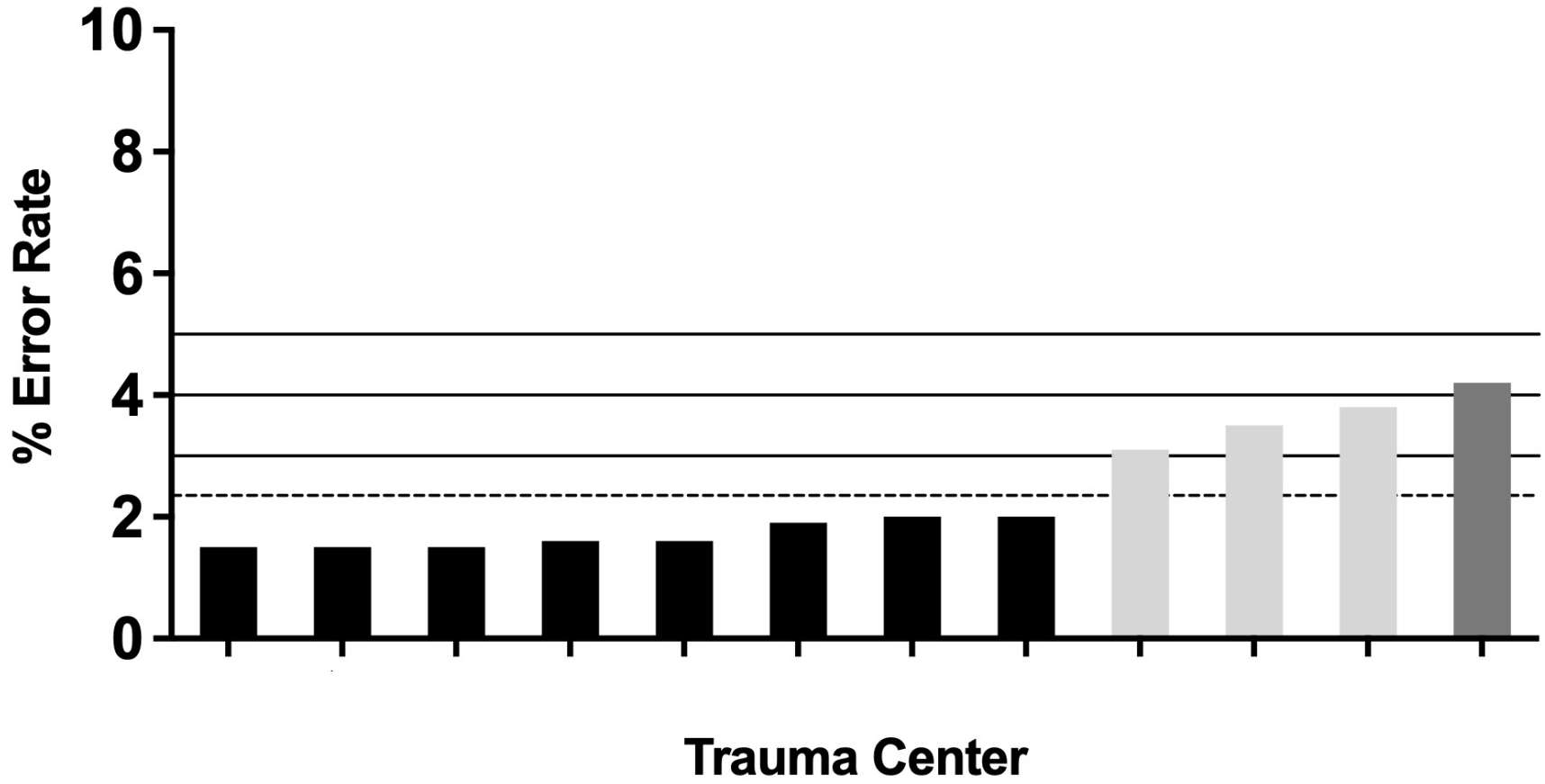
Metric 3 – Data Validation Error Rate

0.0 – 3.0%	10 points
3.1 – 4.0%	8 points
4.1 – 5.0%	5 points
> 5.0%	0 points

Metric 3 - Data Validation Accuracy
Last Processed Report



Metric 3 - Data Validation Accuracy
Last Processed Report



No data validation values: X, X, X, X, X, X, X, X, X, X, X

EMR Source Hierarchy

- EMR tutorial pilot (Dec)
- Center reviews populate source hierarchy
- Successful 4 hrs. visits to 1 hr.
- Aggregated EMR submitted sources

Aim phone camera to see location on website

EMR Source Hierarchy

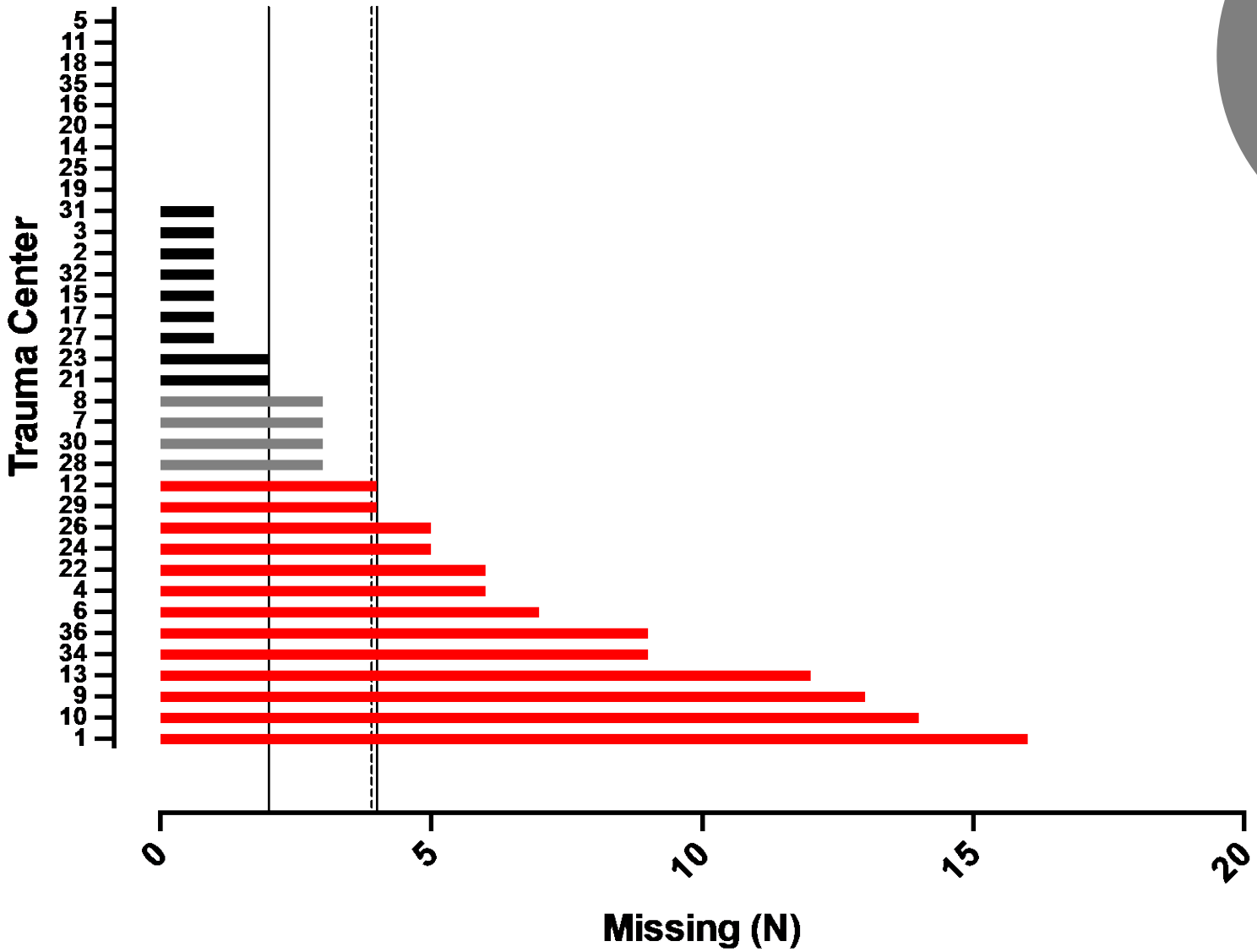
emr	ed trauma response	trauma surgeon	trauma surgeon arrival date time
epic	1) halo (phone app) > upload to dropbox prior to visit 2) chart review > choose encounter > master report at top > edtl > "trauma start" 3) chart review > notes > h&p top of document	1) chart review > edtl > "staff arrived" 2) h&p top of document 3) ed provider note > "trauma at bedside"	1) chart review > edtl > "staff arrived" 2) h&p top of document 3) ed provider note > "trauma at bedside"
epic	snapshot > trauma document timeline	1) snapshot > trauma document timeline 2) ed summary > ed patient timeline 3) ed summary	1) Trauma note 2) Snapshot > trauma document timeline
epic	1) Snapshot > Trauma Timeline > Trauma Activation > Level One (Trauma Code), L2 (Limited) 2) ED provider Note or Trauma Surgeon dictation = HPI	1) Snapshot > Trauma Timeline > Staff Arrival 2) notes review > h&p/consult note	1) Snapshot > Trauma Timeline > Staff Arrival 2) notes review > h&p/consult note
paragon	1) trauma > top left circled 2) ed record > page 11 > trauma level 3) ed record > page 4 > trauma level 4)	1) trauma 2) ed record > page 11 > trauma staff	1) trauma 2) ed record > page 11 > trauma staff

Metric 4 – PI Death Determination Documentation

0 – 2 Deceased pts missing documentation	5 points
3 – 4 Deceased pts missing documentation	3 points
> 4 Deceased pts missing documentation	0 points

Filters
Date range: 7/1/22-6/30/23
Cohort 2 (Admit to trauma)
Exclude DOA

Metric 4 - PI Death Determination
Cohort 2 - Admit to Trauma
7/1/22 - 1/31/23



Drill Down Case List in Dropbox

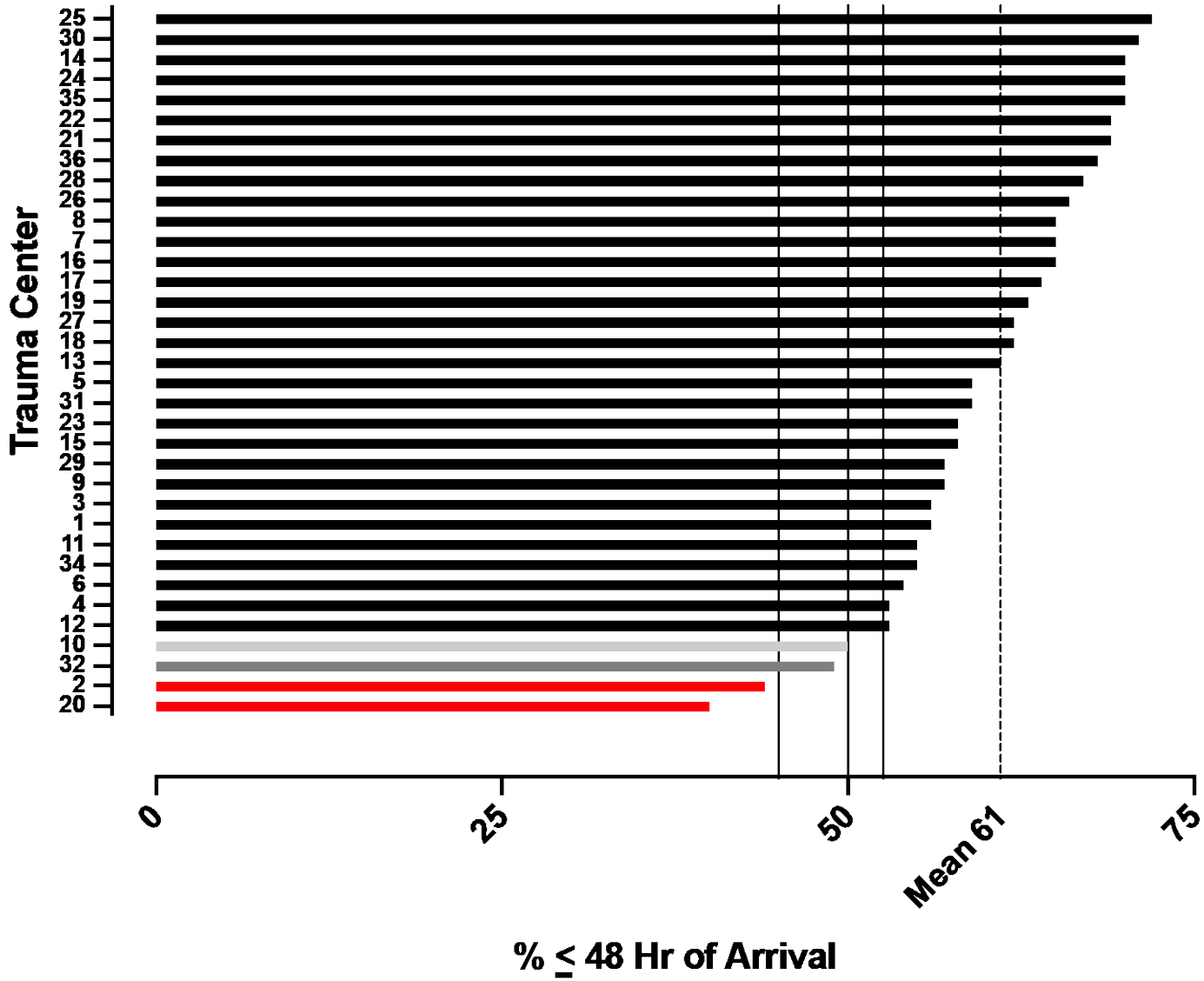
Metric 5 – Timely LMWH VTE Prophylaxis <= 48 hrs.

>= 52.5% of patients	10 points
>= 50.0% of patients	8 points
>= 45.0% of patients	5 points
< 45.0% of patients	0 points

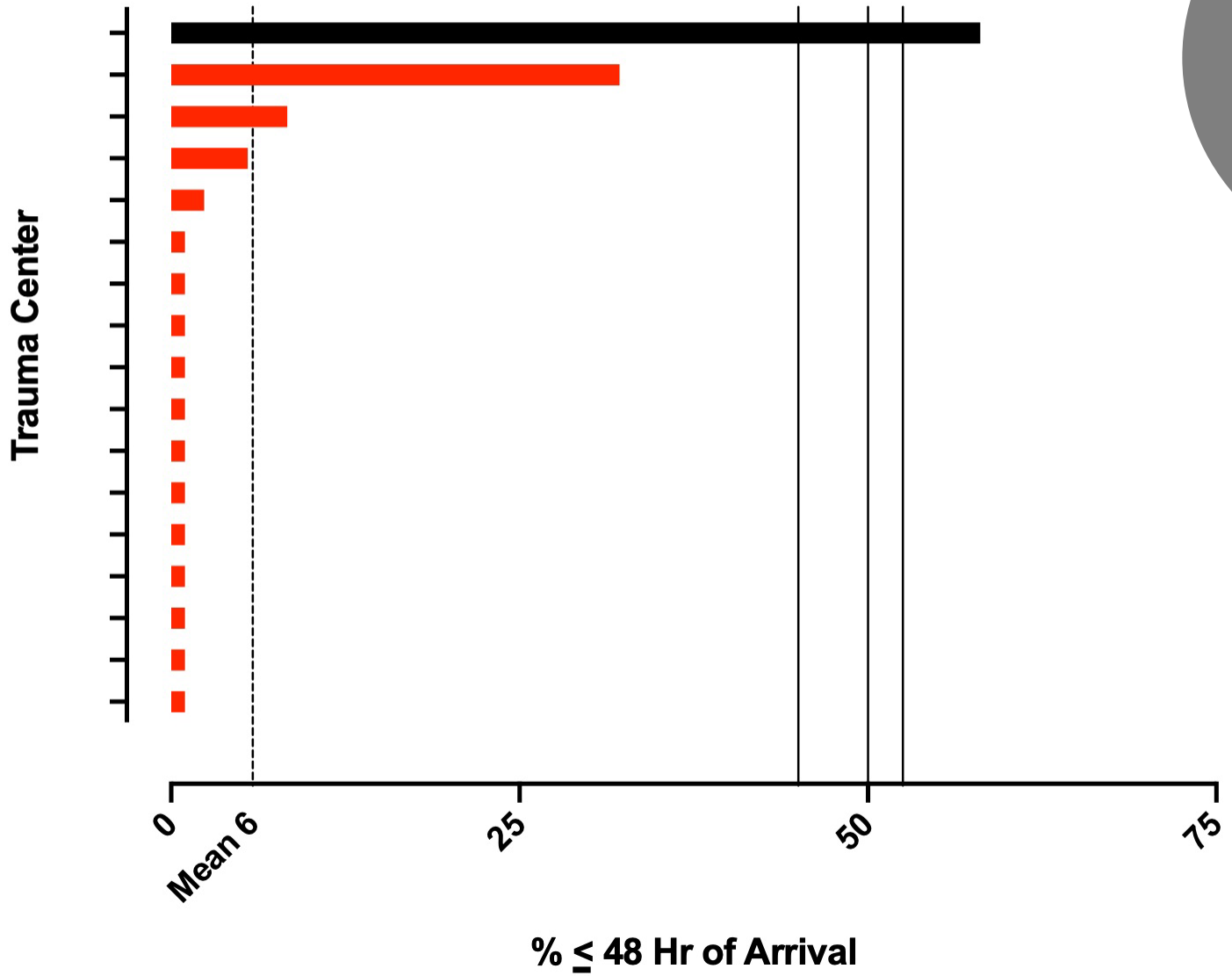
Filters

Date range: 1/1/22 – 6/30/23
Cohort 2 (Admit to trauma) > 2-day LOS
LMWH <= 48 hrs.
Exclude DOA
Exclude transfers out

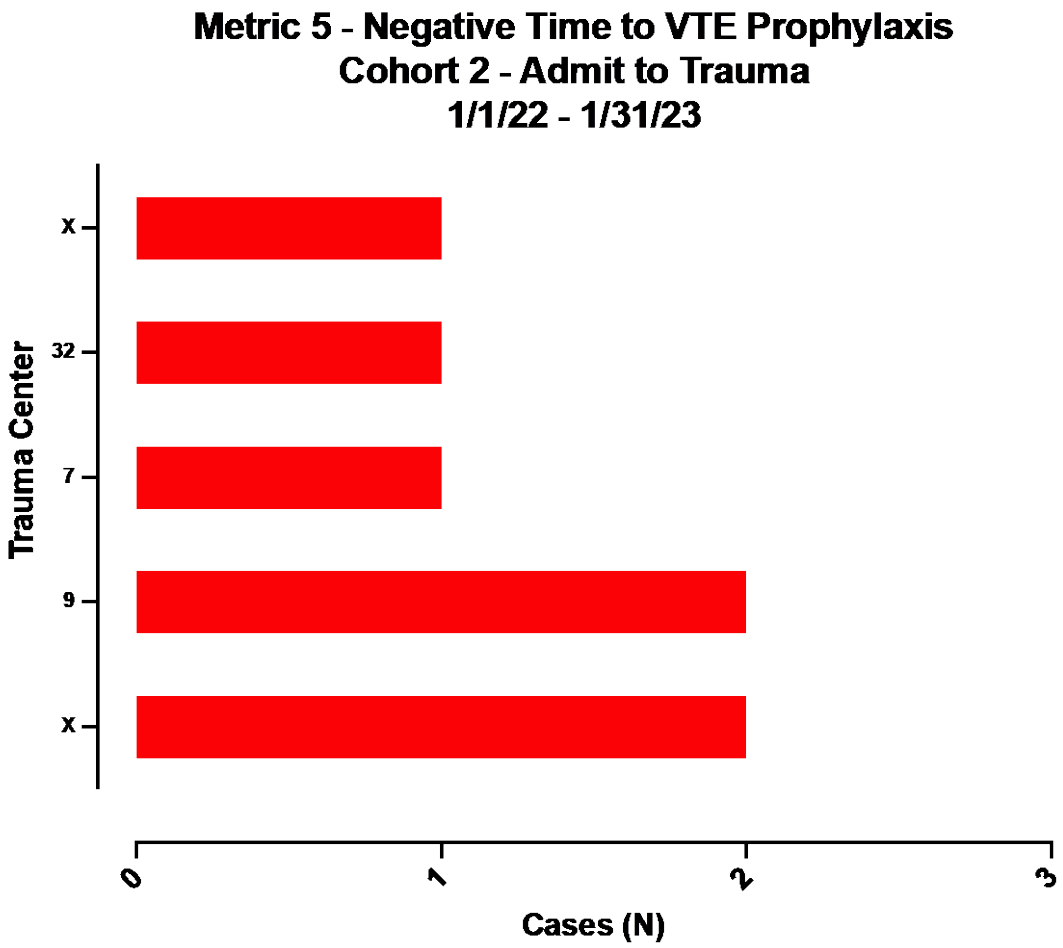
Metric 5 - VTE Prophylaxis LMWH Timeliness
Cohort 2 - Admit to Trauma
1/1/22 - 1/31/23

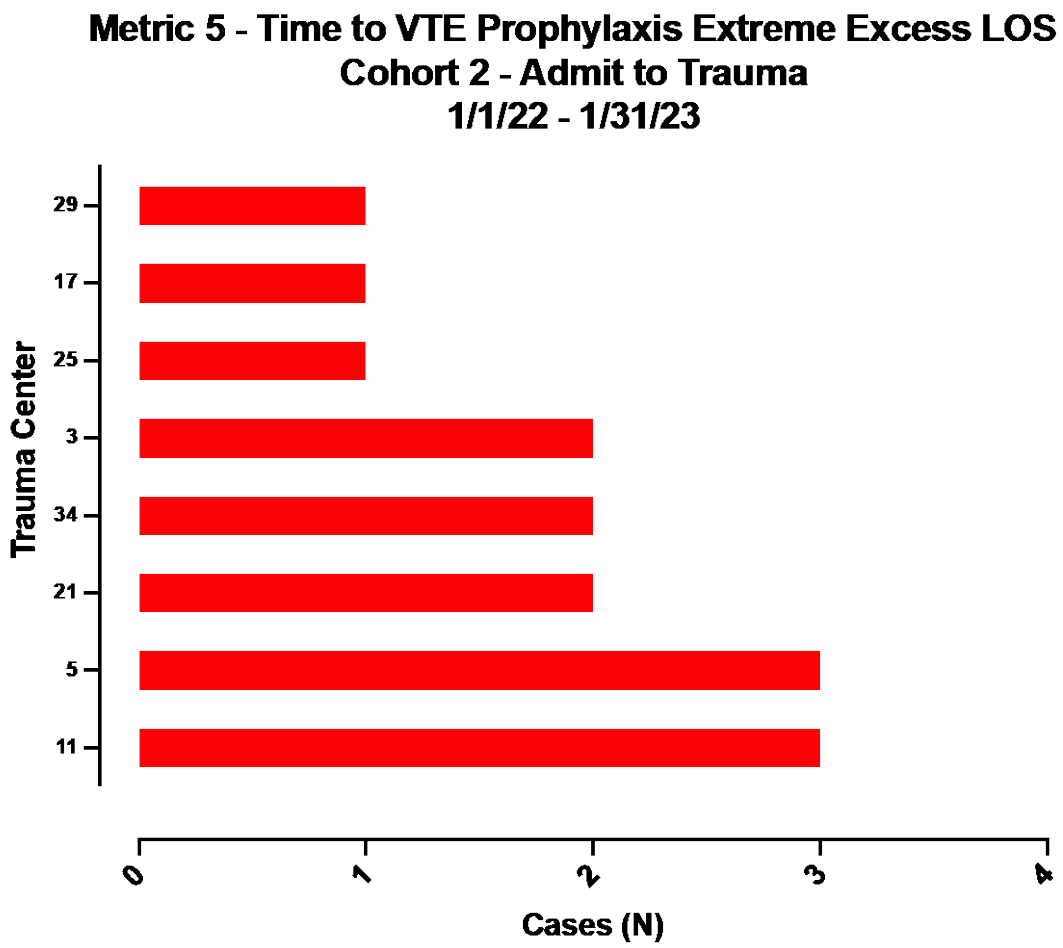


Metric 5 - VTE Prophylaxis LMWH Timeliness
Cohort 2 - Admit to Trauma
1/1/22 - 1/31/23



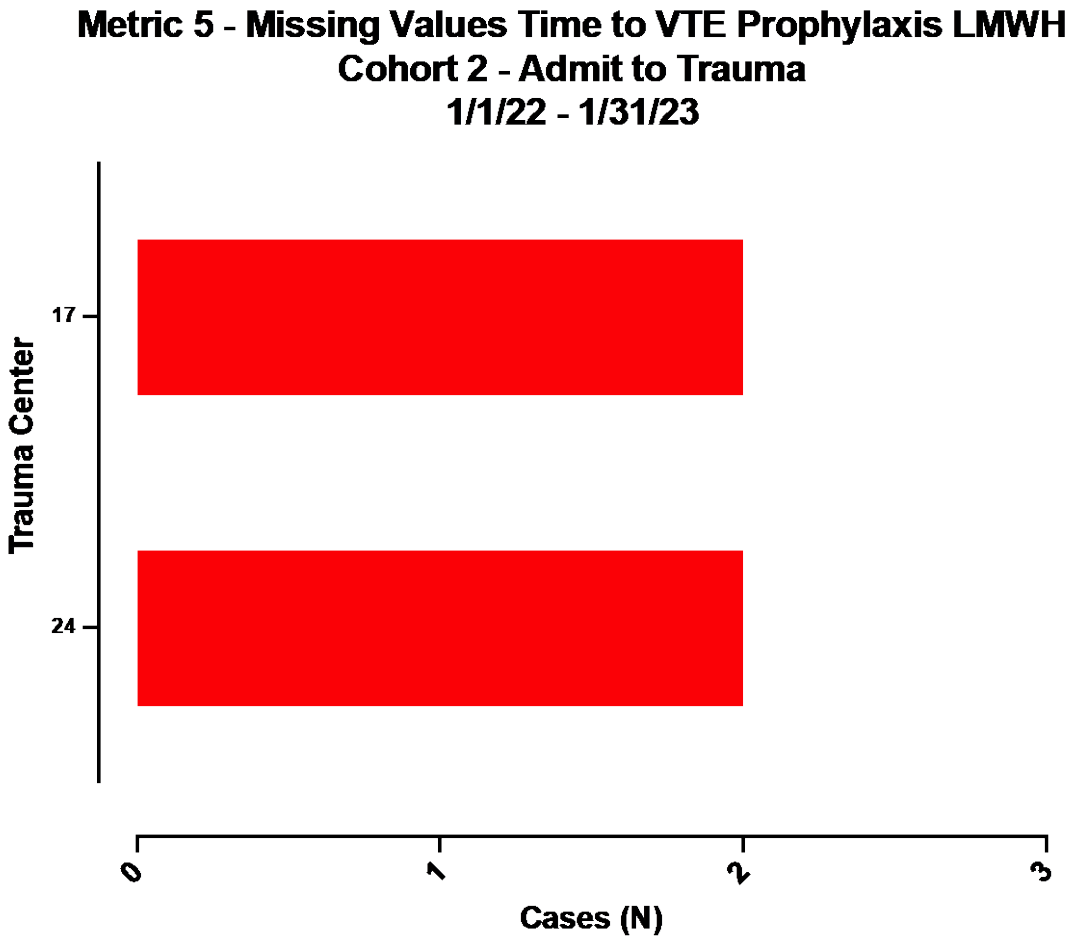
Not NTDS required reporting





A negative calculation occurs when ED arrival date/time occurs after VTE date/time

An extreme calculation occurs when VTE date/time is reported as extreme post-d/c



A missing time to VTE prophylaxis occurs when either ED arrival date/time is missing or VTE date/time is missing (despite reported VTE type)

Helpful hint: you're most likely missing ED arrival time

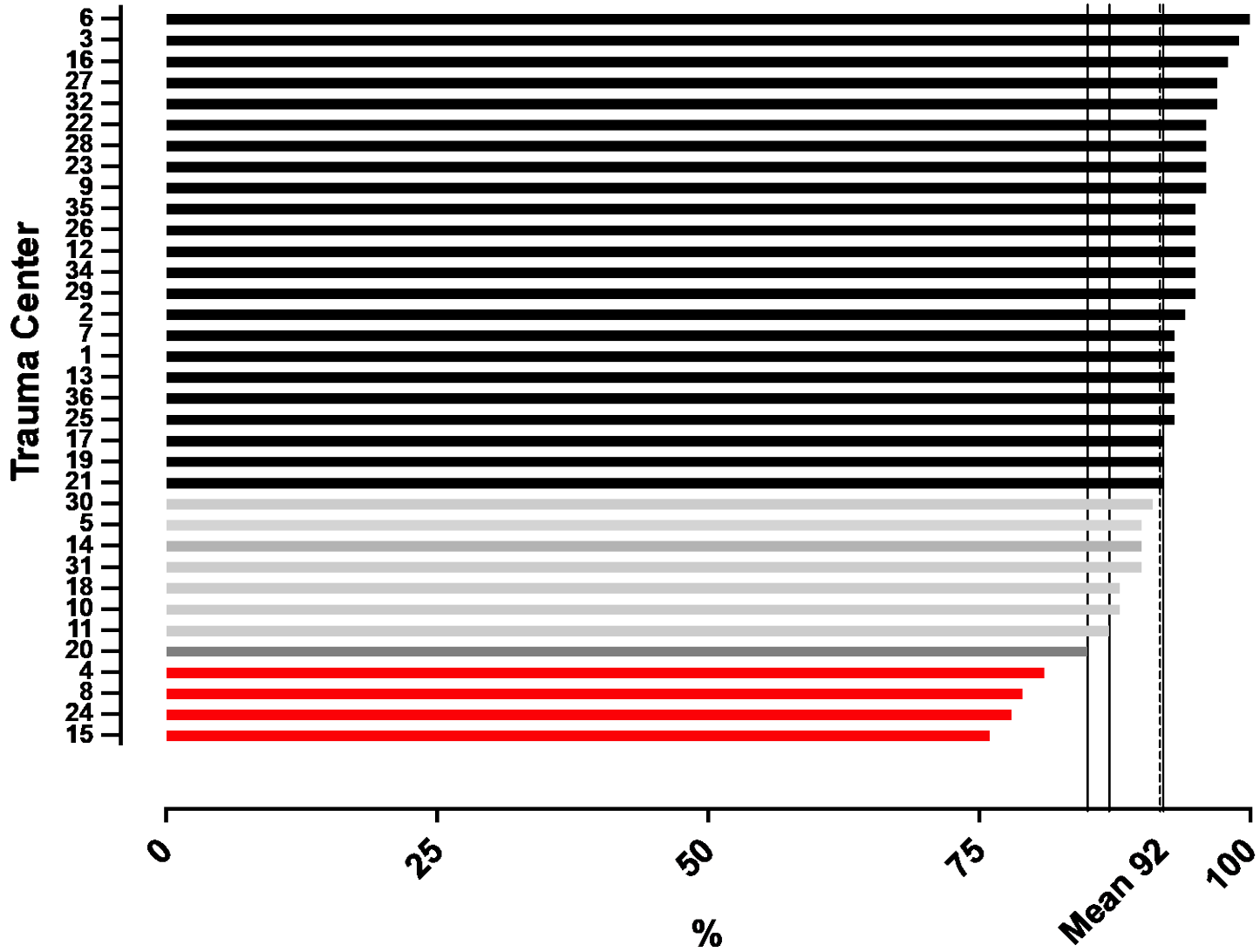
Metric 6 – Timely Geriatric IHF Repair <= 48 hrs.

>= 92.0% of patients	10 points
>= 87.0% of patients	8 points
>= 85.0% of patients	5 points
< 85.0% of patients	0 points

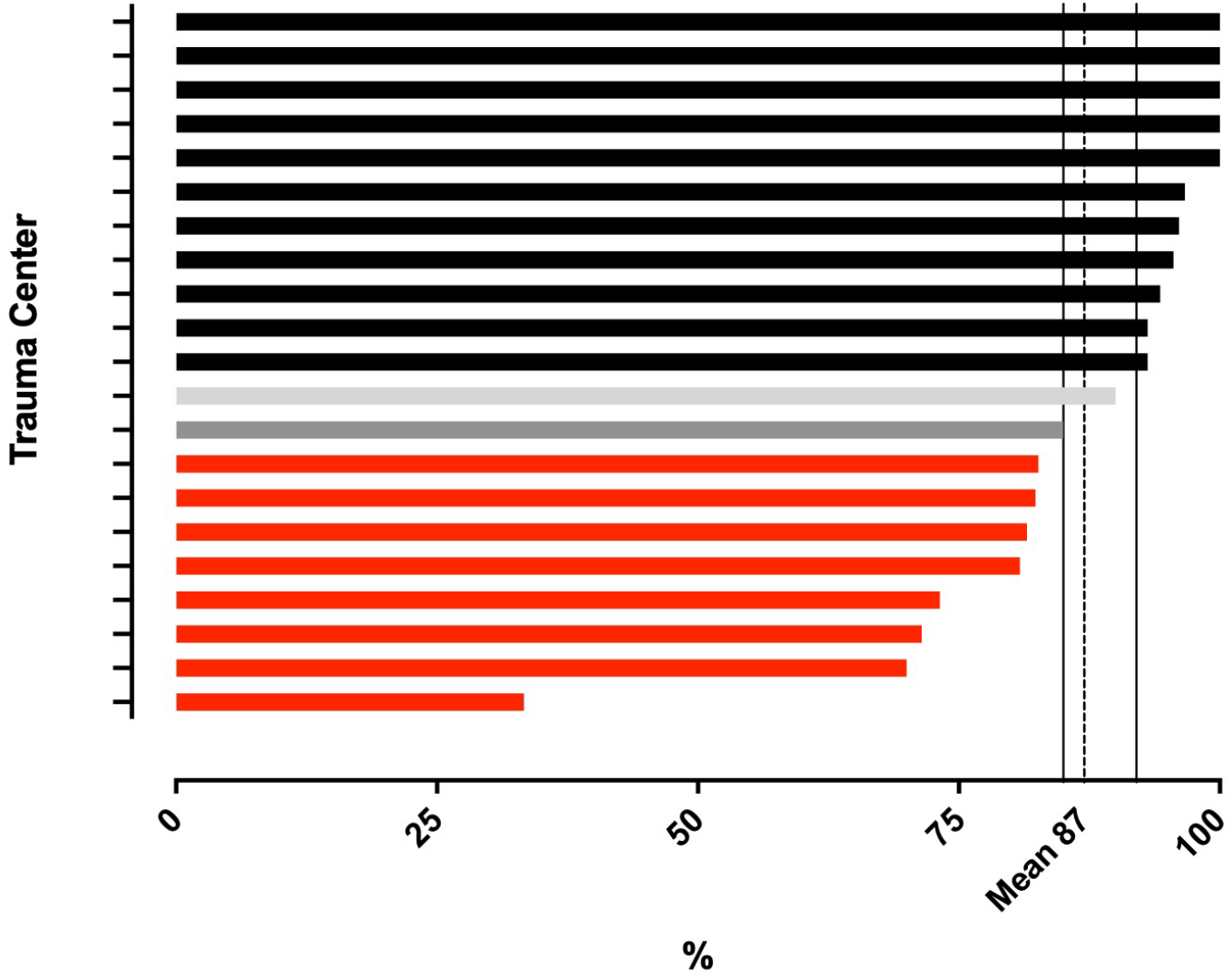
Filters

Date range: 7/1/22 – 6/30/23
Cohort 8 (Isolated hip fracture)
Age >= 65
Exclude DOA
Exclude transfers out
Exclude non-op IHF

Metric 6 - Timely Surgical Hip Repair ≥ 65 years
Cohort 8 - Isolated Hip Fracture
7/1/22 - 1/31/23



Metric 6 - Timely Surgical Hip Repair ≥ 65 years
Cohort 8 - Isolated Hip Fracture
7/1/22 - 1/31/23



Metric 6 – Timely Geriatric IHF Repair <= 48 hrs.

- X unable to calculate due to missing ED time (1 case)
- Incredible work for sample size 2,792

Filters
Date range: 7/1/22 – 6/30/23
Cohort 8 (Isolated hip fracture)
Age >= 65
Exclude DOA
Exclude transfers out
Exclude non-op IHF

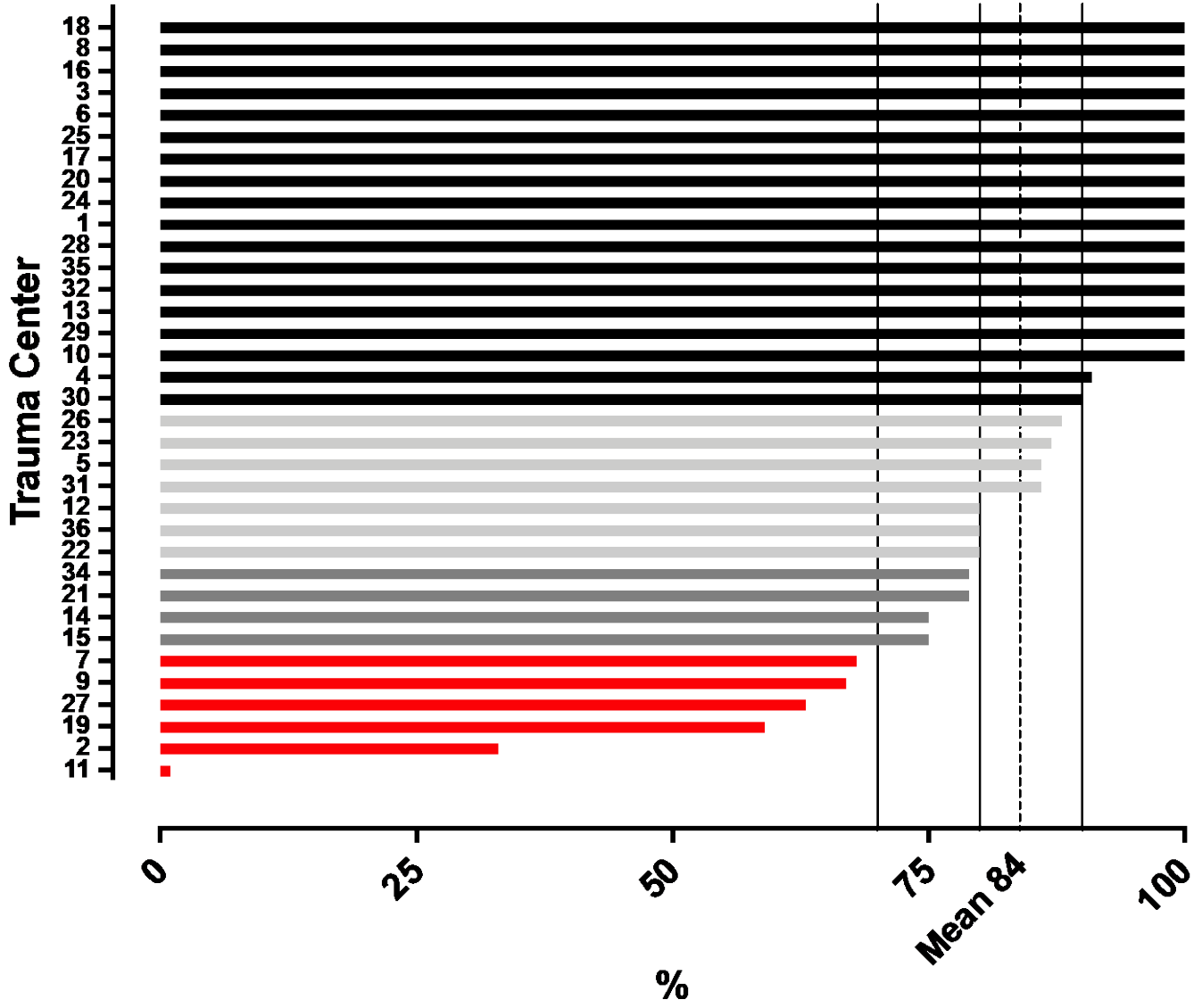
Metric 10 – Timely Head CT <= 120 min

>= 90% of patients	5 points
>= 80% of patients	4 points
>= 70% of patients	3 points
< 70% of patients	0 points

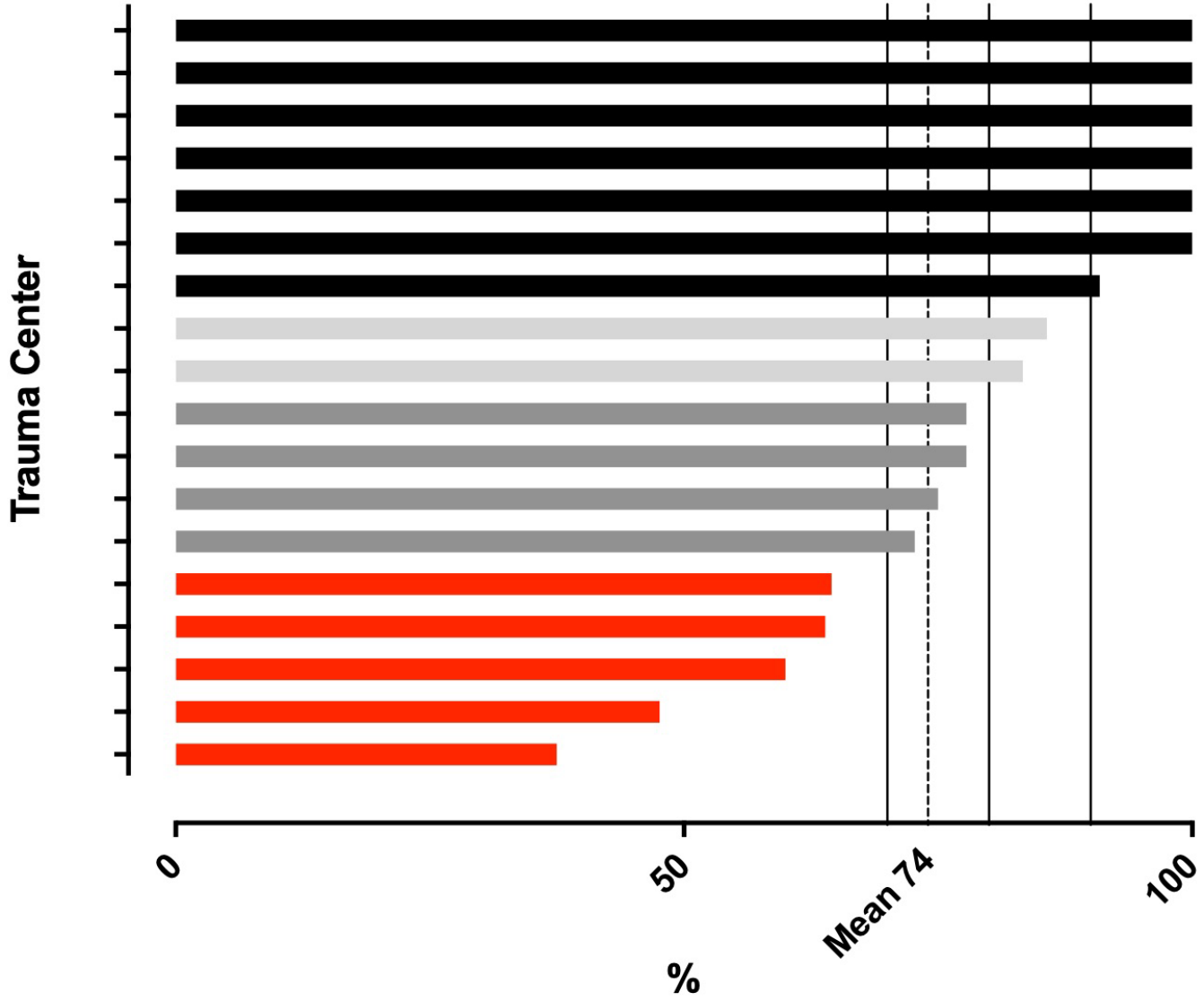
Filters

Date range: 7/1/22 – 6/30/23
Cohort 1 (All)
Include anticoagulation pre-injury (warfarin, DTI, XaI)
Exclude DOA
Exclude transfers in and direct admits

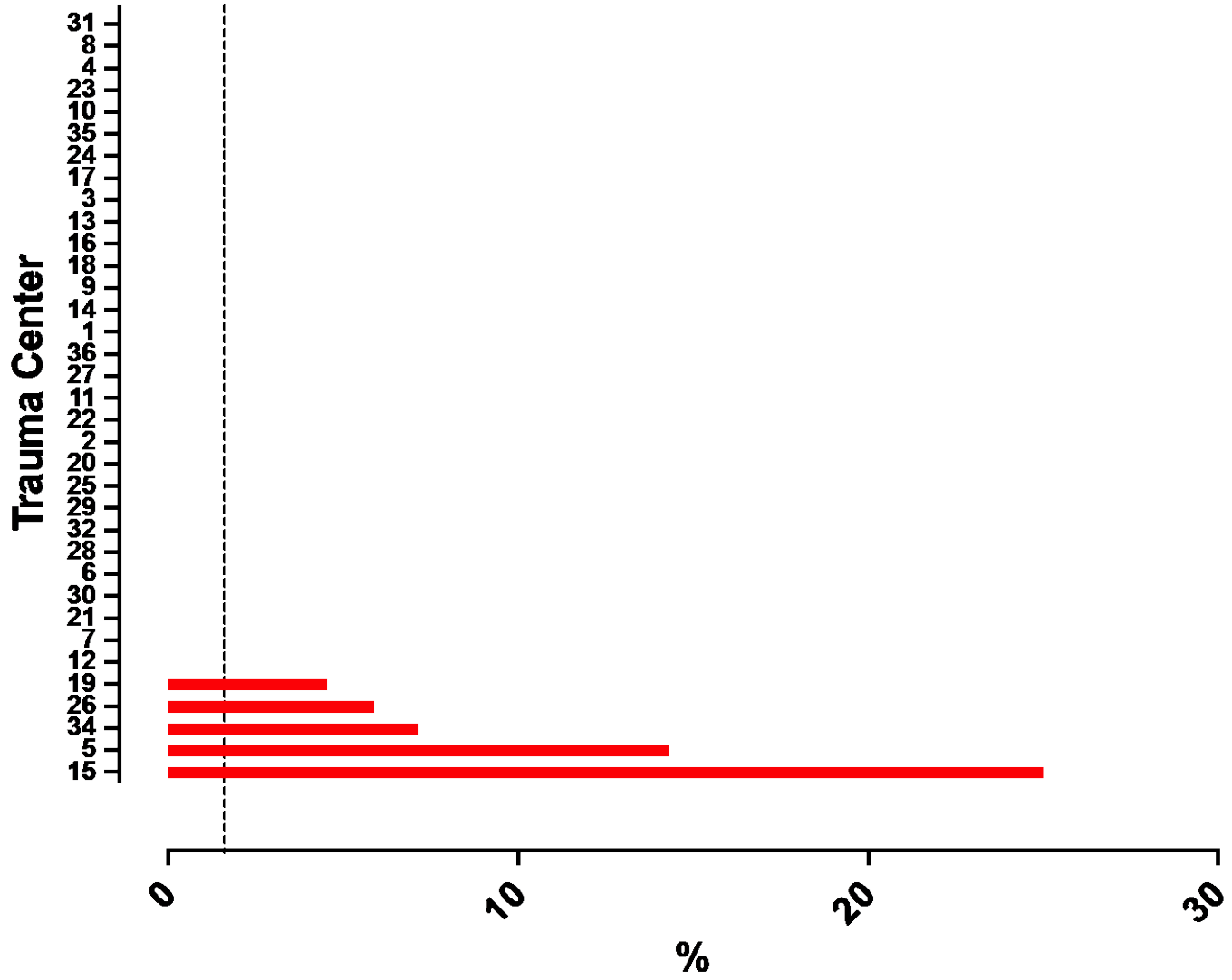
Metric 10 - ED Head CT ≤ 120 min
Cohort 1 - MTQIP All on Anticoagulant (Excluding ASA)
7/1/22 - 1/31/23



Metric 10 - ED Head CT ≤ 120 min
Cohort 1 - MTQIP All on Anticoagulant Therapy
7/1/22 - 1/31/23



ED Head CT Missing - Code, Date or Negative Time
Cohort 1 - MTQIP All, TBI on Anticoagulant (Excluding ASA)
7/1/22 - 1/31/23



Drill Down Case List in Dropbox

Metric 10 – Timely Head CT <= 120 min

Missing time to head CT

- X missing head CT date and time (1 case)
- X missing head CT time (1 case)

Filters

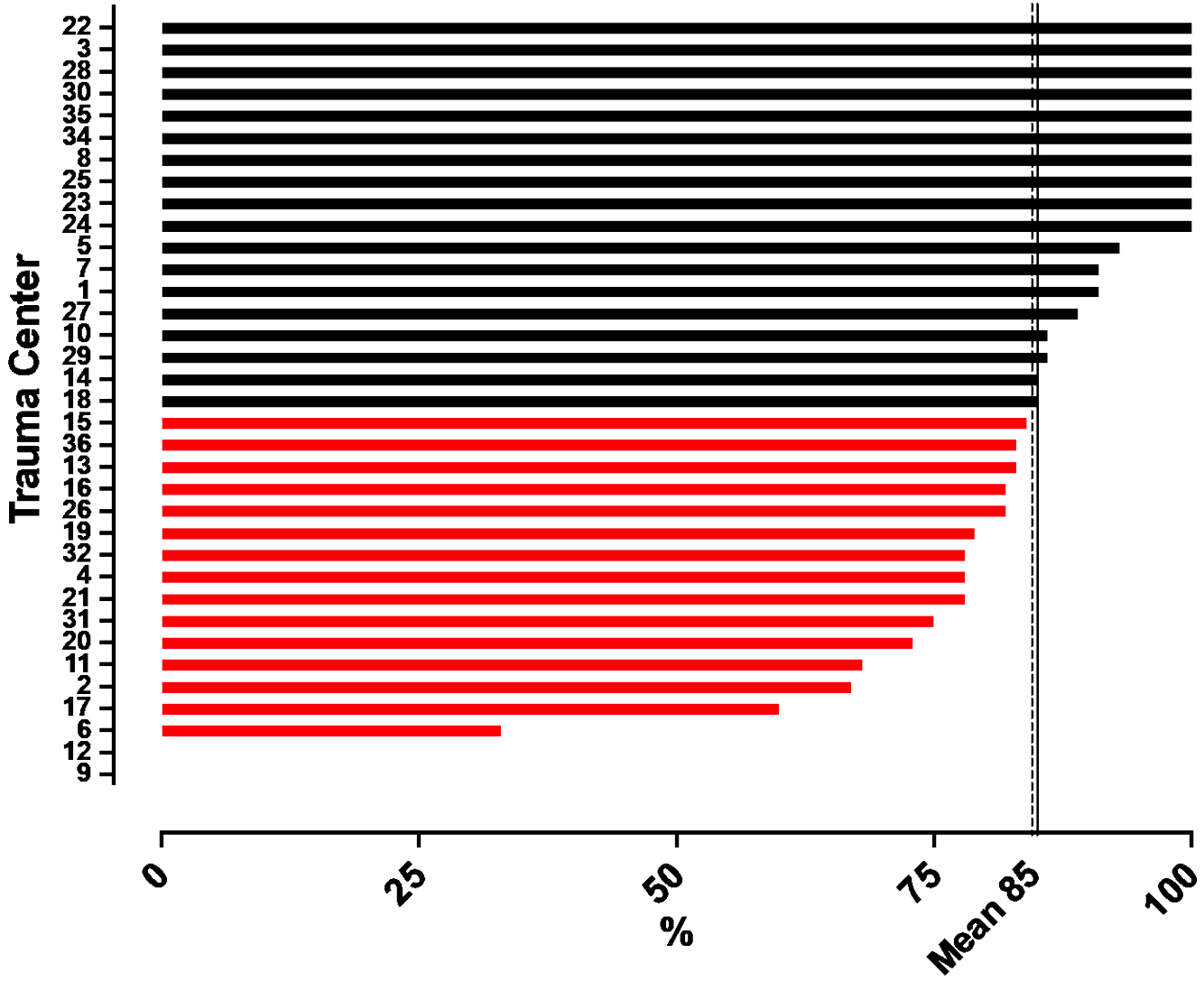
Date range: 7/1/22 – 6/30/23
Cohort 1 (All)
Include anticoagulation pre-injury (warfarin, DTI, XaI)
Exclude DOA
Exclude transfers in and direct admits

Metric 11 – Timely Antibiotic Femur/Tibia Fx <= 90 min

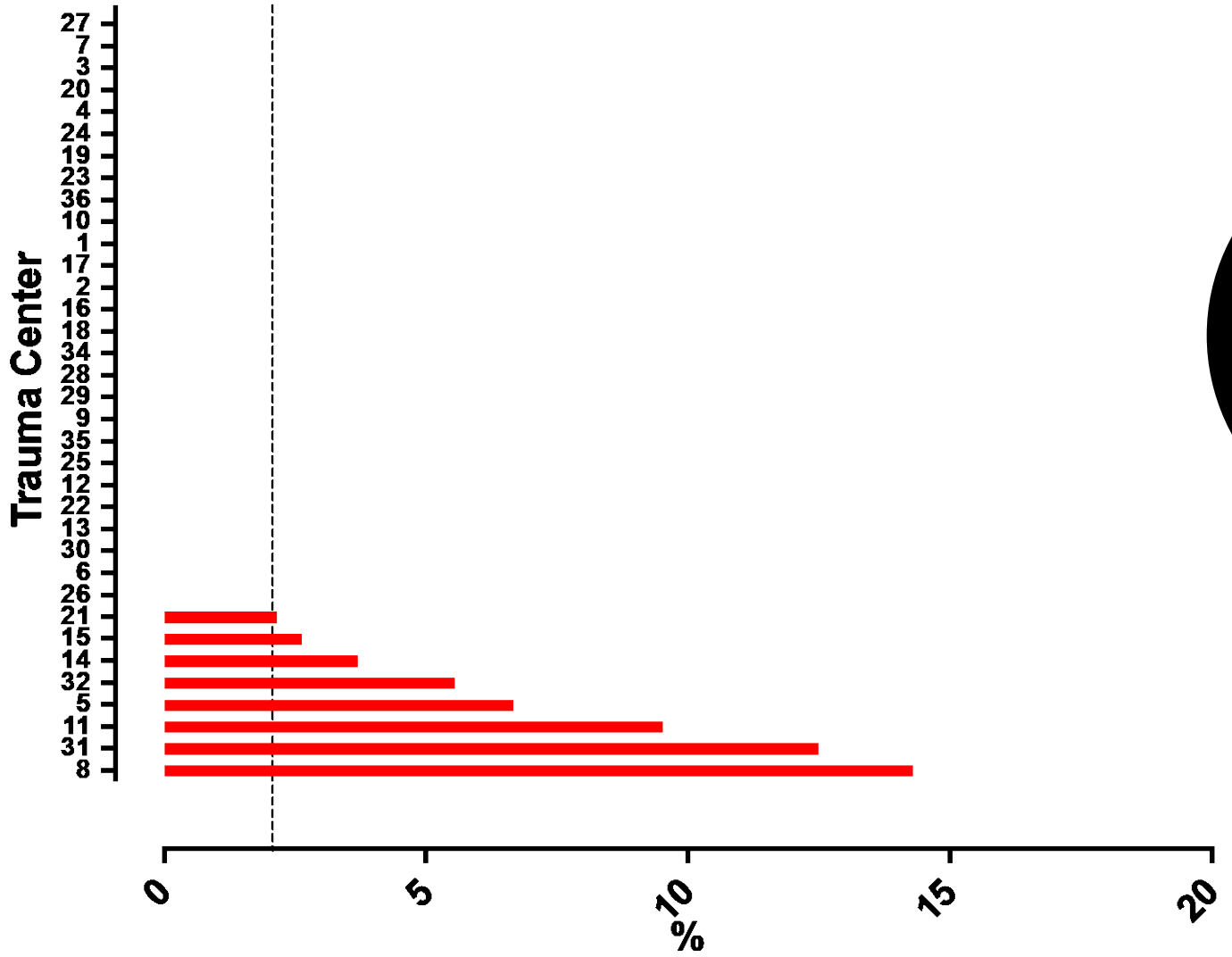
>= 85% of patients	10 points
< 85% of patients	0 points

Filters
Date range: 7/1/22 – 6/30/23
Cohort 1 (All)
Exclude DOA
Exclude transfers in, direct admits, death in ED

Metric 11 - Open Fracture - Time to Abx ≤ 90 min
Cohort 1 - MTQIP All
7/1/22 - 1/31/23



Open Fracture - Missing Type, Date or Time
Cohort 1 - MTQIP All
7/1/22 - 1/31/23



Drill Down Case List in Dropbox

Metric 11 – Timely Antibiotic Femur/Tibia Fx <= 90 min

- 75% missing (25/33 cases)
- X negative value, possible in route abx (1 case)
- Mean 33 min (7 cases)

Not NTDS required reporting

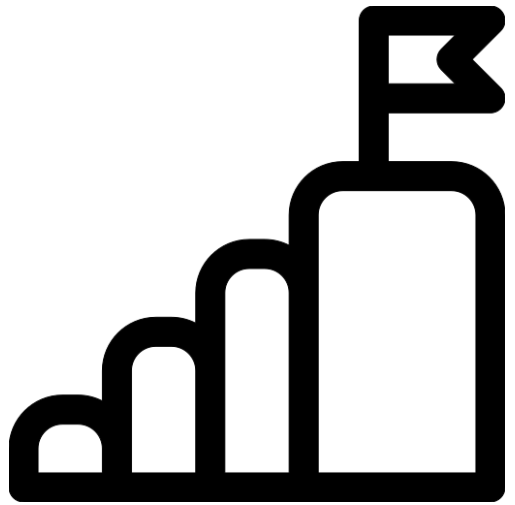
Filters
Date range: 7/1/22 – 6/30/23
Cohort 1 (All)
Exclude DOA
Exclude transfers in, direct admits, death in ED

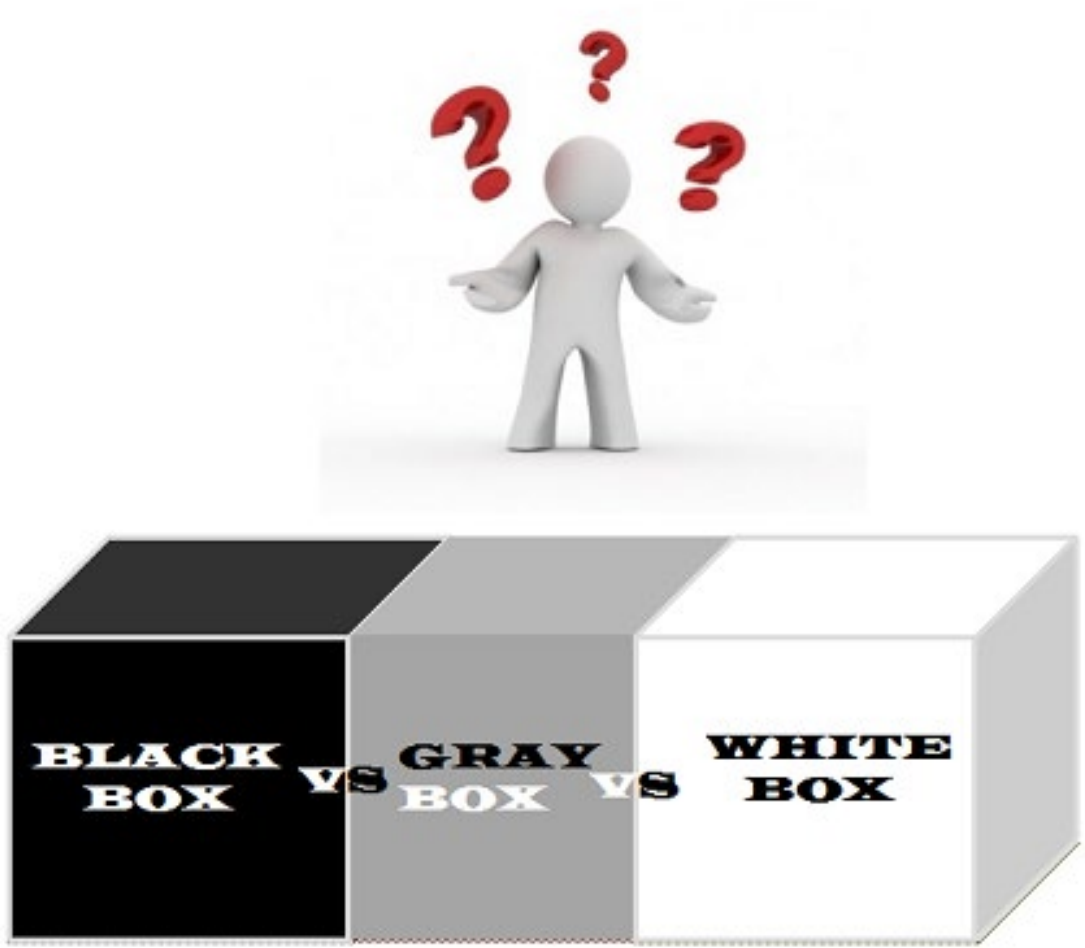
Challenging Questions

Shauna Di Pasquo

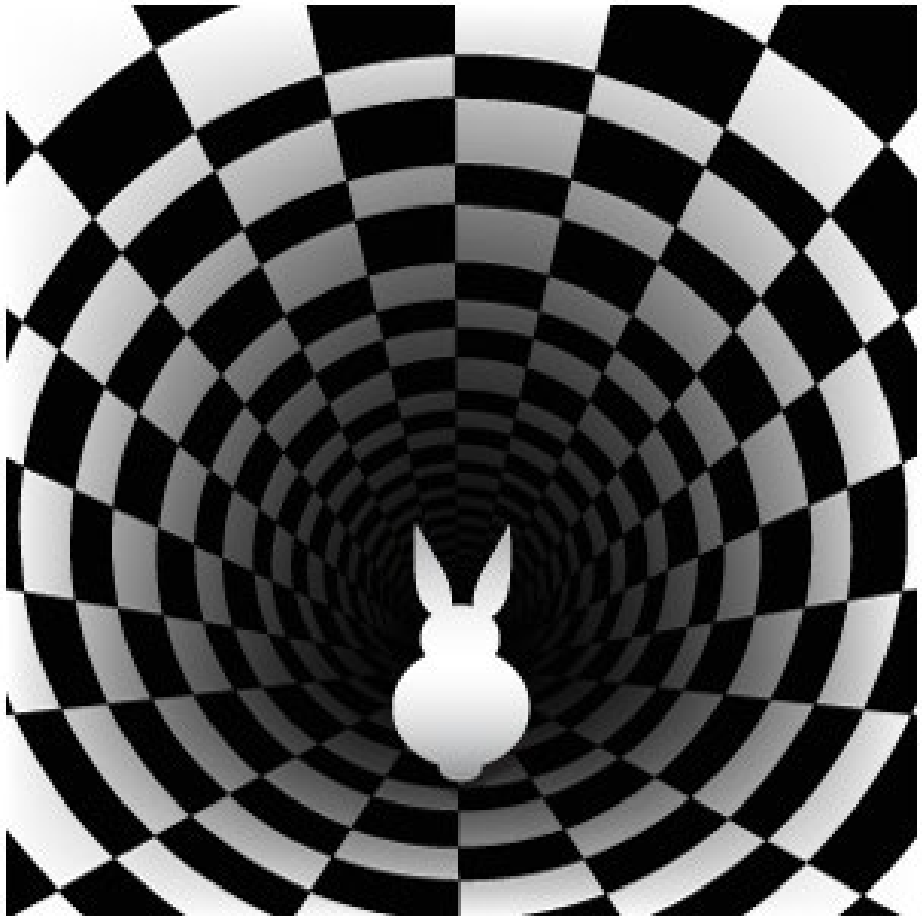
Instructions

- Show questions submitted to MTQIP
- Definition
- Your response via poll
- Provide response received
- Provide answer and reasoning




BLACK BOX
VS
GRAY BOX
VS
WHITE BOX

We’ve all been there…



slido

Join at

slido.com

#trauma

Question 0

What is your favorite color?

- Blue
- Yellow
- Green

*** Select option and click send

Response

Answer: Blue

****It's my favorite anyway so I get to pick…**

Question 1

For Surgery for Hemorrhage Control, what should be reported?

Patient in MVC. MULTI extremity and rib fxs. MTP initiated in ED for hypotension. +FAST x2. To OR for exploratory lap due to "+ FAST and hemorrhagic shock". Negative abdominal findings / no injuries. No repair or abdominal procedures required. Only actual OR procedure was closure of LE laceration. OR blood loss 10cc.

- **1. None**
- **2. Laparotomy**
- **5. Extremity**

14.23 SURGERY FOR HEMORRHAGE CONTROL TYPE

Reporting Criterion

Report on all patients with transfused packed red blood cells or whole blood within first 4 hours after ED/hospital arrival.

Description

First type of surgery for hemorrhage control within the first 24 hours of ED/hospital arrival.

Element Values

1. None
2. Laparotomy
3. Thoracotomy
4. Sternotomy
5. Extremity
6. Neck
7. Mangled extremity/traumatic amputation
8. Other skin/soft tissue
9. Extraperitoneal pelvic packing

Additional Information

- If unclear if surgery was for hemorrhage control, then consult TMD or operating/consulting/relevant surgeon.
- The null value "Not Applicable" is reported for patients that do not meet the reporting criterion.
- Element Value "1. None" is reported if Surgery for Hemorrhage Control Type is not a listed Element Value option.

Response

Answer: 2. Laparotomy

MTQIP team discussed capturing actual procedure performed vs procedure indication.

Patient was taken to OR and ex lap done for expected hemorrhage control per documentation (procedure indication).

Capture of this procedure is the truth that happened to the patient and is a significant occurrence in their trauma care.

Procedure due to +FAST without injury can lead to center looking into the way FAST exams are being performed > opportunity for improvement

Question 2

For Hospital Event of Pulmonary Embolism, what should be reported?

Patient in MVC. Extremity/rib fxs, renal/hepatic lacs, HPTX, pleural effusions. Ex lap x2. Thrombectomy and stenting for popliteal artery occlusion

Day 7 CT: "Small pulmonary artery filling defect in the superior segment of the right lower lobe. No CT evidence for right heart strain. While typically this would represent pulmonary embolism, also consider in situ thrombosis given that this is an isolated filling defect associated with complete pulmonary consolidation"

Physician documentation of "in situ thrombus"

- **Yes**
- **No**

9.25 PULMONARY EMBOLISM

Description

A lodging of a blood clot in the pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system.

INCLUDE:

- Include segmental PE's.
- Include pulmonary imaging positive for fat embolism.

EXCLUDE:

- Exclude subsegmental PE's.

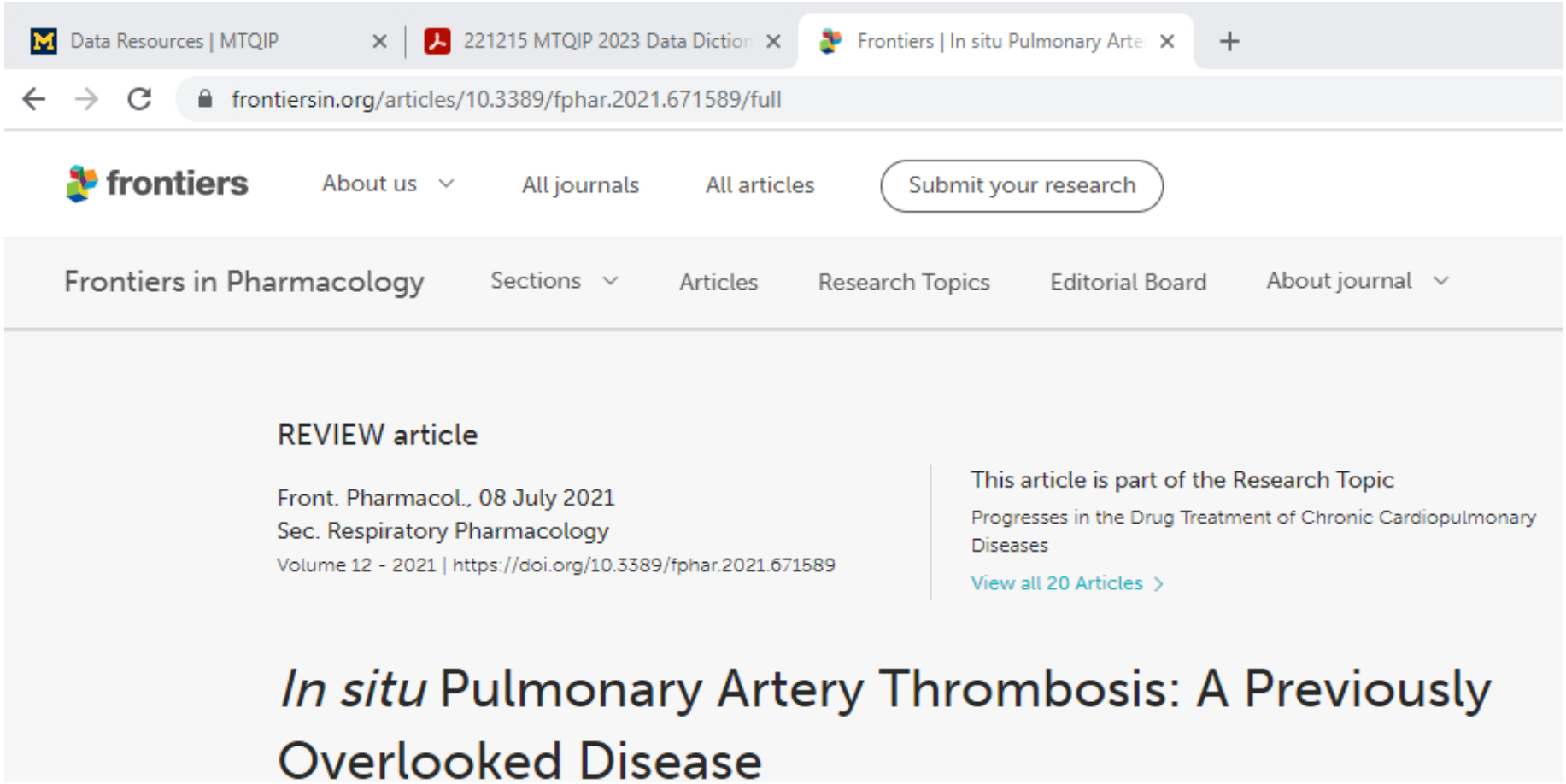
Element Values

- Pulmonary Embolism (NTDS 21)

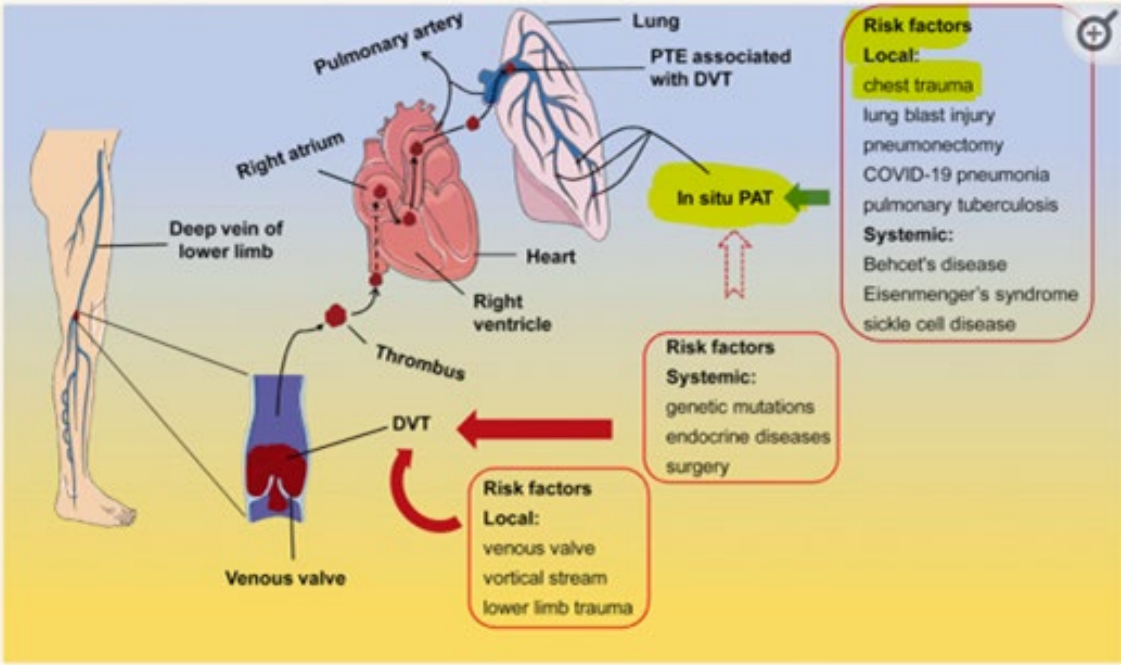
Additional Information

- Onset of symptoms began after arrival to your ED/hospital.
- Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

Thought Journey



Thought Journey



The main pathogenesis for *in situ* PAT (in situ pulmonary artery thrombosis) is deemed as pulmonary local factors including pulmonary vascular endothelial cell dysfunction, hypoxia, and inflammation

Subsequently, pulmonary trauma-induced hypoxia and inflammation activate endothelial cell, platelets, and monocytes, all of which coordinate to cause in situ PAT

The risk factors of PTE associated with DVT and *in situ* PAT. In the majority of cases, the systemic susceptible conditions, such as genetic mutations, endocrine disorders, and surgery, as well as the local conditions, such as anatomical and hemodynamic characteristics and trauma, elicit thrombus formation at the venous valves in lower extremities. After shedding from the venous valves, the thrombus travels through circulation to block either the main body or branches of pulmonary artery, leading to the PTE associated with DVT (arrows in dark red). On the other hand, pulmonary diseases, lung damage, and immunological, congenital, and hematological systemic diseases may cause *in situ* PAT (arrow in dark green). It is also possible that *in situ* PAT is formed under the susceptible systemic conditions of DVT, however, direct evidence is lacking (arrow in dark red dotted lines). PTE, pulmonary thromboembolism; DVT, deep vein thrombosis; *in situ* PAT, *in situ* pulmonary artery thrombosis.

9.25 PULMONARY EMBOLISM

Description

A lodging of a blood clot in the pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system.

INCLUDE:

- Include segmental PE's.
- Include pulmonary imaging positive for fat embolism.

EXCLUDE:

- Exclude subsegmental PE's.

Element Values

- Pulmonary Embolism (NTDS 21)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.
- Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

Response

Answer: Yes – report PE

Per the 2023 MTQIP Data Dictionary, to meet criteria, origination from a deep vein or other source is not a requirement.

Chest trauma can also be a risk factor for developing an in situ pulmonary artery thrombus.

Patient developed pulmonary artery thrombosis during hospital stay.

Question 3

For Hospital Event of Superficial Incisional Surgical Site Infection, what should be reported?

Patient had a bedside PEG procedure. A few days following procedure, patient was noted to have purulent drainage around PEG site, febrile, hypotensive.
Patient was taken to OR for exploratory laparotomy with wound vac placement due to abscess at PEG site.

- **Yes**
- **No**

9.28 SUPERFICIAL INCISIONAL SURGICAL SITE INFECTION

Description

Infection occurs within 30 days after any NHSN operative procedure (where day 1 = the procedure date)

AND

Involves only skin and subcutaneous tissue of the incision

AND

Patient has at least one of the following:

a. purulent drainage from the superficial incision.
b. organisms identified from an aseptically obtained specimen from the superficial incision or subcutaneous tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (e.g., not Active Surveillance Culture/Testing (ASC/AST).
c. Superficial incision that is deliberately opened by a surgeon, attending physician** or other designee and culture or non-culture-based testing is not performed. **AND** Patient has at least one of the following signs or symptoms: pain or tenderness; localized swelling; erythema; or heat. A culture or non-culture-based test that has a negative finding does not meet this criterion.
d. diagnosis of a superficial incisional SSI by the surgeon or attending physician** or other designee.

** The term attending physician for the purposes of application of the NHSN SSI criteria may be interpreted to mean the surgeon(s), infectious disease, other physician on the case, emergency physician or physician's designee (nurse practitioner or physician assistant).

Resources

- CDC NHSN Manual, Chapter 9
- CDC NHSN Operative Procedures, Chapter 9-1
- CDC NHSN Exclusions, Chapter 9-9
- CDC FAQ SSI Events

*Links on page 186 of 2023 MTQIP Data Dictionary

Resources

CDC NHSN Manual, Chapter 9

https://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf

Definition of an NHSN Operative Procedure:

An NHSN Operative Procedure is a procedure:

- that is included in the ICD-10-PCS and/or CPT NHSN operative procedure code mapping
  And
- takes place during an operation where at least one incision (including laparoscopic approach and cranial Burr holes) is made through the skin or mucous membrane, or entry is through an existing incision (such as an incision from a prior operative procedure)
  And
- takes place in an operating room (OR), defined as a patient care area that met the Facilities Guidelines Institute's (FGI) or American Institute of Architects' (AIA) criteria for an operating room when it was constructed or renovated[10]. This may include an operating room, C-section room, interventional radiology room, or a cardiac catheterization lab.

Response

Answer: No – do not report Superficial Incisional Surgical Site Infection

The PEG tube procedure itself meets the NHSN criteria for an operative procedure but the fact that it was done at the BS (ie: in the patient's room) does not meet the OR location defined part of the criteria set by NHSN.

You may be able to reach out to your Infection Control department who reports on these events and confirm the designation of the room but it most likely will not be considered an OR.

Question 4

For Positive Drug Screens found only on autopsy, what should be reported (if meets all other reporting criteria)?

***Email Question: "Per TQIP, you should NOT report positive drug screens found on autopsy. Is this the same for MTQIP?"**

- **Yes (report drugs found on autopsy screen)**
- **No (do not report drugs found on autopsy screen)**

5.26 DRUG SCREEN

Description

First recorded positive drug screen results within 24 hours after first hospital encounter.

Element Values

1. AMP (Amphetamine)
2. BAR (Barbiturate)
3. BZO (Benzodiazepines)
4. COC (Cocaine)
5. mAMP (Methamphetamine)
6. MDMA (Ecstasy)
7. MTD (Methadone)
8. OPI (Opioid)
9. OXY (Oxycodone)
10. PCP (Phencyclidine)
11. TCA (Tricyclic Antidepressant)
12. THC (Cannabinoid)
13. Other
14. None
15. Not Tested

Additional Information

- Report all that apply.
- Report positive drug screen results within 24 hours after first hospital encounter at either your facility or the transferring facility.
- Report Element Value "14. None" for patients whose only positive results are due to drugs administered at any facility (or setting) treating this patient event or for patients who were tested and had no positive results.
- If multiple drugs are detected, only report drugs that were not administered at any facility (or setting) treating this patient event.

Response

Answer: Yes – report positive drug screen if findings meet the data dictionary criteria.

Positive drug screen noted only on autopsy is still the truth happening to the patient.
If drugs are in the patient's system at death, it's concrete.
A patient's injuries found on autopsy are reported and MTQIP feels the drug screens should also be captured if they meet the data dictionary criteria (pt death within 24 hrs of first hospital encounter / not given by health care workers).

***Clarification will be added to the 2024 Data Dictionary regarding capture.**

Question 5

For Hospital Discharge Disposition, what should be reported?

Patient admitted to hospital from SNF. On discharge, returned to the same SNF. Final CM note states that the patient is returning to her previous address for SAR.

- **3. Discharged/Transferred to home under care of organized home health service**
- **6. Discharged to home or self-care (routine discharge)**
- **7. Discharged/Transferred to Skilled Nursing Facility (SNF)**
- **11. Discharged/Transferred to inpatient rehab or designated unit (acute rehabilitation or subacute rehabilitation)**

10.3 HOSPITAL DISCHARGE DISPOSITION

Description

The disposition of the patient when discharged from the hospital.

Element Values

1. Discharged/Transferred to a short-term general hospital for inpatient care
2. Discharged/Transferred to an Intermediate Care Facility (ICF)
3. Discharged/Transferred to home under care of organized home health service
4. Left against medical advice or discontinued care
5. Deceased/Expired
6. Discharged to home or self-care (routine discharge)
7. Discharged/Transferred to Skilled Nursing Facility (SNF)
8. Discharged/Transferred to hospice care (home hospice or hospice facility)
10. Discharged/Transferred to court/law enforcement
11. Discharged/Transferred to inpatient rehab or designated unit (acute rehabilitation or subacute rehabilitation)
12. Discharged/Transferred to Long Term Care Hospital (LTCH, LTAC or Select Specialty)
13. Discharged/transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital
14. Discharged/Transferred to another type of institution not defined elsewhere

Additional Information

- Element values based upon UB-04 disposition coding.
- Element value = 6, "home" refers to the patient's current place of residence (e.g., prison, Child Protective Services etc.).
- Disposition to any other non-medical facility should be coded as Element Value "6. Discharged to home or self-care (routine discharge)."
- Disposition to any other medical facility should be coded as Element Value "14. Discharged/Transferred to another type of institution not defined elsewhere."
- The null value "Not Applicable" is reported if ED Discharge Disposition is reported as Element Value 4, 5, 6, 9, 10, or 11.
- Hospital Discharge Dispositions which were retired greater than 2 years before the current NTDS version are no longer listed under Element Values above, which is why there are numbering gaps. Refer to the NTDS Change Log for a full list of retired Hospital Discharge Dispositions.
- Report the actual disposition of the patient as arranged and documented by discharge planning or case management at time of discharge. If no discharge planning or case management provided, report the final disposition order.

Resources

- CMS Clarification of Discharge Status Codes

Response

Answer: 6. Discharged to home or self-care (routine discharge)

NTDB defines *Element Value* "6. Home" as the patient's current place of residence. Therefore, in the described scenario, since the patient came from a SNF and was discharged to the same SNF, *regardless of the temporary increased services*, you must report *Element Value* "6. Home"

***MTQIP is in line with NTDB / TQIP in this area**

Question 6

For, Hospital Event of Pneumonia, what should be reported?

Patient meets the imaging criteria and the signs and symptoms criteria for PNA capture but the only positive culture they have is a positive covid test.

- **Yes**
- **No**

9.23 PNEUMONIA

Description

Patients with evidence of pneumonia that develops during hospitalization. Patients with pneumonia must meet at least one of the following two criteria:

Criterion 1

- Bacterial or Filamentous Fungal Pathogens (VAP Algorithm PNU2)
- Viral, Legionella, and other Bacterial Pneumonias (VAP Algorithm PNU2)
- Immunocompromised Patients (VAP Algorithm PNU3)

Criterion 2

Patient meets criteria for Ventilator-Associated Pneumonia (report under both VAP and Pneumonia).

Element Values

- Pneumonia (NTDS 20)

Additional Information

- If no quantitative culture is performed, report if the culture is positive.

Resources

- CDC NHSN Excluded Organisms, Chapter 6-2
- CDC NHSN Immunocompromised Patients, Chapter 6-13
- CDC NHSN Manual, Chapter 6

Codebook

Source: MTQIP, CDC

Resources

Table 3: Specific Site Algorithms for Viral, Legionella, and other Bacterial Pneumonias with Definitive Laboratory Findings (PNU2)

Imaging Test Evidence	**Signs/Symptoms**	**Laboratory**
Two or more serial chest imaging test results with at least ***one*** of the following[1,2,14]: New and persistent **or** Progressive and persistent • Infiltrate • Consolidation • Cavitation • Pneumatoceles, in infants ≤1 year old **Note:** In patients ***without*** underlying pulmonary or cardiac disease (for example: respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), one definitive chest imaging test result is acceptable.[1]	At least ***one*** of the following: • Fever (>38.0°C or >100.4°F) • Leukopenia (≤4000 WBC/mm^3) or leukocytosis (≥12,000 WBC/mm^3) • For adults ≥70 years old, altered mental status with no other recognized cause And at least ***one*** of the following: • New onset of purulent sputum[3] or change in character of sputum[4], or increased respiratory secretions, or increased suctioning requirements • New onset or worsening cough or dyspnea, or tachypnea[5] • Rales[6] or bronchial breath sounds • Worsening gas exchange (for example: O_2 desaturations [for example: PaO_2/FiO_2 ≤240][7], increased oxygen requirements, or increased ventilator demand)	At least ***one*** of the following: • Virus, *Bordetella, Legionella, Chlamydia or Mycoplasma* identified from respiratory secretions or tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example: not Active Surveillance Culture/Testing (ASC/AST). • Fourfold rise in paired sera (IgG) for pathogen (for example: influenza viruses, *Chlamydia*) • Fourfold rise in *Legionella pneumophila* serogroup 1 antibody titer to ≥1:128 in paired acute and convalescent sera by indirect IFA. • Detection of *L. pneumophila* serogroup 1 antigens in urine by RIA or EIA

Resources

- CDC NHSN Excluded Organisms, Chapter 6-2
- CDC NHSN Immunocompromised Patients, Chapter 6-13
- CDC NHSN Manual, Chapter 6

*Links on page 179 of 2023 MTQIP Data Dictionary

Response

Answer: Yes - Report PNA for + Covid test if patient meets all other PNA capture criteria

NHSN (CDC) email:

"If the positive COVID test identified coronavirus (SARS-CoV-2) from respiratory secretions, then this will meet PNU2 laboratory element (Table 3, PNEU chapter). A covid swab that is obtained from any respiratory secretions is eligible for use."

Question 7

For, Hospital Event of Unplanned Visit to the Operating Room, what should be reported?

Patient was given the option of surgery or could be placed in a collar, brace, etc. to see how they did. The patient chose the non-op route but then they changed their mind and ended up going to OR.

- **Yes**
- **No**

9.31 UNPLANNED VISIT TO THE OPERATING ROOM

Description

Patients with an unplanned operative procedure OR patients returned to the operating room after initial operation management of a related previous procedure.

EXCLUDE:

- Non-urgent tracheostomy and gastrostomy tube.
- Pre-planned, staged and/or procedures for incidental findings.
- Operative management related to a procedure that was initially performed prior to arrival at your center.

Element Values

- Unplanned Visit to OR (NTDS 40)

Additional Information

- Unplanned is defined as an acute clinical deterioration requiring operative intervention.
- Inclusion Example
    - Patient has an acute loss of airway requiring emergent tracheostomy in the OR for airway establishment.
- Exclusion Example
    - Patient is having difficulty weaning for the ventilator. Patient is scheduled and undergoes a tracheostomy.
    - Patient is initially managed non-operatively for a fracture. Pain control is unable to be achieved with non-operative management. Patient is scheduled and undergoes an ORIF.
    - Patient is initially managed non-operatively for a fracture. Post-ambulation imaging to confirm stability demonstrates increased malalignment. Patient is scheduled and undergoes an ORIF.

Resources

Codebook

Source: MTQIP, NTDS

Response

Answer: No - do not capture Unplanned Visit to the Operating Room

The definition requires an unplanned operative procedure due to an *acute clinical deterioration* or *an unplanned return to the OR* after initial surgery. The patient described does not meet either of these criteria – they just changed their mind.

Additional Information

- Unplanned is defined as an acute clinical deterioration requiring operative intervention.

Question 8

For, Withdrawal of Life Supporting Treatment, what should be reported?

Patient was hit by a car. Severe brain injuries. Family discussed making them CMO X/XX/XX at XX:XX. Two brain death studies were done on patient. Declared brain dead on X/XX/XX at XX:XX . They were kept alive for Gift of Life and transported to an OSH on X/XX/XX at XX:XX.

- **N/A – life supporting treatment was not removed**
- **X/XX/XX at XX:XX - discussed CMO**
- **X/XX/XX at XX:XX - declared brain dead**

17.1 WITHDRAWAL OF LIFE SUPPORTING TREATMENT

Reporting Criterion

Report on all patients.

Description

Treatment was withdrawn based on a decision to either remove or withhold further life sustaining intervention. This decision must be documented in the medical record and is often, but not always associated with a discussion with the legal next of kin.

Element Values

- Yes
- No

Additional Information

- DNR not a requirement.
- A note to limit escalation of treatment qualifies as a withdrawal of life supporting treatment. These interventions are limited to ventilator support (with or without extubation), dialysis or other forms of renal support, institution of medications to support blood pressure or cardiac function, or a specific surgical, interventional, or radiological procedure (e.g., decompressive craniectomy, operation for hemorrhage control, angiography). Note that this definition provides equal weight to the withdrawal of an intervention already in place (e.g., extubation) and a decision not to proceed with a life-saving intervention (e.g., intubation).
- Excludes the discontinuation of CPR and typically involves prior planning.
- DNR order is not the same as withdrawal of care.
- Element Value "No" must be reported for patients whose time of death, according to your hospital's definition, was prior to the removal of any interventions or escalation of care.
- Include brain dead patients where care is withdrawn in coordination with Gift of Life.
- Include patients changed to comfort care status, which may be documented in notes or orders.

Resources

Codebook

Source: MTQIP, TQIP

Response

Answer: X/XX/XX at XX:XX (time brain death declared)

Withdrawal of Life Supporting Treatment includes patients that are kept "alive" after brain death determination solely for the purpose of organ donation

When a patient undergoes brain death testing in association with Gift of Life donation, the physical care will not be withdrawn the same way it is if this is not the case.

With patients that are declared brain dead but are maintained on a ventilator, meds, etc. following this declaration to keep them eligible for donation, you would use the time brain death is declared as withdrawal of care. The only reason treatment is not removed at this time, is because they are donation candidates.

When GOL takes over care of the patient it is post hospital disposition and you would not include this information in your abstraction.

Question 9

For, Pre-existing Condition of Cirrhosis, what should be reported?

Pt has a history of Cirrhosis but had a liver transplant 3 years ago. No present diagnosis of cirrhosis, or documentation of cirrhosis by diagnostic imaging studies or a laparotomy/laparoscopy.

- **Yes**
- **No**

7.14 CIRRHOSIS

Description

Cirrhosis is the replacement of normal liver tissue with non-living scar tissue related to other liver diseases. Must have documentation in the medical record of cirrhosis, which might also be referred to as end-stage liver disease.

Element Values

- Cirrhosis (NTDS 25)

Additional Information

- Present prior to injury.
- A diagnosis of cirrhosis, or documentation of cirrhosis by diagnostic imaging studies or a laparotomy/laparoscopy, must be in the patient's medical record.
- Documentation in the medical record may include CHILD or MELD scores that support evidence of cirrhosis.
- The null value "Not Known/Not Recorded" is only reported if no past medical history is available.

Resources

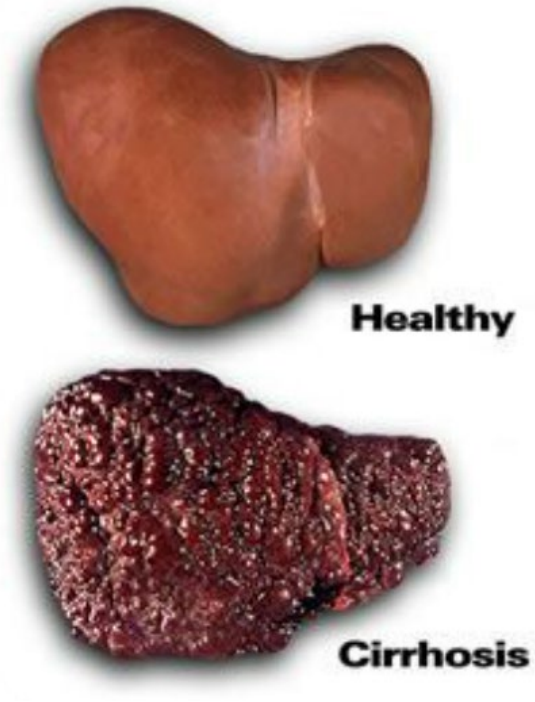
Codebook

Source: NTDS

Thought Journey

CIRRHOSIS

<u>Description</u>: Cirrhosis is the replacement of normal liver tissue with non-living scar tissue related to other liver diseases.



Response

Answer: No – do not report Cirrhosis as a pre-existing condition

As noted in the DD definition, cirrhosis is non-living scar tissue due to liver disease.

Patient had a liver transplant, scar tissue is no longer present, and they now have a healthy, non-cirrhotic liver (unless documented otherwise).

Unlike most pre-existing conditions where there is no absolute "fix" to the problem, a transplant does just that. Regardless of the diagnosis in the past, we want to capture the true picture of this patient.

***Clarification will be added to the 2024 Data Dictionary regarding capture (differs from NTDB/TQIP)**

***No discrepancies either way at this time**

Question 10

For, Hospital Event of Sepsis, what should be reported?

Patient had fall with pubic rami fx. Baseline GCS 15. Several days into patient stay, developed altered mental status (GCS 13) and hypotension (SBP < 100). Head CT shows new CVA. Pt also noted to have serosanguinous fluid coming from her left ear same day. Culture positive.

- **Yes**
- **No**

9.26 SEPSIS

Description

Sepsis is life-threatening organ dysfunction due to a dysregulated host response to infection. Septic shock is defined as a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities substantially increase mortality. The baseline SOFA score should be assumed to be zero unless the patient is known to have preexisting (acute or chronic) organ dysfunction before the onset of infection.

Presence of infection

1. Culture-confirmed infection

AND

Sepsis Quick Sequential Organ Failure Criteria (qSOFA) – 2 or more of the following are required:

1. Altered mentation (GCS < 15)
2. Systolic blood pressure ≤ 100 mmHg
3. Respiratory rate ≥ 22 breaths/min

OR

Septic Shock - all required

1. Persistent hypotension requiring vasopressors to maintain MAP ≥ 65 mmHg
2. Serum lactate level >2 mmol/L (18 mg/dL) despite adequate volume resuscitation

Element Values

- Sepsis (NTDS 32)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.

Resources

- SCCM Sepsis 3

Codebook

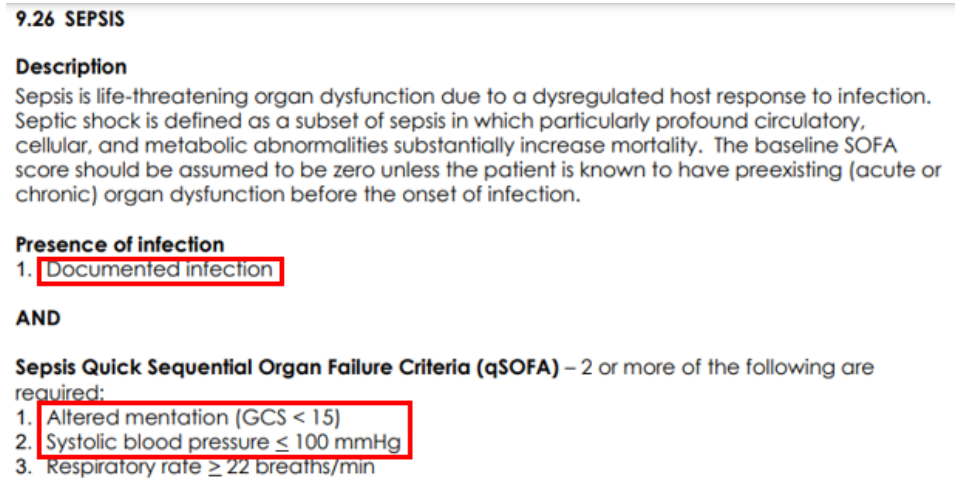
Source: NTDS, SCCM

Response

Answer: Yes –report Sepsis as a Hospital Event

The patient does meet the criteria for documented infection, hypotension, and altered mentation, regardless of the CVA.

No specification regarding reason for decreased GCS in Data Dictionary.



9.26 SEPSIS

Description

Sepsis is life-threatening organ dysfunction due to a dysregulated host response to infection. Septic shock is defined as a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities substantially increase mortality. The baseline SOFA score should be assumed to be zero unless the patient is known to have preexisting (acute or chronic) organ dysfunction before the onset of infection.

Presence of infection

1. Documented infection

AND

Sepsis Quick Sequential Organ Failure Criteria (qSOFA) – 2 or more of the following are required:

1. Altered mentation (GCS < 15)
2. Systolic blood pressure ≤ 100 mmHg
3. Respiratory rate ≥ 22 breaths/min

Question 11

For, Hospital Event of Ventilator Associated Pneumonia, what should be reported?

Patient with a positive sputum cx but does not fully meet the VAP definition (CXR were clear) within the 7-day infection window period.

Another sputum cx was done 3 days after the 1st one and resulted with the same organism. Patient now meets all VAP capture criteria in its 7-day infection window.

- **Yes**
- **No**

9.32 VENTILATOR-ASSOCIATED PNEUMONIA

Description

A pneumonia where the patient is on mechanical ventilation for > 2 consecutive calendar days on the date of event, with day of ventilator placement being Day 1,

AND

The ventilator was in place on the date of event or the day before.

AND

- Bacterial or Filamentous Fungal Pathogens (VAP Algorithm PNU2)
- Viral, Legionella, and other Bacterial Pneumonias (VAP Algorithm PNU2)
- Immunocompromised Patients (VAP Algorithm PNU3)

Element Values

- Ventilator-Associated Pneumonia (NTDS 35)

Additional Information

- Onset of symptoms began after arrival to your ED/hospital.
- If no quantitative culture is performed, report if the culture is positive.

Resources

- CDC NHSN Excluded Organisms, Chapter 6-2
- CDC NHSN Immunocompromised Patients, Chapter 6-13
- CDC NHSN Manual, Chapter 6

Codebook

Source: CDC, MTQIP, NTDS

Infection Window Period

The infection window period (IWP) is defined as the 7-days during which all site-specific infection criteria must be met. It includes the collection date of the **first positive diagnostic test that is used as an element** to meet the site-specific infection criterion, the 3 calendar days before and the 3 calendar days after (Table 2). For purposes of defining the IWP the following examples are considered diagnostic tests:

- laboratory specimen collection
- imaging test
- procedure or exam

Table 2: Infection Window Period

Infection Window Period		**3 days before**
	Date of first positive diagnostic test that is used as an element of the site-specific criterion OR In the absence of a diagnostic test, use the date of the first documented localized sign or symptom that is used as an element of the site-specific criterion	
		3 days after

It is important to use the first diagnostic test that creates an infection window period during which all elements of the criterion can be found. See example below.

Example

When meeting pneumonia (PNEU) definition using the PNU2 criterion, identification of an eligible organism from blood or from a site-specific specimen, and an imaging test may be available. Both the organism identification and the imaging test are diagnostic tests. Use the first diagnostic test for which all

Resources

Table 3: Specific Site Algorithms for Viral, Legionella, and other Bacterial Pneumonias with Definitive Laboratory Findings (PNU2)

Imaging Test Evidence	**Signs/Symptoms**	**Laboratory**
Two or more serial chest imaging test results with at least ***one*** of the following[1,2,14]: New and persistent **or** Progressive and persistent • Infiltrate • Consolidation • Cavitation • Pneumatoceles, in infants ≤1 year old **Note:** In patients ***without*** underlying pulmonary or cardiac disease (for example: respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), one definitive chest imaging test result is acceptable.[1]	At least ***one*** of the following: • Fever (>38.0°C or >100.4°F) • Leukopenia (≤4000 WBC/mm^3) or leukocytosis (≥12,000 WBC/mm^3) • For adults ≥70 years old, altered mental status with no other recognized cause And at least ***one*** of the following: • New onset of purulent sputum[3] or change in character of sputum[4], or increased respiratory secretions, or increased suctioning requirements • New onset or worsening cough or dyspnea, or tachypnea[5] • Rales[6] or bronchial breath sounds • Worsening gas exchange (for example: O_2 desaturations [for example: PaO_2/FiO_2 ≤240][7], increased oxygen requirements, or increased ventilator demand)	At least ***one*** of the following: • Virus, *Bordetella, Legionella, Chlamydia or Mycoplasma* identified from respiratory secretions or tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example: not Active Surveillance Culture/Testing (ASC/AST). • Fourfold rise in paired sera (IgG) for pathogen (for example: influenza viruses, *Chlamydia*) • Fourfold rise in *Legionella pneumophila* serogroup 1 antibody titer to ≥1:128 in paired acute and convalescent sera by indirect IFA. • Detection of *L. pneumophila* serogroup 1 antigens in urine by RIA or EIA

Thought Journey

Would the 2nd culture / infection window be considered a repeat infection if the initial cx / timeframe did not actually meet VAP criteria, or would this 2nd cx / timeframe be looked at on its own and VAP reported?

XX/XX/XX - + sputum cx
Infection window XX/XX/XX - XX/XX/XX
***Does not meet VAP definition as does not have positive CXR**

XX/XX/XX - + sputum cx (same organism as XX/XX/XX cx)
Infection window XX/XX/XX - XX/XX/XX
***Meets VAP definition on XX/XX/XX with new positive CXR**

Response

Answer: Yes –report VAP as a Hospital Event

NHSN (CDC) email:

"A previous positive culture does not prevent the use of a specimen with the same organism for meeting the PNEU/VAP definition. A repeat infection timeframe (RIT) is only set if an infection definition is met. Since the PNEU/VAP definition was not met using the XX/XX/XX respiratory culture, an RIT is not set. Therefore, when the PNEU/VAP definition is met with the XX/XX/XX respiratory culture, this is considered a 'new' infection and should be reported."

("If it doesn't meet, its not repeat" – haha).

Discussion

Lunch

Return at 12:15

2024 Performance Index Updates

Jill Jakubus

Michigan Trauma Quality Improvement Program (MTQIP)
2023 Performance Index
January 1 to December 31, 2023

Measure	Weight	Measure Description	Points	
#1	10	**Data Submission**		PARTICIPATION (30%)
		On-time and complete 3 of 3 times	10	
		On-time and complete 2 of 3 times	5	
		On-time and complete 1 of 3 times	0	
#2	10	**Meeting Participation**	0-10	
		Surgeon and TPM or MCR participate in 3 of 3 Collaborative meetings	9	
		Surgeon and TPM or MCR participate in 2 of 3 Collaborative meetings	6	
		Surgeon and TPM or MCR participate in 0-1 of 3 Collaborative meetings	0	
		Registrar or MCR participate in the annual June Data Abstractor meeting	1	
#3	10	**Data Validation Error Rate**		
		0.0-3.0%	10	
		3.1-4.0%	8	
		4.1-5.0%	5	
		> 5.0%	0	
#4	5	**PI Death Determination Documentation** (12 mo: 7/1/22-6/30/23)		PERFORMANCE (70%)
		0-2 Deceased patients missing documentation	5	
		3-4 Deceased patients Missing documentation **New 2023**	3	
		> 4 Deceased patients Missing documentation	0	
#5	10	**Timely LMWH VTE Prophylaxis in Trauma Admits** (18 mo: 1/1/22-6/30/23)		
		≥ 52.5 % of patients (≤ 48 hr)	10	
		≥ 50.0 % of patients (≤ 48 hr)	8	
		≥ 45.0 % of patients (≤ 48 hr)	5	
		< 45.0 % of patients (≤ 48 hr)	0	
#6	10	**Timely Surgical Repair in Geriatric (Age ≥ 65) Isolated Hip Fxs** (12 mo: 7/1/22-6/30/23)		
		≥ 92.0 % of patients (≤ 48 hr)	10	
		≥ 87.0 % of patients (≤ 48 hr)	8	
		≥ 85.0 % of patients (≤ 48 hr)	5	
		< 85.0 % of patients (≤ 48 hr)	0	
#7	10	**RBC to Plasma Ratio in Massive Transfusion** (18 mo: 1/1/22-6/30/23)	0-10	
		Weighted Mean Points in Patients Transfused ≥ 5 Units 1st 4 hr		
#8	10	**Serious Complication Z-Score Trend in Trauma Admits** (3 yr: 7/1/20-6/30/23)		
		< -1 (major improvement)	10	
		-1 to 1 or serious complications low outlier (average or better rate)	7	
		> 1 (rates of serious complications increased)	5	
#9	10	**Mortality Z-Score Trend in Trauma Admits** (3 yr: 7/1/20-6/30/23)		
		< -1 (major improvement)	10	
		-1 to 1 or mortality low outlier (average or better)	7	
		> 1 (rates of mortality increased)	5	
#10	5	**Timely Head CT in TBI Patients on Anticoagulation Pre-Injury** (12 mo: 7/1/22-6/30/23)		
		≥ 90% patients (≤ 120 min)	5	
		≥ 80% patients (≤ 120 min)	4	
		≥ 70% patients (≤ 120 min)	3	
		< 70% patients (≤ 120 min)	0	
#11	10	**Timely Antibiotic in Femur/Tibia Open Fractures - COLLABORATIVE WIDE MEASURE** (12 mo: 7/1/22-6/30/23)		
		≥ 85% patients (≤ 90 min)	10	
		< 85% patients (≤ 90 min)	0	
		Total (Max Points) =	100	

Michigan Trauma Quality Improvement Program (MTQIP)
Pending BCBS Approval **PROPOSED 2024 Performance Index**
January 1 to December 31, 2024

Measure	Weight	Measure Description	Points	
#1	10	**Data Submission**		PARTICIPATION (30%)
		On-time and complete 3 of 3 times	10	
		On-time and complete 2 of 3 times	5	
		On-time and complete 1 of 3 times	0	
#2	10	**Meeting Participation**	0-10	
		Surgeon and TPM or MCR participate in 3 of 3 Collaborative meetings	9	
		Surgeon and TPM or MCR participate in 2 of 3 Collaborative meetings	6	
		Surgeon and TPM or MCR participate in 0-1 of 3 Collaborative meetings	0	
		Registrar or MCR participate in the annual June data abstractor meeting	1	
#3	10	**Data Validation Error Rate**		
		0.0-3.0%	10	
		3.1-4.0%	8	
		4.1-5.0%	5	
		> 5.0%	0	
#4	5	**PI Death Determination Documentation** (12 mo: 7/1/23-6/30/24)		PERFORMANCE (70%)
		0-2 Cases missing documentation	5	
		3-4 Cases missing documentation	3	
		> 4 Cases missing documentation	0	
#5A	8	**Timely LMWH VTE Prophylaxis in Trauma Admits** (18 mo: 1/1/23-6/30/24)		
		≥ 52.5 % of patients (≤ 48 hr)	8	
		≥ 50.0 % of patients (≤ 48 hr) **Literature Update**	6	
		≥ 45.0 % of patients (≤ 48 hr)	3	
		< 45.0 % of patients (≤ 48 hr)	0	
#5B	2	**Weight Based LMWH Protocol in Use** (12mo: 7/1/23-6/30/24)		
		Yes **New 2024**	2	
		No	0	
#6	10	**Timely Surgical Repair in Geriatric (Age ≥ 65) Isolated Hip Fxs** (12 mo: 7/1/23-6/30/24)		
		≥ 92.0 % of patients (≤ 42 hr)	10	
		≥ 87.0 % of patients (≤ 42 hr)	8	
		≥ 85.0 % of patients (≤ 42 hr)	5	
		< 85.0 % of patients (≤ 42 hr)	0	
#7	10	**RBC to Plasma Ratio in Massive Transfusion** (18 mo: 1/1/23-6/30/24)	0-10	
		Weighted Mean Points in Patients Transfused ≥ 5 Units 1st 4 hr		
#8	10	**Serious Complication Z-Score Trend in Trauma Admits** (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
		-1 to 1 or serious complications low outlier (average or better rate)	7	
		> 1 (rates of serious complications increased)	5	
#9	10	**Mortality Z-Score Trend in Trauma Admits** (3 yr: 7/1/21-6/30/24)		
		< -1 (major improvement)	10	
		-1 to 1 or mortality low outlier (average or better)	7	
		> 1 (rates of mortality increased)	5	
#10	5	**Patient Reported Outcomes Participation** (12 mo: 7/1/23-6/30/24)		
		Yes **New 2024**	5	
		No	0	
#11	10	**Timely Antibiotic in Femur/Tibia Open Fractures - COLLABORATIVE WIDE MEASURE** (12 mo: 7/1/23-6/30/24)		
		≥ 85% patients (≤ 90 min)	10	
		< 85% patients (≤ 90 min)	0	
		Total (Max Points) =	100	

Metric 5A
Timely LMWH VTE Prophylaxis <= 48 hrs.
Literature Update

All 2024 MTQIP Performance Index metrics are pending BCBS approval

13.1 VENOUS THROMBOEMBOLISM PROPHYLAXIS TYPE

Jan 2022

Reporting Criterion

Report on all patients.

Description

Type of first dose of venous thromboembolism prophylaxis or treatment administered to patient at your hospital.

EXCLUDE:

- Sequential compression devices

Element Values

5. None
6. LMWH (Dalteparin, Enoxaparin, etc.)
7. Direct Thrombin Inhibitor (Dabigatran, etc.)
8. Xa Inhibitor (Rivaroxaban, etc.)
9. Coumadin
10. Other
11. Unfractionated Heparin (UH)
50. Aspirin

Jan 2022

Additional Information

- Must be administered, not just ordered.
- Element Value "5. None" is reported if the patient refuses venous thromboembolism prophylaxis.
- Report heparin, LMWH, direct thrombin inhibitor and Xa inhibitor class agents regardless of the indication when it is administered first.
- Report aspirin and Coumadin and 'other' agents when the indication of VTE prevention is identified in the medical record documentation.
- Exclude non-prophylactic dosing of agents, such as heparin administered for line clearance purposes.
- Use drug search for agents and dosing outside these parameters to determine class and/or indicated use.
- Venous Thromboembolism Prophylaxis Types which were retired greater than 2 years before the current NTDS version are no longer listed under Element Values above, which is why there are numbering gaps. Refer to the NTDS Change Log for a full list of retired Venous Thromboembolism Prophylaxis Types.

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Aspirin or Low-Molecular-Weight Heparin for Thromboprophylaxis after a Fracture

Major Extremity Trauma Research Consortium (METRC)*

ABSTRACT

BACKGROUND

Clinical guidelines recommend low-molecular-weight heparin for thromboprophylaxis in patients with fractures, but trials of its effectiveness as compared with aspirin are lacking.

METHODS

In this pragmatic, multicenter, randomized, noninferiority trial, we enrolled patients 18 years of age or older who had a fracture of an extremity (anywhere from hip to midfoot or shoulder to wrist) that had been treated operatively or who had

The members of the writing committee (Robert V. O'Toole, M.D., Deborah M. Stein, M.D., M.P.H., Nathan N. O'Hara, Ph.D., Katherine P. Frey, Ph.D., R.N., Tara J. Taylor, M.P.H., Daniel O. Scharfstein, Sc.D., Anthony R. Carlini, M.S., Kuladeep Sudini, Ph.D., Yasmin Degani, M.P.H., Gerard P. Slobogean, M.D., M.P.H., Elliott R. Haut, M.D., Ph.D., William Obremskey, M.D., M.P.H., Reza

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Aspirin or Low-Molecular-Weight Heparin for Thromboprophylaxis after a Fracture

CONCLUSIONS

In patients with extremity fractures that had been treated operatively or with any pelvic or acetabular fracture, thromboprophylaxis with aspirin was noninferior to low-molecular-weight heparin in preventing death and was associated with low incidences of deep-vein thrombosis and pulmonary embolism and low 90-day mortality. (Funded by the Patient-Centered Outcomes Research Institute; PREVENT CLOT ClinicalTrials.gov number, NCT02984384.)

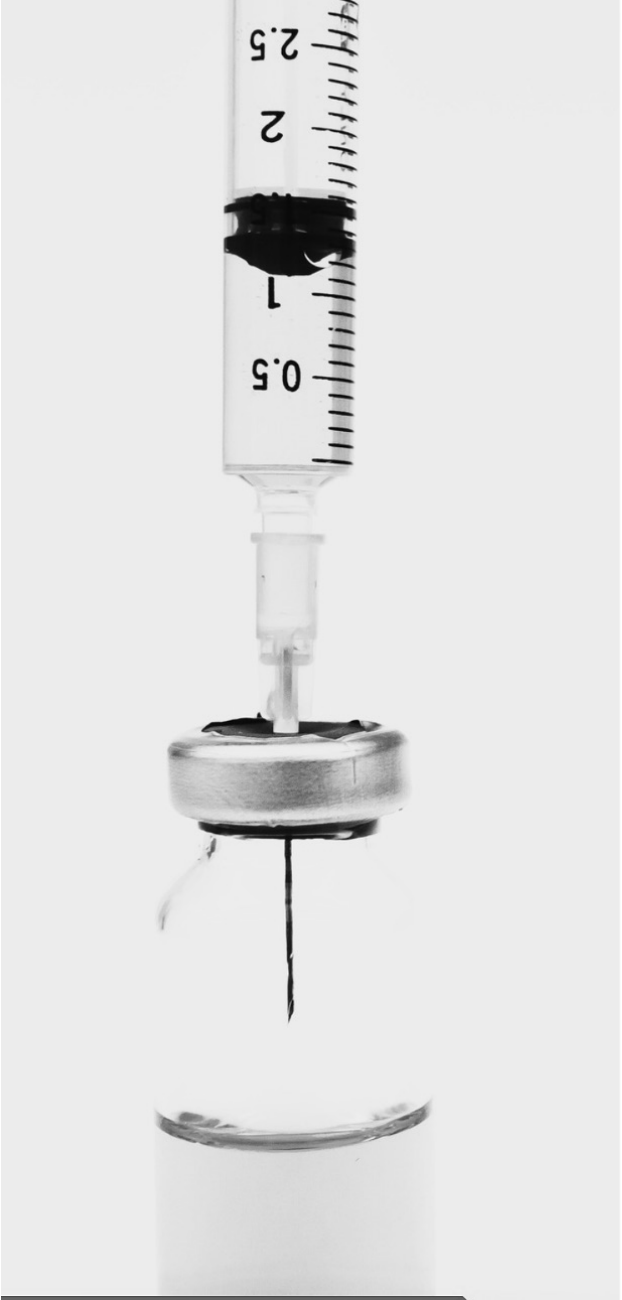
Metric 5A – Timely LMWH VTE Prophylaxis <= 48 hrs.

What do I need to do?

- Be aware you may see more aspirin DVT prophylaxis
- This measure inclusion is for admits to trauma

Metric 5B
Weight Based LMWH Protocol in Use
New 2024

All 2024 MTQIP Performance Index metrics are pending BCBS approval



2024 Performance Index

Weight-based LMWH Protocol and Case Submission

Points can be earned for weight-based LMWH protocol and use

Screenshot your weight-based LMWH protocol and cases

Submission portal available now on mtqip.org

Video demo available now on MTQIP YouTube Channel

Points earned populated on scorecard

Due 12/6/24

Metric 5B – Weight Based LMHW Protocol in Use

What do I need to do?

- **Staff member (likely clinical) will need to submit weight-based protocol and 5 cases via the portal by 12/6/24**

Metric 10
Patient Reported Outcomes Participation
New 2024

All 2024 MTQIP Performance Index metrics are pending BCBS approval

Metric 10 – Patient Reported Outcomes Participation

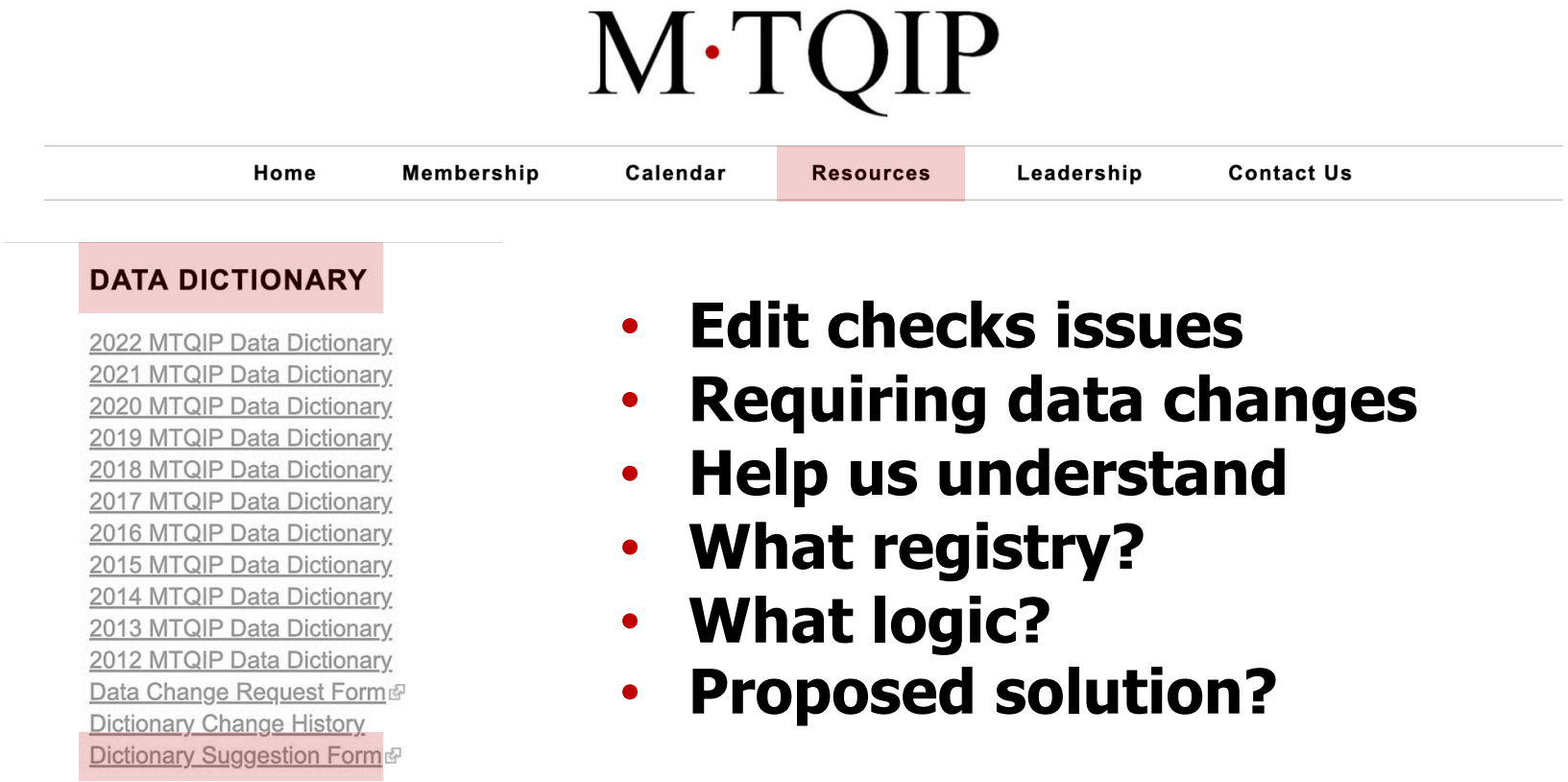
What do I need to do?

- **Make sure patients have a valid formatted email or telephone number**
- **Inclusion: Cohort 1, exclude DOA, exclude death/hospice, include transfers out, 7/1/23-6/30/24**

2024 MTQIP Data Dictionary Requests

Jill Jakubus

Where to submit suggestions?



- **Edit checks issues**
- **Requiring data changes**
- **Help us understand**
- **What registry?**
- **What logic?**
- **Proposed solution?**

Approach

- **Show submitted requests**
- **Poll where applicable**
- **Use feedback used to guide final review**

No NTDS 2024 changes anticipated

Framework

MTQIP will use the following criteria to guide decisions regarding data succession where variables that may deviate from an outside entity.

- **Data is being used in MTQIP reporting or analytics to drive quality improvement**
- **Data reflects actual care being delivered to the patient**
- **Data definition is objective and promotes data integrity**

slido

Join at

slido.com

#trauma

Request 1

Update Beaumont and Spectrum hospital names to current names

1.3TRAUMA CENTER

Description

A two-letter code that identifies each trauma center.

Element Values

BO	Ascension Borgess Hospital
GH	Ascension Genesys Hospital
PN	Ascension Providence Hospital - Novi Campus
VH	Ascension Providence Hospital - Southfield Campus
JO	Ascension St. John Hospital
SM	Ascension St. Mary's Hospital
OW	Beaumont Hospital - Dearborn
BF	Beaumont Hospital - Farmington Hills
WB	Beaumont Hospital - Royal Oak
OS	Beaumont Hospital - Trenton
TB	Beaumont Hospital - Troy
BM	Bronson Methodist Hospital
CO	Covenant HealthCare
DR	Detroit Receiving Hospital
AL	Henry Ford Allegiance
HF	Henry Ford Hospital
HM	Henry Ford Macomb Hospital
HU	Hurley Medical Center

Request 2

Add to "Additional Information" Report positive drug screen results documented in autopsy report if meet rest of capture criteria.

5.26 DRUG SCREEN

Description

First recorded positive drug screen results within 24 hours after first hospital encounter.

Element Values

1. AMP (Amphetamine)
2. BAR (Barbiturate)
3. BZO (Benzodiazepines)
4. COC (Cocaine)
5. mAMP (Methamphetamine)
6. MDMA (Ecstasy)
7. MTD (Methadone)
8. OPI (Opioid)
9. OXY (Oxycodone)
10. PCP (Phencyclidine)
11. TCA (Tricyclic Antidepressant)
12. THC (Cannabinoid)
13. Other
14. None
15. Not Tested

Additional Information

- Report all that apply.
- Report positive drug screen results within 24 hours after first hospital encounter at either your facility or the transferring facility.
- Report Element Value “14. None" for patients whose only positive results are due to drugs administered at any facility (or setting) treating this patient event or for patients who were tested and had no positive results.
- If multiple drugs are detected, only report drugs that were not administered at any facility (or setting) treating this patient event.

Request 3

Additional Information, bullet 2, add missing table.

Trade Names	Generic Names	Subclass	Time Frame
Aggrastat	tirofiban	Antiplatelet	4 hours
Agrylin	anagrelide	Antiplatelet	3 days
Coumadin	warfarin	Anticoagulant	5 days
Effient	prasugrel	Antiplatelet	10 days
Fragmin	dalteparin	Antiplatelet	24 hours
	heparin (IV only)	Anticoagulant	4 hours
Integrilin	eptifibatide	Antiplatelet	2 days
Lovenox	enoxaparin	Anticoagulant	12 hours
Plavix	clopidogrel	Antiplatelet	10 days
Pradaxa	dabigatran etexilate	Direct Thrombin Inhibitor	2 days
Reopro	abciximab	Antiplatelet	9 days
Ticlid	ticlopidine	Antiplatelet	14 days
Xarelto	rivaroxaban	Factor Xa Inhibitor	2 days

7.4 ANTICOAGULANT THERAPY

Description

Documentation in the medical record of the administration of medication (anticoagulants, antiplatelet agents, thrombin inhibitors, factor Xa inhibitors, thrombolytic agents) that interferes with blood clotting.

EXCLUDE:

- Patients whose only anticoagulant therapy is chronic aspirin.

Element Values

- Anticoagulant Therapy (NTDS 31)

Additional Information

- Present prior to injury.
- Anticoagulant must be an active medication within provided time frames below.

Request 4

Delete word "inpatient location." Add clarification stating that despite CDC NHSN Manual Chapter 7 being used as a resource, MTQIP collaborative requests capture of complications that occur when patient is ED Hold.

9.12 CATHETER-ASSOCIATED URINARY TRACT INFECTION

Description

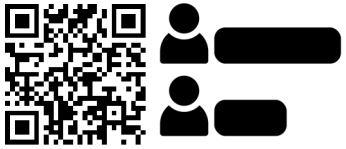
A urinary tract infection (UTI) where an indwelling urinary catheter was in place for > 2 calendar days on the date of event, with day of device placement being Day 1,

AND

An indwelling urinary catheter was in place on the date of event or the day before. If an indwelling urinary catheter was in place for > 2 consecutive days in an inpatient location and then removed, the date of event for the UTI must be the day of device discontinuation or the next day for the UTI to be catheter-associated.

Request 5

Requesting same clarification be added to Introduction. Requesting statement saying include capture of complications that occur when patient is "ED hold".



9.1 INTRODUCTION

Description

Any medical complication that occurred during the patient's stay at your hospital.

Element Values

- Relevant value for data element.

Additional Information

- The patient's stay begins on arrival to the emergency department.
- Do not include reported complications that are present prior to arrival. For example, a patient arrives with a urinary tract infection as indicated by symptoms present in documentation obtained on arrival and a culture obtained on arrival.
- Do not report contaminants that did not require treatment for infectious events. For example, a patient has a BAL or blood culture that demonstrates contaminant, and therapy is not provided. If a provider documents a contaminant, but treatment is provided, the event is reported.
- For hospitals with an inpatient hospice service/unit without transition indicators in the EMR (e.g., new encounter/visit number, discharge order, discharge summary, new admit order, new hospice service assignment, new hospice-specific attending provider, etc.) to signal the end of the patient's stay, the end of stay occurs when the acute phase of care ends. This does not include comfort care status during the acute phase of care or transfer to medicine services during the acute phase of care.
- The null value "Not Applicable" should be used for patients with no complications.

Request 6

Additional Information, bullet 1.

Add wording "for all patients regardless of injury diagnosis"

6.1 ICD-10 HOSPITAL PROCEDURES

Description

Operative and selected non-operative procedures conducted during the hospital stay. Operative and selected non-operative procedures are those that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or complications. The list of procedures below should be used as a guide to desired non-operative procedures that should be provided to NTDB.

Element Values

- Major and minor procedure ICD-10 PCS procedure codes.
- The maximum number of procedures that may be reported for a patient is 200.

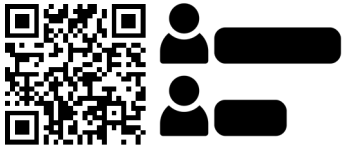
Additional Information

- Procedures marked with a dagger (†) are required reporting.
- Only report procedures performed at your institution. Procedures marked with a double dagger (‡) indicate a pre-hospital exception to this reporting rule.
- Report all procedures performed in the operating room.
- Report all procedures in the ED, ICU, ward, or radiology department that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or their complications.
- Procedures with an asterisk (*) have the potential to be performed multiple times during one episode of hospitalization. In this case, report only the first event. If there is no asterisk, report each event even if there is more than one.
- The null value "Not Applicable" is used if the patient did not have procedures.
- For patients on warfarin, direct thrombin inhibitor, or factor Xa inhibitor pre-injury and sustain a traumatic brain injury and are not transferred in a referring hospital or direct admit, report pre-hospital head/brain CT code, date, and time.
- Note that the hospital may report additional procedures.

Request 7

Additional Information, bullet 7.

For patients on warfarin, direct thrombin inhibitor, or factor Xa inhibitor pre-injury and sustain a traumatic brain injury and are not transferred in *FROM* a referring hospital or direct admit *(IE: PTS WHO COME TO ED AFTER OUTPATIENT CT OR URGENT CARE CT)*, report pre-hospital head/brain CT code, date, and time.



6.1 ICD-10 HOSPITAL PROCEDURES

Description

Operative and selected non-operative procedures conducted during the hospital stay. Operative and selected non-operative procedures are those that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or complications. The list of procedures below should be used as a guide to desired non-operative procedures that should be provided to NTDB.

Element Values

- Major and minor procedure ICD-10 PCS procedure codes.
- The maximum number of procedures that may be reported for a patient is 200.

Additional Information

- Procedures marked with a dagger (†) are required reporting.
- Only report procedures performed at your institution. Procedures marked with a double dagger (‡) indicate a pre-hospital exception to this reporting rule.
- Report all procedures performed in the operating room.
- Report all procedures in the ED, ICU, ward, or radiology department that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or their complications.
- Procedures with an asterisk (*) have the potential to be performed multiple times during one episode of hospitalization. In this case, report only the first event. If there is no asterisk, report each event even if there is more than one.
- The null value "Not Applicable" is used if the patient did not have procedures.
- For patients on warfarin, direct thrombin inhibitor, or factor Xa inhibitor pre-injury and sustain a traumatic brain injury and are not transferred in a referring hospital or direct admit, report pre-hospital head/brain CT code, date, and time.
- Note that the hospital may report additional procedures.

Request 8

Clarify reporting when patient elopes for both paper and e-prescribing.

Preference to NOT report opioids when the prescribed status is unclear.

16.1 TABLET TYPE 1

Reporting Criterion

Report on all patients.

Description

The type of opioid tablet prescribed at discharge.

Element Values

0. None
1. Buprenorphine
2. Codeine
3. Dihydrocodeine
4. Fentanyl
5. Hydrocodone
6. Hydromorphone
7. Meperidine
8. Methadone
9. Morphine
10. Oxycodone
11. Pentazocine
12. Tapentadol
13. Tramadol
14. Other

Additional Information

- Report capsules in the tablet data fields.
- Only report the opioid component of the prescription (e.g., oxycodone/acetaminophen 5 mg/325 mg, report oxycodone).

Request 9

Additional Information, bullet 4, delete.

Additional Information, bullet 6 already captures evidence of chronic use.

Shifts reporting to current disorder c/w Description.

7.3 ALCOHOL USE DISORDER

Description

Evidence of chronic use, such as withdrawal episodes, or the patient admits to drinking > 2 ounces of hard liquor or > two 12 oz. cans of beer or > two 6 oz. glasses of wine per day in the two weeks prior to admission.

Element Values

- Alcohol Use Disorder (NTDS 2)

Additional Information

- Only report on patients ≥ 15 years of age.
- The null value "Not Applicable" must be reported for patients < 15 years of age.
- If the patient is a binge drinker, divide out the number of drinks during the binge by seven days, then apply the Description.
- Include evidence of chronic use, such as withdrawal episodes.
- May determine inclusion based on the brief screening tool used at your institution.
- Include patients who meet the criteria for Alcohol Withdrawal Syndrome during the same stay.

Request 10

Remove "VAP Algorithm" text.

9.23 PNEUMONIA

Description

Patients with evidence of pneumonia that develops during hospitalization. Patients with pneumonia must meet at least one of the following two criteria:

Criterion 1

- Bacterial or Filamentous Fungal Pathogens (VAP Algorithm PNU2)
- Viral, Legionella, and other Bacterial Pneumonias (VAP Algorithm PNU2)
- Immunocompromised Patients (VAP Algorithm PNU3)

Criterion 2

Patient meets criteria for Ventilator-Associated Pneumonia (report under both VAP and Pneumonia).

Element Values

- Pneumonia (NTDS 20)

Additional Information

- If no quantitative culture is performed, report if the culture is positive.

Request 11

Exclude cannabis use as Substance Abuse Disorder. Possibly create a new definition of Cannabis Use. Better representation of a patient's substance use.

Note: this change would create divergence from NTDS.

7.36 SUBSTANCE USE DISORDER

Description

Descriptors documented in the patient's medical record consistent with the diagnostic criteria of substance use disorders, specifically cannabis, hallucinogens, inhalants, opioids, sedative/hypnotics, and stimulants (e.g., patient has a history of drug use; patient has a history of opioid use) OR diagnosis of any of the following documented in the patient's medical record.

- Cannabis Use Disorder; Other Cannabis-Induced Disorder; Unspecified Cannabis-Related Disorder
- Phencyclidine Use Disorder; Other Hallucinogen Use Disorder; Hallucinogen Persisting Perception Disorder; Other Phencyclidine-Induced Disorder; Other Hallucinogen-Induced Disorder; Unspecified Phencyclidine-Related Disorder; Unspecified Hallucinogen-Related Disorder
- Inhalant Use Disorder; Other Inhalant-Induced Disorder; Unspecified Inhalant-Related Disorder
- Opioid Use Disorder; Other Opioid-Induced Disorder; Unspecified Opioid-Related Disorder
- Sedative, Hypnotic, or Anxiolytic Use Disorder; Other Sedative, Hypnotic, or Anxiolytic-Induced Disorder; Unspecified Sedative, Hypnotic, or Anxiolytic-Related Disorder
- Stimulant Use Disorder; Other Stimulant-Induced Disorder; Unspecified Stimulant-Related Disorder

Element Values

- Substance Abuse Disorder (NTDS 36)

Additional Information

- Present prior to injury.
- Only report on patients ≥ 15 years of age.
- The null value "Not Applicable" must be reported for patients < 15 years of age.
- The null value "Not Known/Not Recorded" is only reported if no past medical history is available for patients ≥ 15 years of age.
- The word "disorder" is not required to be present for capture.
- Include patients who have a positive drug screen for a non-prescribed drug.

Request 12

Patients admitted to the ICU after initial transfer to the floor, and/or patients with an unplanned return to the ICU after initial ICU discharge, "and/or after an event that occurred following the initial plan.

(Or)

Additional Information Include patients who required ICU care due to an event or deterioration that occurred after initial plan."

9.29 UNPLANNED ADMISSION TO ICU

Description

Patients admitted to the ICU after initial transfer to the floor, and/or patients with an unplanned return to the ICU after initial ICU discharge.

INCLUDE:

- Patients who required ICU care due to an event that occurred during surgery or in the PACU.

EXCLUDE:

- Patients with a planned post-operative ICU stay.

Element Values

- Unplanned Admission to ICU (NTDS 31)

Additional Information

- Must have occurred during the patient's initial stay at your hospital.

Request 13

Add the text definitions discussed in the Jan 2023 TQIP Educational Experience.

9.31 UNPLANNED VISIT TO THE OPERATING ROOM

Description

Patients with an unplanned operative procedure OR patients returned to the operating room after initial operation management of a related previous procedure.

EXCLUDE:

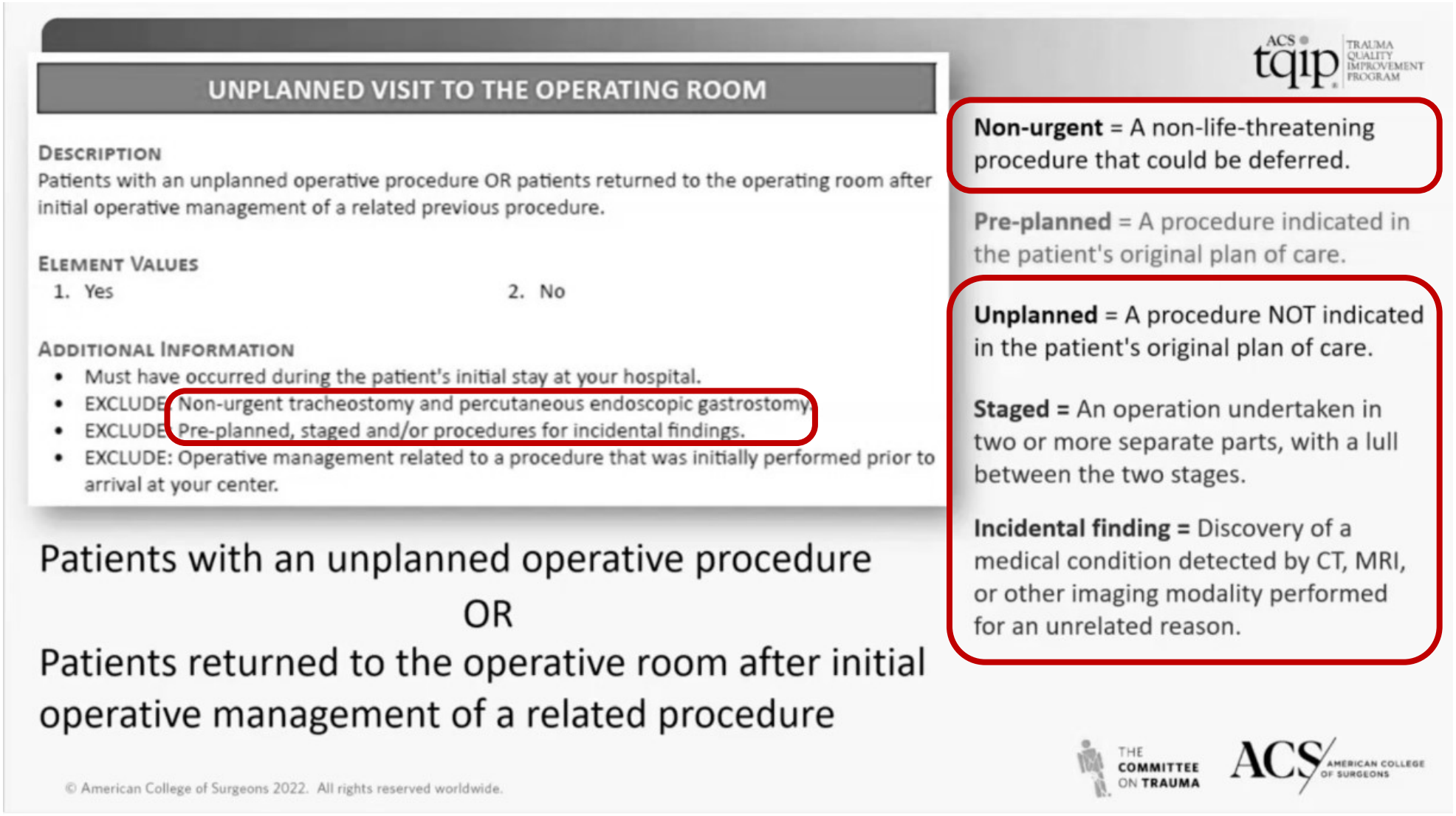
- Non-urgent tracheostomy and gastrostomy tube.
- Pre-planned, staged and/or procedures for incidental findings.
- Operative management related to a procedure that was initially performed prior to arrival at your center.

Element Values

- Unplanned Visit to OR (NTDS 40)

Additional Information

- Unplanned is defined as an acute clinical deterioration requiring operative intervention.
- Inclusion Example
  - Patient has an acute loss of airway requiring emergent tracheostomy in the OR for airway establishment.
- Exclusion Example
  - Patient is having difficulty weaning for the ventilator. Patient is scheduled and undergoes a tracheostomy.
  - Patient is initially managed non-operatively for a fracture. Pain control is unable to be achieved with non-operative management. Patient is scheduled and undergoes an ORIF.
  - Patient is initially managed non-operatively for a fracture. Post-ambulation imaging to confirm stability demonstrates increased malalignment. Patient is scheduled and undergoes an ORIF.



January 2023 Educational Experience Review

Request 14

Add missing text.

The null value "Not Applicable" is reported if the patient is discharged from your hospital "PRIOR TO THE" next calendar day.

12.3 GCS ASSESSMENT QUALIFIER COMPONENT OF HIGHEST GCS TOTAL

Reporting Criterion

Report on patients with at least one injury in AIS head region, excluding patients with isolated scalp abrasion(s), scalp contusion(s), scalp laceration(s) and/or scalp avulsion(s). Exclude injuries where the code is not included in the AIS head region of the AAAM book such as isolated asphyxiation/suffocation injuries.

Description

Documentation of factors potentially affecting the highest GCS on calendar day after ED/hospital arrival.

- The null value "Not Known/Not Recorded" is reported if reporting Highest GCS Motor 40.
- If reporting GCS Assessment Qualifier Component of Highest GCS Total, the null value "Not Applicable" is reported if the patient is discharged from your hospital the next calendar day.

Wrap Up

Jill Jakubus

Conclusion

- **Electronic evaluations**
- **See you virtually at the abstraction staff education event this Dec**