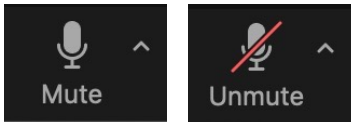
Abstractor Education Event

Virtual
December 15, 2022

Disclosures

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

Nonprofit corporations and independent licensees
of the Blue Cross and Blue Shield Association

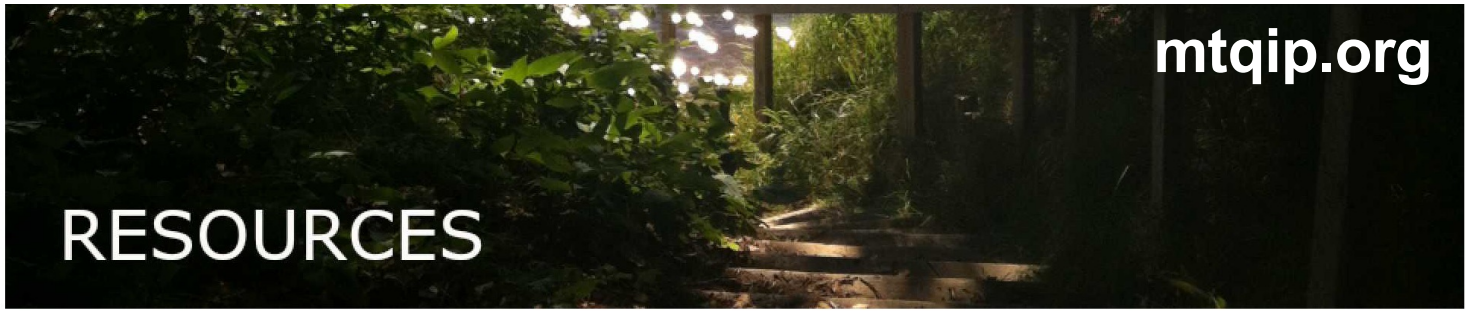


Meeting Logistics

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

zoom

Slides



SLIDES

MEETING SLIDES

2022	**|**	Feb	May	June	Oct

Available Fri

Event Agenda

- Announcements
- Level 3 Updates
- Challenging Questions Audience Engagement
- Break
- Data Bytes
- Challenging Questions Clarifications
- Meeting Evaluation

Announcements

- Upcoming events
- Updates video
- Data validation
- Future meeting format
- Research in progress

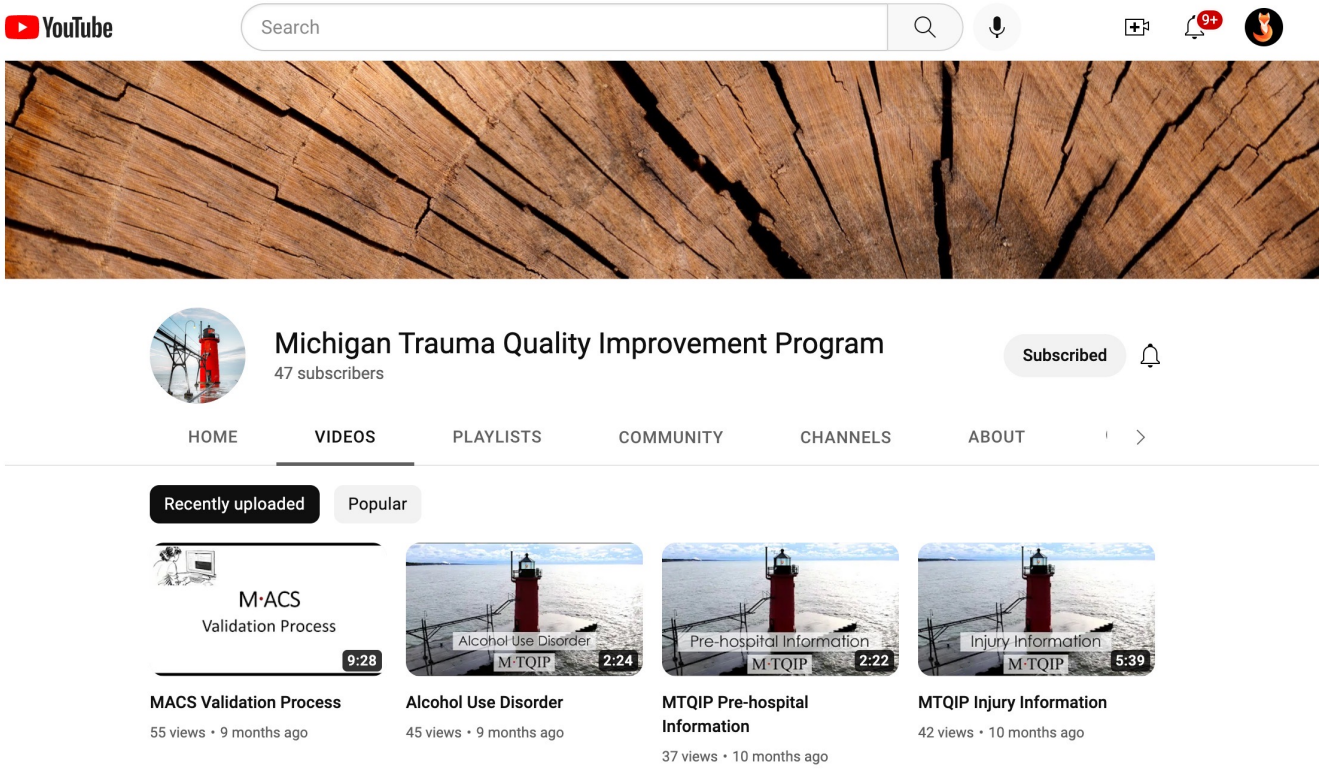
Data Submission

- **Due: 2/3/23**
- **Minimum interval: 7/1/21 – 10/31/22**
- **First submission: 1/1/16**

Abstractor Meeting

- **Date: 6/6/23**
- **Time: 10:00 AM**
- **Location: Ann Arbor Marriot Ypsilanti**
- **Website: mtqip.org > calendar**

Updates Video



Available Now

2023 Validation Centers Selected

- Ascension Providence Hospital - Southfield
- Ascension St. John Hospital
- Ascension St. Mary's Hospital
- Beaumont Hospital - Dearborn
- Beaumont Hospital - Farmington Hills
- Beaumont Hospital - Royal Oak
- Beaumont Hospital - Troy
- Covenant HealthCare
- Henry Ford Allegiance
- Henry Ford Hospital
- Henry Ford Macomb Hospital
- McLaren Lapeer
- McLaren Northern Michigan
- McLaren Oakland
- Michigan Medicine
- MidMichigan Medical Center
- Munson Medical Center
- Sinai-Grace Hospital
- Sparrow Hospital
- Spectrum Health
- Trinity Health Ann Arbor Hospital
- Trinity Health Livonia Hospital
- Trinity Health Muskegon
- Trinity Health Oakland Hospital
- UP Health System Marquette

2023 Validation Centers Deferred

- Ascension Borgess Health
- Ascension Genesys Health System
- Ascension Providence Hospital - Novi
- Beaumont Hospital - Trenton
- Bronson Methodist Hospital
- Detroit Receiving Hospital
- Hurley Medical Center
- McLaren Macomb
- Trinity Health Saint Mary's - Grand Rapids
- University of Michigan Health-West

Update Validation Process

M·TQIP

Remote Data Validation

Workflow

4 Weeks Prior

- **MTQIP:** Provides center staff with validation confirmation, IT letter, validation process, conference link, and case list.
- **Program Manager/Abstraction Staff:** Provides IT with IT letter, validation process, validation date, and agreements (BAA and RAA). Adds preferred patient identifier to highlighted cases on case list and re-uploads to Box (HIPAA-approved platform).
- **IT Staff:** Provides EMR access credentials and instructions.

1 Week Prior

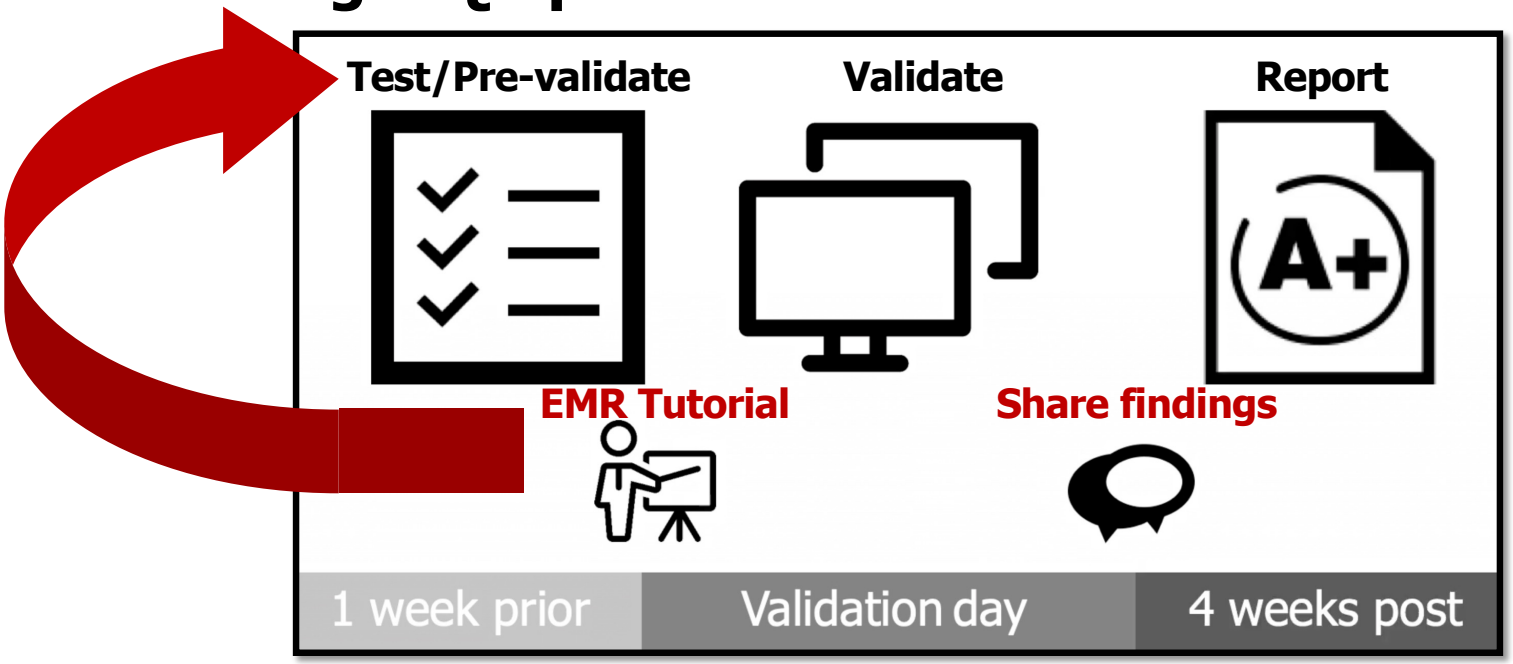
- **MTQIP:** Tests credentials and EMR view. Provides confirmation of EMR view to Program Manager/Abstraction Staff.
- If MTQIP EMR access is not functional by noon on the Friday prior to validation, then the visit will be cancelled and added to next scheduling poll if possible. Centers that do not reschedule by the end of the calendar year will receive 0 points for the performance index validation measure.

April 2023

Friday deadline changing to Wednesday

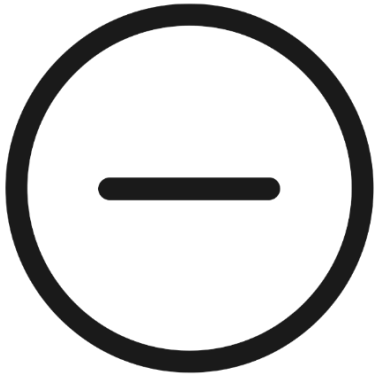
Update Validation Process

- **Data validation feedback**
- **EMR tutorial streamline**
- **Target Q3 pilot**



Data Validation 2023

- **Angina Pectoris**
- **Congenital Anomalies**
- **Mental/Personality Disorders**
- **TBI Processes of Care**



Retire

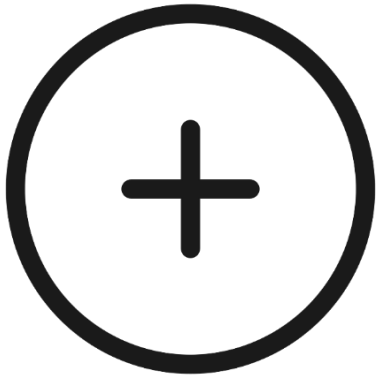
Data Validation 2023

- **Head CT date/time**
  - **Change to include all TBI's**

Change

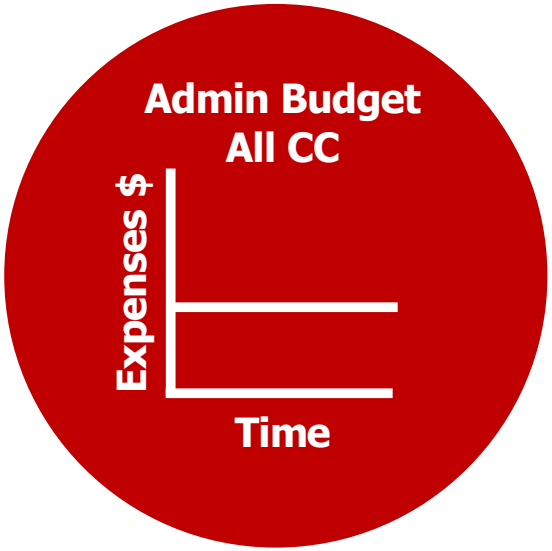
Data Validation 2023

- ADD/ADHD
- Bipolar I/II Disorder
- Major Depressive Disorder
- Other Mental/Personality
- Post-traumatic Stress Disorder
- Schizoaffective Disorder
- Schizophrenia
- Opioid Use Processes of Care



Additions

Future Meeting Format



Deliverables

- Meetings
- Online analytics
- Vendor portals

Changes

- Feb mtg virtual (1/3 mtg)
- June mtg no virtual option

Meeting Format

Evaluation Feedback

- Meeting length

Previous

- Jun 5h (in person)

Current

- Jun 3h (in person)
- Dec 2h (virtual)

Strategy

- Balance
- Network
- Traffic

Patient-Reported Outcomes (PRO) Centers

- Detroit Receiving Hospital
- Michigan Medicine
- 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
- UP Health System Marquette

Patient-Reported Outcomes (PRO)

Available Now

Patient Responses

Coming 2023

Response Dashboards

Research in Progress

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

Center	PI	Topic	Status
Henry Ford	Johnson	EMS vs. private car effect on outcomes	
Henry Ford	Kabbani	Impact of COVID-19 on outcomes in trauma patients	
Hurley Medical Center	Daswani	Resuscitation efficiency by dedicated trauma nurses in the ED	New
Michigan Medicine	Chung	Hand trauma: A geospatial analysis	Analysis done Manuscript creation
Michigan Medicine	Oliphant	Outcomes in trauma patients	
Michigan Medicine	Scott	Long-term outcomes and trauma policy	
Spectrum Health	Chapman	Outcomes in operative fixation of rib fractures	Analysis done Manuscript creation
Spectrum Health	Miller	Outcomes of simultaneous versus staged IMN nailing fixation of multiple long bone lower extremity fractures	Manuscript submission
St Joseph Mercy	Curtiss	Infection rates in operative trauma patients	
St Joseph Mercy	Hecht	Effect of antiplatelet and anticoagulant agents on outcomes following emergent surgery for trauma	
St Joseph Mercy	Hecht	Effect of antiplatelet and anticoagulant on outcomes following TBI	New
St Joseph Mercy	Hecht	Early chemoprophylaxis in severe TBI patients reduces risk of VTE	
St Joseph Mercy	Hecht	Need for reversal of anticoagulants in small to moderate TBI	New
St. Joseph Mercy	Hoesel	Rib fractures in the elderly	Statistician staffing
St. Joseph Mercy	Sadek	Reversal of anticoagulants and antiplatelets following TBI	
U of M Health - West	Mitchell	Blunt cerebral vascular injury	Statistician staffing


Feedback

Level III Updates

Sara Samborn, MSN, RN

Data Validation

Two first quarter dates available

- 2/21/2023
- 3/21/2023

Turn in your signed BAA/RAA to secure a date!

Data Validation

M·TQIP

Retired Variables

- Angina Pectoris
- Congenital Anomalies
- Mental/Personality Disorders

Data Validation

M·TQIP

Additional Variables

- ADD/ADHD
- Bipolar I/II Disorder
- Major Depressive Disorder
- Post-traumatic Stress Disorder
- Schizophrenia
- Delirium
- Cardiac arrest with CPR : Procedures > Outcomes

Site Specific Reports

M·TQIP

Additions

- Isolated hip fracture data
  - Time to OR
  - Delirium

  Available July 2023

Questions

smohar@med.umich.edu

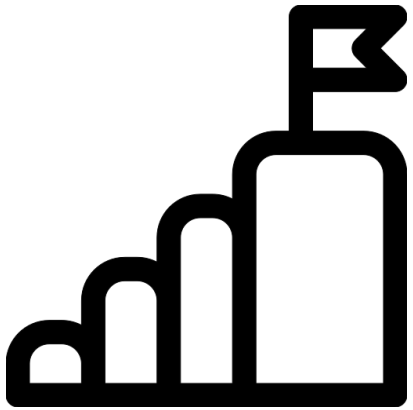
Thank you!

Challenging Questions Audience Engagement

Jill Jakubus

Instructions

- **Show questions submitted to MTQIP**
- **Definition**
- **Your response via poll**
- **Provided response**



The Challenge

Question 0

In the 1980s, who was the spokesperson for Publishers Clearing House?

- **Pat Sajak**
- **Ed McMahon**
- **Dick Clark**
- **Ed and Dick**
- **None of the above**
- **Before my time**

Response 0

Answer: None of the above

Response: This is an often-cited example of the Mandela effect where a large mass of peoples believe an event occurred.

Ed McMahon and Dick Clark were spokespeople for American Family Publishers.

This example highlights the importance of revisiting data definitions over time.

Question 1

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

Pt s/p fall found to have G-IV renal lac. Plan non-op management. Floor status hold in ED. Pt has cardiac arrest. CPR provided. Intubated. ROSC. Emergently taken to the OR for nephrectomy.

- **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.

Element Values

- Unplanned Visit to OR (NTDS 40)

Additional Information

- Unplanned is defined as an acute clinical deterioration requiring operative intervention.
- Exclude non-urgent tracheostomy and gastrostomy tube.
- Exclude pre-planned, staged and/or procedures for incidental findings.
- Exclude operative management related to a procedure that was initially performed prior to arrival at your center.
- 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.

Response 1

Answer: Yes, report Unplanned Visit to the Operating Room.

Response: Patient had unplanned operative procedure.

Initial plan was non-operative management until they deteriorated.

Question 2

For Unplanned Admission to ICU, what should be reported?

Pt s/p fall found to have SDH. Plan non-op management. Pt develops AMS. Emergently taken to the OR for evacuation of SDH. No documentation of plan for post-op ICU, but pts commonly go to ICU post-this procedure. Pt admitted to ICU post-op.

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

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.

Element Values

- Unplanned Admission to ICU (NTDS 31)

Additional Information

- Exclude patients with a planned post-operative ICU stay.
- Include patients who required ICU care due to an event that occurred during surgery or in the PACU.

Response 2

Answer: Yes, report Unplanned Admission to ICU.

TQIP Response:

"If it was not documented prior to the OR procedure the patient required ICU stay post OP, they meet the definition criteria and Element Value "1. Yes" must be reported. Additionally, if the patient failed removal of a required interventions placed in the OR requiring ICU admission, that is considered an event that occurred.

If your providers are not documenting the need for ICU care after certain OR procedures are being performed, you may consider initiating a PI project to improve documentation."

Question 3

For Unplanned Intubation, what should be reported?

Pt s/p fall. Admitted to floor. All injuries non-op. RN finds patient in respiratory arrest (i.e., RR = 0). Anesthesia to bedside and places endotracheal tube.

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

9.30 UNPLANNED INTUBATION

Description

Patient requires placement of an endotracheal tube and mechanical or assisted ventilation manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis.

Element Values

- Unplanned Intubation (NTDS 25)

Additional Information

- For patients who were intubated in the field, emergency department, or those intubated for surgery, unplanned intubation occurs if they require reintubation >24 hours after extubation.

Response 3

Answer: Yes, report Unplanned Intubation.

Response: Pt required placement of endotracheal tube for respiratory arrest.

The patient has already gone through severe respiratory distress and now has respiratory arrest. No breathing = hypoxia.

Question 4

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

Pt s/p MVC. Pt found to have SDH. Pt admitted. Pt never regained consciousness post MVC. Pt declared brain dead 1/1/23 00:01. Care withdrawn in coordination with Gift of Life. Gift of Life procurement 1/5/23 00:01.

- **Yes, 1/1/23, 00:01**
- **Yes, 1/5/23, 00:01**
- **No**

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 Description 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.
- The element value 'No' should be reported for patients whose time of death, according to your hospital's Description, 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.

17.2 WITHDRAWAL OF LIFE SUPPORTING TREATMENT DATE

Reporting Criterion

Report on all patients.

Description

The date care was withdrawn.

Element Values

- Relevant value for data element.

Additional Information

- Reported as YYYY-MM-DD.
- The null value "Not Applicable" is reported for patients where Withdrawal of Life Supporting Treatment is "No."
- Report the date the first of any existing life-sustaining intervention(s) is withdrawn (e.g., extubation). If no intervention(s) is in place, record the time the decision not to proceed with a lifesaving intervention(s) occurs (e.g., intubation).

Response 4

Answer: Yes, 1/1/23, 00:01

Response: 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 patient's 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.

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 Description 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).
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17.2 WITHDRAWAL OF LIFE SUPPORTING TREATMENT DATE

Reporting Criterion

Report on all patients.

Description

The date care was withdrawn.

Element Values

- Relevant value for data element.

Additional Information

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- The null value "Not Applicable" is reported for patients where Withdrawal of Life Supporting Treatment is "No."
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Question 5

For Superficial SSI, what should be reported?

Pt s/p fall. Pt found to have SDH. PEG placed at bedside. On POD 3, pt has purulent drainage around PEG site, febrile, hypotensive. Pt taken to the OR for ex lap with wound VAC placement.

- **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).

Comments

There are two specific types of superficial incisional SSIs:

1. Superficial Incisional Primary (SIP) – a superficial incisional SSI that is identified in the primary incision in a patient
   that has had an operation with one or more incisions (e.g., C-section incision or chest incision for CBGB)
2. Superficial Incisional Secondary (SIS) – a superficial incisional SSI that is identified in the secondary incision in a
   patient that has had an operation with more than one incision (e.g., donor site incision for CBGB)

Additional Information

Resources

- CDC NHSN Manual, Chapter 9
- CDC NHSN Operative Procedures, Chapter 9-1
- CDC NHSN Exclusions, Chapter 9-9
- 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

Response 5

Answer: No (likely)

Response: The PEG tube procedure itself meets the NHSN criteria for an operative procedure but the fact that it was done at the bedside in the patient's room likely does not meet the OR location part of the criteria (see up-coming slide, orange flag).

We suggest reaching out to your Infection Control department who reports on these events and confirm the designation of the room.

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Additional Information

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- CDC NHSN Manual, Chapter 9
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- 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

Response 5

NHSN Chapter 9-4

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.

Question 6

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

Pt s/p fall. Pt found to have SDH. Plan non-op. Worsening MS in ED with increased SDH. Plan non-op. HD 10 pending d/c to acute rehab. Repeat head CT w/new 8 mm midline shift and uncal herniation. No neuro changes. Pt taken to the OR for evacuation of SDH.

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

9.31 UNPLANNED VISIT TO THE OPERATING ROOM

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Element Values

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- 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.

Response 6

Answer: Yes

Response: Head CT showing new clinical deterioration requiring operative intervention.


Feedback

Break

10 minutes

Data Bytes

Jill Jakubus

Data Bytes

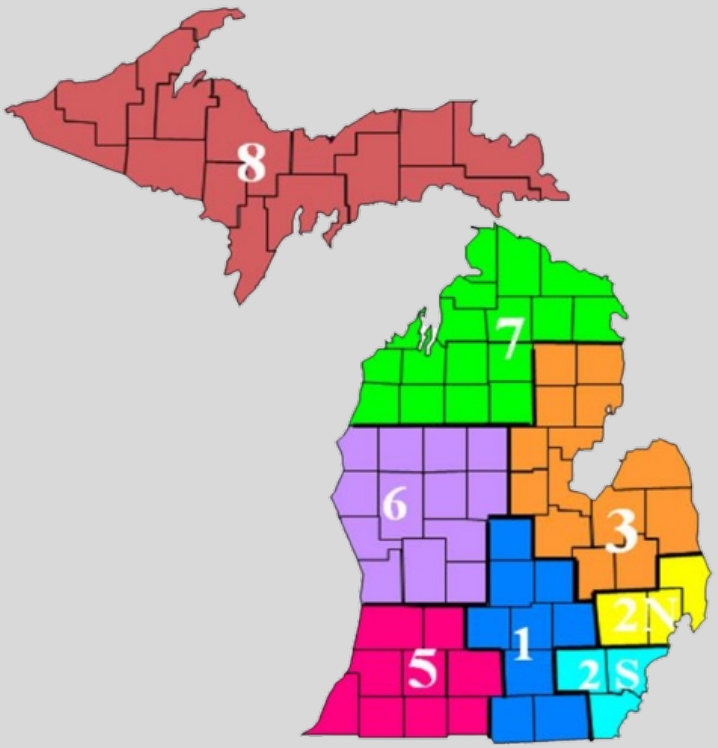
- **Updated SOM Tableau graphs**
- **New death determination drill downs**

State of Michigan Work

- Request new trend graphs
- Trend by year
- PDF medium
- Target Jan 2023 report

Request

- Number of patients
- Number of patients level I-III centers
- Mean ED dwell time
- Mean ISS
- Mean age
- Frequency of blunt and penetrating mechanism
- Frequency of transport in mode
- Number of patients with active COVID diagnosis



Data Submission Participants by Region

Region 1
Henry Ford Allegiance Health
McLaren Greater Lansing Hospital
MidMichigan Medical Center - Gratiot
Sparrow Hospital

Region 2N
Ascension Macomb-Oakland Hospital
Ascension Providence Hospital - Novi
Ascension Providence Hospital, Southfield Campus
Ascension Providence Rochester Hospital
Beaumont Hospital, Troy
Beaumont Hospital, Farmington Hills
Beaumont Hospital, Royal Oak
Henry Ford Macomb Hospital
Henry Ford West Bloomfield Hospital
Lake Huron Medical Center
McLaren Macomb Hospital
McLaren Oakland Hospital
McLaren Port Huron Hospital
Trinity Health Oakland Hospital

Region 2S
Ascension St. John Hospital
Beaumont Hospital, Dearborn
Beaumont Hospital, Grosse Pointe
Beaumont Hospital, Trenton
Beaumont Hospital, Wayne
DMC Detroit Receiving Hospital
DMC Sinai-Grace Hospital
Henry Ford Hospital
Henry Ford Wyandotte Hospital
Michigan Medicine
ProMedica Monroe Regional Hospital
Trinity Health Ann Arbor Hospital
Trinity Health Livonia Hospital

Region 3
Ascension Genesys Hospital
Ascension St. Mary's Hospital
Covenant HealthCare
Hurley Medical Center
McLaren Bay Region Hospital
McLaren Flint Hospital
McLaren Lapeer Region Hospital
MidMichigan Medical Center – Midland

Region 5
Ascension Borgess Hospital
Bronson Battle Creek Hospital
Bronson Methodist Hospital
Oaklawn Hospital
Spectrum Health Lakeland Hospital

Region 6
Holland Hospital
Spectrum Health Blodgett Hospital
Spectrum Health Butterworth Hospital
Spectrum Health Zeeland Hospital
Trinity Health Muskegon Hospital
Trinity Health Saint Mary's - Grand Rapids
University of Michigan Health – West

Region 7
McLaren Northern Michigan Hospital
MidMichigan Medical Center - Alpena
Munson Healthcare

Region 8
Aspirus Keweenaw Hospital
UP Health System - Marquette
UP Health System - Portage
War Memorial Hospital

Data Submission Participants

Level I

Ascension St. John Hospital
Beaumont Hospital, Royal Oak
Bronson Methodist Hospital
DMC Detroit Receiving Hospital
Henry Ford Hospital
Hurley Medical Center
Michigan Medicine
Sparrow Hospital
Spectrum Health Butterworth Hospital
Trinity Health Ann Arbor Hospital

Level II

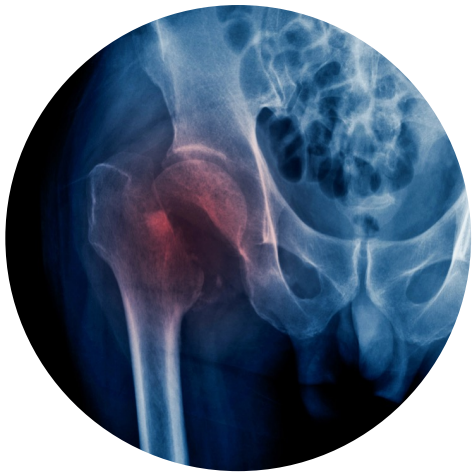
Ascension Borgess Hospital
Ascension Genesys Hospital
Ascension Providence Hospital - Novi
Ascension Providence Hospital, Southfield Campus
Ascension St. Mary's Hospital
Beaumont Hopsital, Troy
Beaumont Hospital, Dearborn
Beaumont Hospital, Farmington Hills
Beaumont Hospital, Trenton
Covenant HealthCare
DMC Sinai-Grace Hospital
Henry Ford Allegiance Health
Henry Ford Macomb Hospital
McLaren Lapeer Region Hospital
McLaren Macomb Hospital
McLaren Northern Michigan Hospital
McLaren Oakland Hospital
Mercy Health Muskegon
MidMichigan Medical Center - Midland
Munson Healthcare
Trinity Health Livonia Hospital
Trinity Health Oakland Hospital
Trinity Health Saint Mary's - Grand Rapids
University of Michigan Health-West
UP Health System - Marquette

Level III

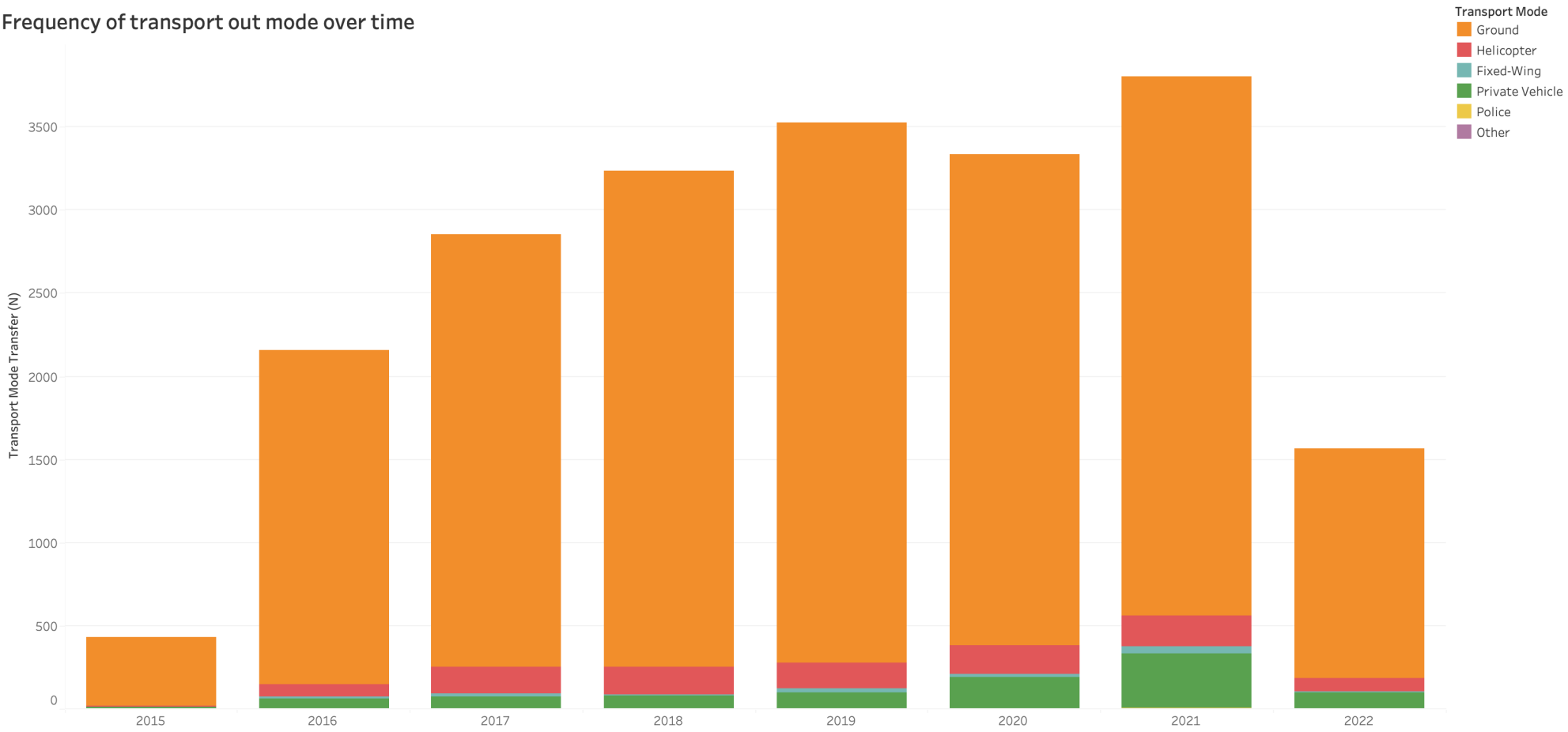
Ascension Macomb-Oakland Hospital
Ascension Providence Rochester Hospital
Aspirus Keweenaw Hospital
Beaumont Hospital, Grosse Pointe
Beaumont Hospital, Wayne
Bronson Battle Creek Hospital
Henry Ford West Bloomfield Hospital
Henry Ford Wyandotte Hospital
Holland Hospital
Lake Huron Medical Center
McLaren Bay Region Hospital
McLaren Flint Hospital
McLaren Greater Lansing Hospital
McLaren Port Huron Hospital
MidMichigan Medical Center - Alpena
MidMichigan Medical Center - Gratiot
Oaklawn Hospital
ProMedica Monroe Regional Hospital
Spectrum Health Blodgett Hospital
Spectrum Health Lakland Hospital
Spectrum Health Zeeland Hospital
UP Health System - Portage
War Memorial Hospital

Bonus

- Frequency of transport out mode
- Mean time to OR IHF
- Mean hospital LOS IHF

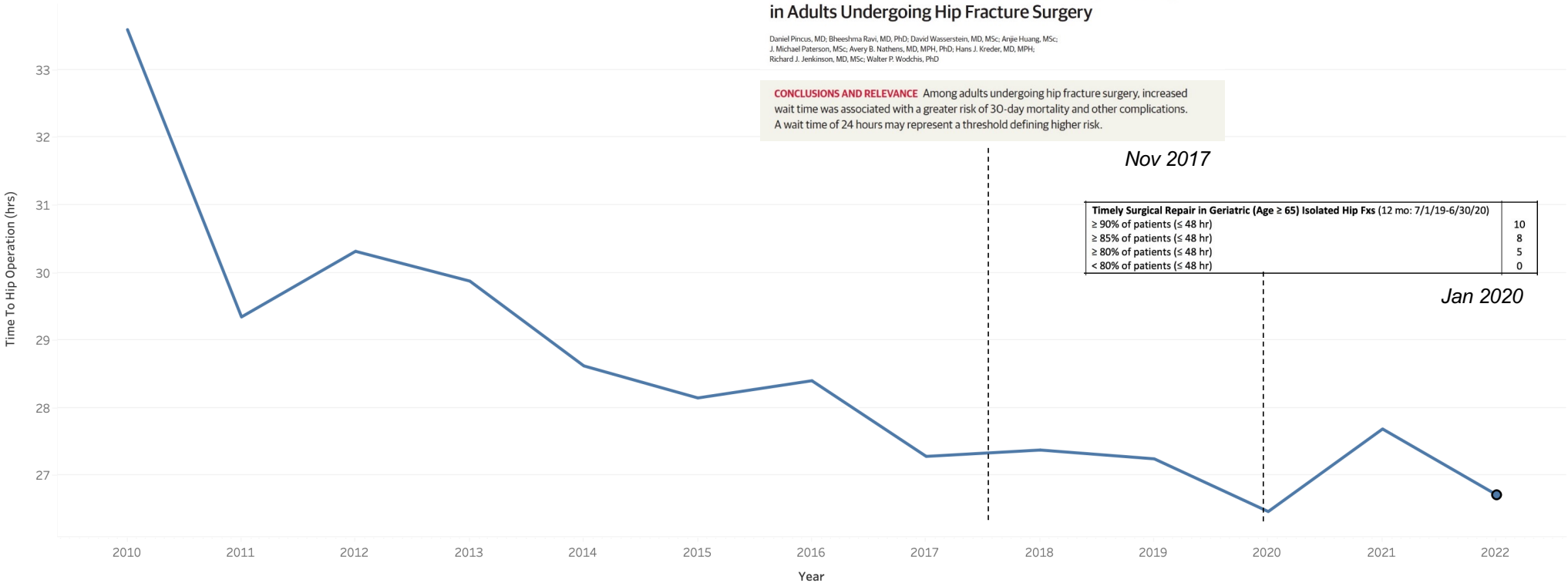


Frequency of transport out mode over time



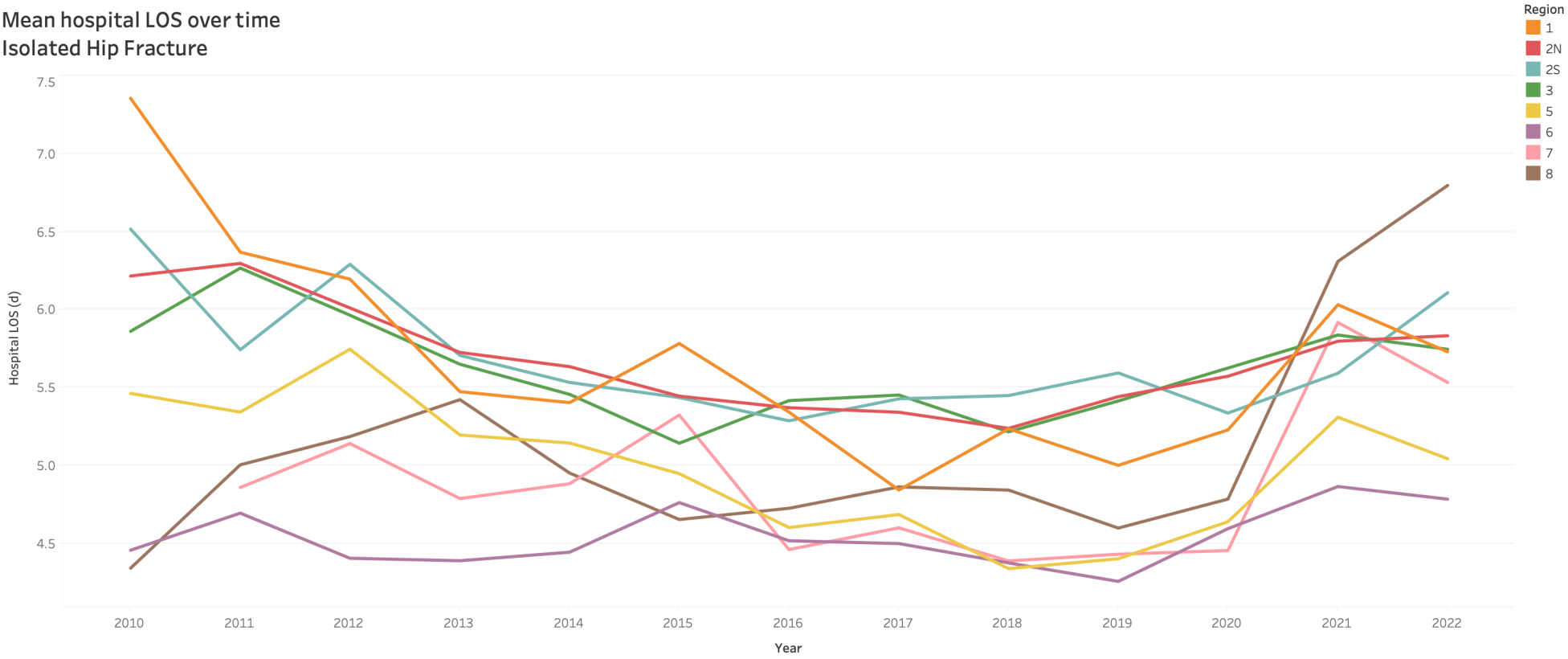
Transport Mode Transfer	2015	2016	2017	2018	2019	2020	2021	2022	Grand Total
Ground	95.4%	93.0%	91.1%	92.1%	92.1%	88.5%	85.3%	88.2%	**90.0%**
Helicopter	2.3%	3.5%	5.7%	5.1%	4.5%	5.2%	4.9%	5.0%	**4.8%**
Fixed-Wing		0.5%	0.7%	0.2%	0.7%	0.6%	1.1%	0.6%	**0.6%**
Private Vehicle	2.3%	2.8%	2.5%	2.5%	2.7%	5.6%	8.6%	6.1%	**4.4%**
Police		0.0%				0.1%	0.1%	0.1%	**0.0%**
Other		0.1%			0.0%		0.1%		**0.0%**

Mean time to OR over time
Isolated Hip Fracture



Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Grand Total
1	19.8	28.0	30.9	26.2	26.1	27.4	26.9	26.2	29.9	26.7	28.5	28.0	24.3	**27.5**
2N	29.0	32.8	33.8	33.4	31.8	32.9	31.4	30.3	30.5	30.6	29.8	28.9	29.6	**30.8**
2S	41.5	36.0	37.0	34.7	33.3	29.3	28.5	28.2	29.3	28.4	27.0	26.7	28.7	**30.0**
3	30.8	25.8	24.5	26.0	24.8	25.1	27.6	26.2	28.0	28.3	26.1	27.2	25.5	**26.7**
5	31.4	25.6	28.0	25.4	24.7	23.3	22.6	24.3	22.0	22.8	22.8	22.5	21.9	**24.0**
6	23.6	25.3	23.2	22.9	23.5	23.6	26.2	22.7	22.0	21.5	22.2	21.9	21.4	**22.6**
7		23.3	27.4	28.9	25.0	27.1	23.2	24.8	22.6	24.9	24.4	47.5	29.4	**28.4**
8	26.2	24.9	30.5	32.2	28.6	29.6	28.7	28.3	28.1	27.9	28.5	25.2	24.7	**28.1**

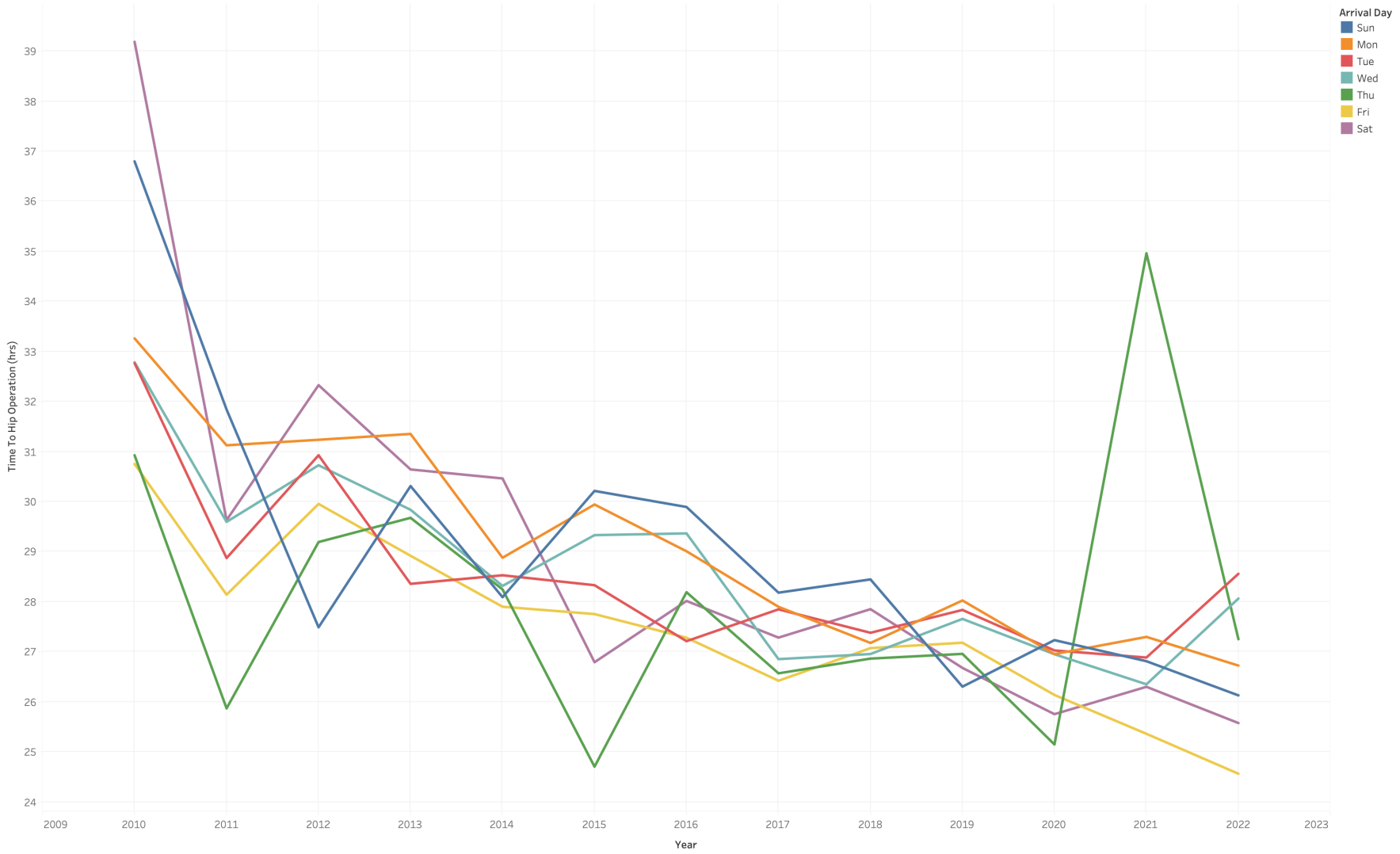
Mean hospital LOS over time
Isolated Hip Fracture



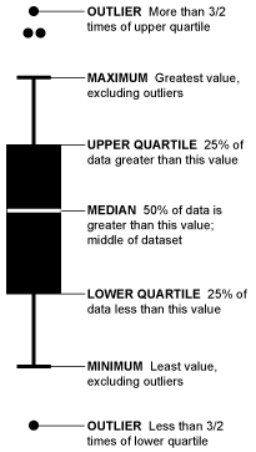
Region	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Grand Total
1	7.4	6.4	6.2	5.5	5.4	5.8	5.3	4.9	5.3	5.0	5.2	6.0	5.7	**5.5**
2N	6.2	6.3	6.0	5.7	5.6	5.4	5.4	5.3	5.2	5.4	5.6	5.8	5.8	**5.6**
2S	6.5	5.7	6.3	5.7	5.5	5.4	5.3	5.4	5.4	5.6	5.3	5.6	6.1	**5.6**
3	5.9	6.3	6.0	5.6	5.5	5.1	5.4	5.5	5.2	5.4	5.6	5.8	5.7	**5.6**
5	5.5	5.3	5.7	5.2	5.1	4.9	4.6	4.7	4.3	4.4	4.6	5.3	5.0	**4.9**
6	4.5	4.7	4.4	4.4	4.4	4.8	4.5	4.5	4.4	4.3	4.6	4.9	4.8	**4.5**
7		4.9	5.1	4.8	4.9	5.3	4.5	4.5	4.3	4.4	4.5	5.9	5.5	**4.9**
8	4.3	5.0	5.2	5.4	5.0	4.7	4.8	4.9	4.9	4.6	4.8	6.3	6.8	**5.1**
Grand Total	**6.1**	**5.7**	**5.8**	**5.5**	**5.3**	**5.3**	**5.1**	**5.1**	**5.0**	**5.1**	**5.2**	**5.6**	**5.7**	5.3


For isolated hip fractures, does day of the week of patient arrival matter?

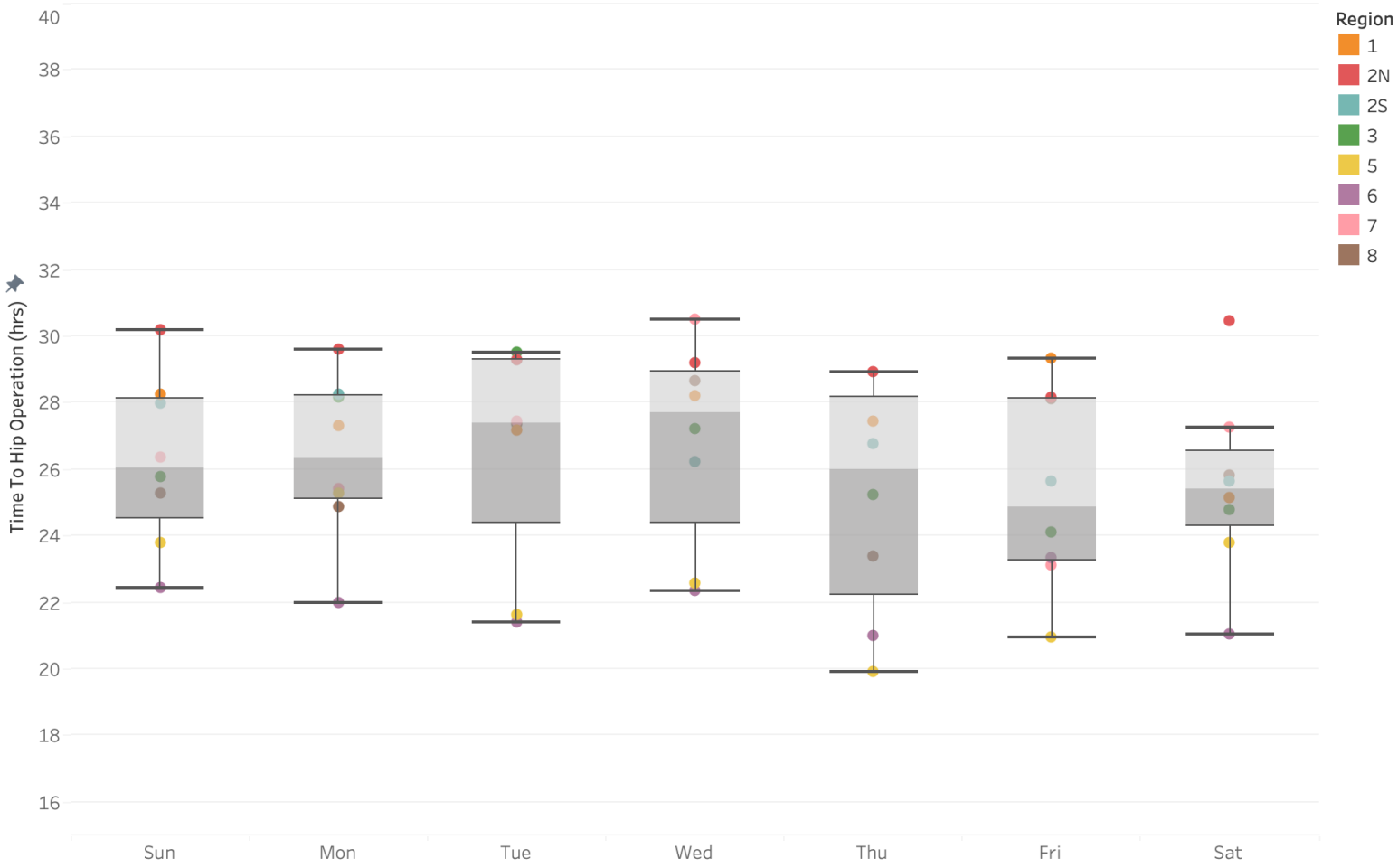
Mean time to OR over time
Isolated Hip Fracture

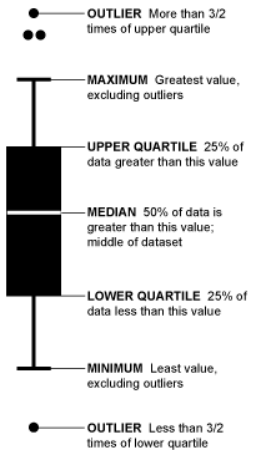


Mean time to OR by arrival day
Isolated Hip Fracture



Mean time to OR by arrival day
Isolated Hip Fracture
2020 - 2022





Death Determination

- Resources for Optimal Care
- Data dictionary definition
- MTQIP 2023 Performance Index
- Drill downs

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

Resources for Optimal Care of the Injured Patient (2022 Standards)

Death Determination Definition

2021

17.7 MORTALITY CLASSIFICATION

Reporting Criterion

~~Optional reporting. If participating~~, 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

- 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.

2023

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

- Unanticipated mortality with opportunity for improvement (UNANTIC.QI.OPP)
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Death Determination Performance Index

Michigan Trauma Quality Improvement Program (MTQIP) 2023 Performance Index January 1 to December 31, 2023				
Measure	**Weight**	**Measure Description**	**Points**	
#1	10	**Data Submission** On-time and complete 3 of 3 times On-time and complete 2 of 3 times On-time and complete 1 of 3 times	 10 5 0	**PARTICIPATION (30%)**
#2	10	**Meeting Participation** Surgeon and TPM or MCR participate in 3 of 3 Collaborative meetings Surgeon and TPM or MCR participate in 2 of 3 Collaborative meetings Surgeon and TPM or MCR participate in 0-1 of 3 Collaborative meetings Registrar or MCR participate in the annual June Data Abstractor meeting	0-10 9 6 0 1	
#3	10	**Data Validation Error Rate** 0.0-3.0% 3.1-4.0% 4.1-5.0% > 5.0%	 10 8 5 0	
#4	5	**PI Death Determination Documentation** (12 mo: 7/1/22-6/30/23) 0-2 Deceased patients missing documentation 3-4 Deceased patients Missing documentation > 4 Deceased patients Missing documentation	 5 3 0	

Death Determination Drill Down

MTQIP PI Death Drill Down
Interval 7/1/22 - 6/30/23
Target 0 - 2 Deceased patients missing documentation

3

M·TQIP

2

1

Center	Trauma #	MRN	Age	ED Arrival Date	Activation Status	Surgeon Name	ISS	Serious Complication	Withdrawal of Care	Death Location	LOS	Death Determination	Missing Data Alert
XX	1111	12345	25	7/1/22	Consult	Doe, John	18	No	Yes	ICU	0.9		
XX	2222	67891	46	7/2/22	Consult	Doe, Jane	9	Yes	Yes	ICU	39.8	Anticipated without opportunity for improvement	


Feedback

Challenging Questions Clarifications

Jill Jakubus

Question A

For Alcohol Use Disorder, what does "include evidence of chronic use, such as withdrawal episodes" mean?

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

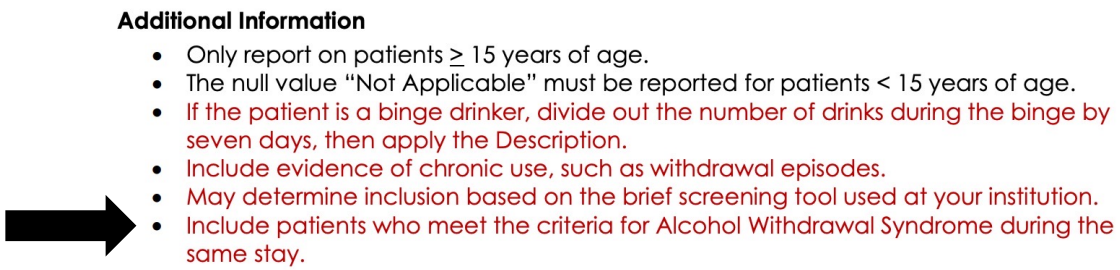
- Only report on patients ≥ 15 years of age.
- The null value "Not Applicable" must be reported for patients < 15 years of age.
- If the patient is a binge drinker, divide out the number of drinks during the binge by seven days, then apply the Description.
- Include evidence of chronic use, such as withdrawal 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.

Response A

The intent is to include evidence of chronic use, such as withdrawal episodes during the same stay.

This aligns with the bullet including if Alcohol Withdrawal Syndrome during the same stay.

We have included this clarification with the 2024 updates.



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.

Question B

For Arrived From, can you help us on reporting from a freestanding ED?

The freestanding ED facility does not have admitting capabilities. Thus, would not be considered a hospital.

5.32 DIRECT ADMIT

Description

Report whether patient was directly admitted to MTQIP accepting facility without ED evaluation (i.e., direct admit to floor or ICU).

Element Values

- Yes (Y)
- No (N)

Additional Information

Resources

5.33 ARRIVED FROM

Description

The location where patient arrived from.

Element Values

1. Scene of injury
2. Home
3. Transfer from referring hospital ED

Additional Information

Resources

Response B

Free standing ED to Hospital ED

- **Direct Admit = No**
- **Arrived From = Transfer from referring hospital ED**

Free standing ED to Floor

- **Direct Admit = Yes**
- **Arrived From = Transfer from referring hospital ED**

Plan

- **Discuss at the June 2023 meeting**
- **Update the 2024 data dictionary if needed based on feedback**

Question C

For Opioid Process Measures, what should be reported?

Pt s/p fall. On HD 5, pt scheduled for d/c to SNF. APP e-prescribes oxycodone 5mg PO Q 6 hr prn pain #20. RN notes pt has eloped when attempting to provide d/c instructions.

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).

Resources

- Drug search

Response C

For data validation, either will be accepted for 2023.

The preference would be to not report opioids when prescribed status is unclear in the documentation.

We have included this clarification with the 2024 updates.

Question D

For Delirium, what should be reported?

Pt PMH +dementia s/p fall. Positive CAM score during her entire stay. Notes state "pt is pleasantly confused" which is baseline.

9.16 DELIRIUM

Description

Acute onset of behaviors characterized by restlessness, delusions, and incoherence of thought and speech. Delirium can often be traced to one or more contributing factors, such as a severe or chronic medical illness, changes in your metabolic balance (e.g., low sodium), medication, infection, surgery, or drug withdrawal.

OR

Patient tests positive after using an objective screening tool like the Confusion Assessment Method (CAM) or the Intensive Care Delirium Screening Checklist (ICDSC).

OR

A diagnosis of delirium documented in the patient's medical record.

Element Values

- Delirium (NTDS 39)

Additional Information

- Exclude patients whose delirium is due to alcohol withdrawal.

Response D

More info needed.

Capture of delirium using a screening tool would depend on the onset and when the screenings were initiated. When the patient is admitted to the ICU/floor, a delirium screen should be completed as part of the initial assessment. If it was positive at that time, it would be considered present on arrival and not reported.

The definition provides 3 ways to capture delirium that are separate from each other (OR statements vs AND statements), therefore, if the patient meets any of the criteria, you need report it.

It's difficult at times to determine delirium in a patient with dementia but these patients are at a higher risk for this hospital event. Following the definition criteria is the easiest way to determine whether to report it.

Question E

For ICU Days, what source should we use?

At the MTC Meeting, there was a possible opportunity for improvement identified.

10.1 TOTAL ICU LENGTH OF STAY

Description

The cumulative amount of time spent in the ICU receiving ICU level of care.

Element Values

- Relevant value for data element.

Additional Information

- Reported in full day increments with any partial calendar day counted as a full calendar day.
- The calculation assumes that the date and time of starting and stopping an ICU episode are recorded in the patient's chart.
- The null value "Not Known/Not Recorded" is reported if any dates are missing.
- If patient has multiple ICU episodes on the same calendar day, count that day as one calendar day.
- At no time should the ICU LOS exceed the Hospital LOS.
- The null value "Not Applicable" is reported if the patient had no ICU days according to the above Description.
- If the documentation reflects a patient is receiving ICU care in a non-ICU setting due to bed availability issues, then report as an ICU day.

Response E

Short answer: **The definition for ICU days asks for ICU care delivery. There are multiple ways this can be documented in the medical record so we're intentionally not proscriptive in the source.**

Long answer: **Technically, the level of care orders should be followed by the nurse, meaning if a provider asks for floor status then they should provide that.**

The issue we most commonly see people running into is the request for bed orders. This means that the provider asks for the patient to be transferred but in the meantime the nurses are still providing ICU care. The easiest way we know to be able to secondarily confirm what they are doing is by checking the frequency of the vital signs.

Certainly, open to suggestions and clarifications to the data dictionary if someone has a better way to easily and consistently identify ICU care delivery.


Feedback


M·TQIP

Data Abstraction Staff Meeting

Hybrid Ann Arbor, MI
June 7, 2022

Welcome & Updates

Jill Jakubus

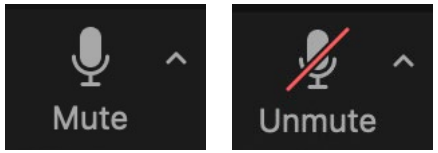
Disclosures

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

- **Shauna Di Pasquo**
- **Jill Jakubus**
- **Sara Samborn**

Hybrid Meeting Logistics

- Join via computer
- Enter your full name
- Mute all microphones
- Discussion at the section ends
- Unmute your own microphone
- Zoom network dependent



Slides Online

M·TQIP

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

SLIDES

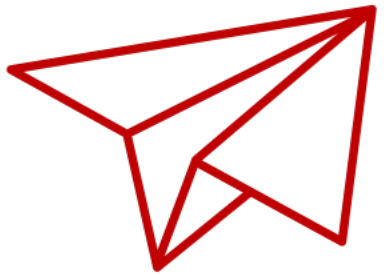
MEETING SLIDES

2022	**|**	Feb	May	June	Oct
2021	**|**	Feb	May	June	Oct

7 business days

Hybrid Meeting Pilot

- **Silver lining experimentation**
- **Access**
- **Engagement**
- **Advocating for you**
- **Patience & feedback**



No Photos Please

Calendar

- July – State of Michigan report release
- Aug 5 – Optional data submission due
- Dec – Abstraction staff education event


Welcome

Contacting Us

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Data Dictionary

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Jennifer O'Gorman
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Meeting Invites

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MACS

Janessa Monahan
monahaj@med.umich.edu

Patient-Reported Outcomes

Data Support Made Easy

Hello,

If you have any questions about the dataset, click "Schedule Meeting" below.

The created invite can be forwarded if others would like to join.

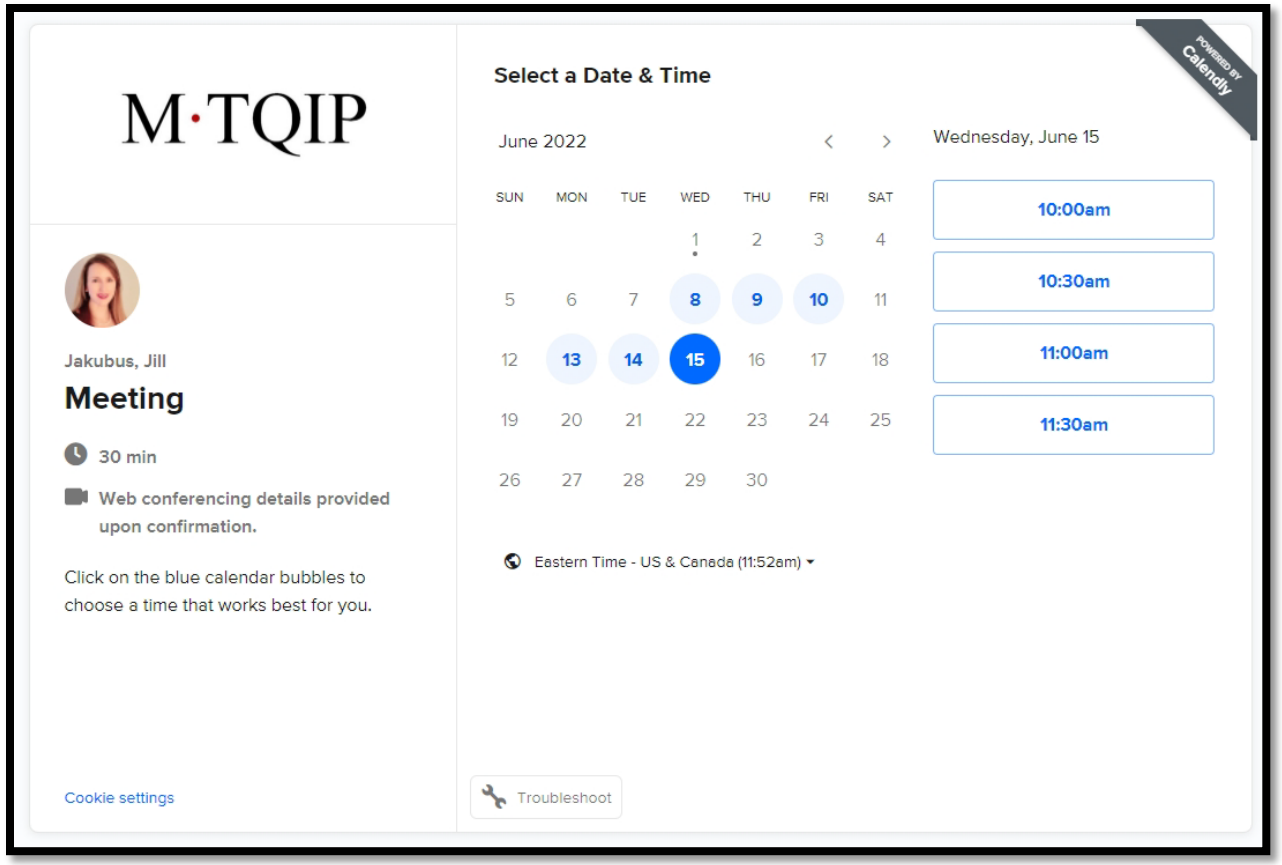
Sincerely,

Jill

Jill Jakubus, PA-C, MHSA, MS
Program Manager – Data and Analytics | MTQIP
Physician Assistant | University of Michigan
Schedule Meeting

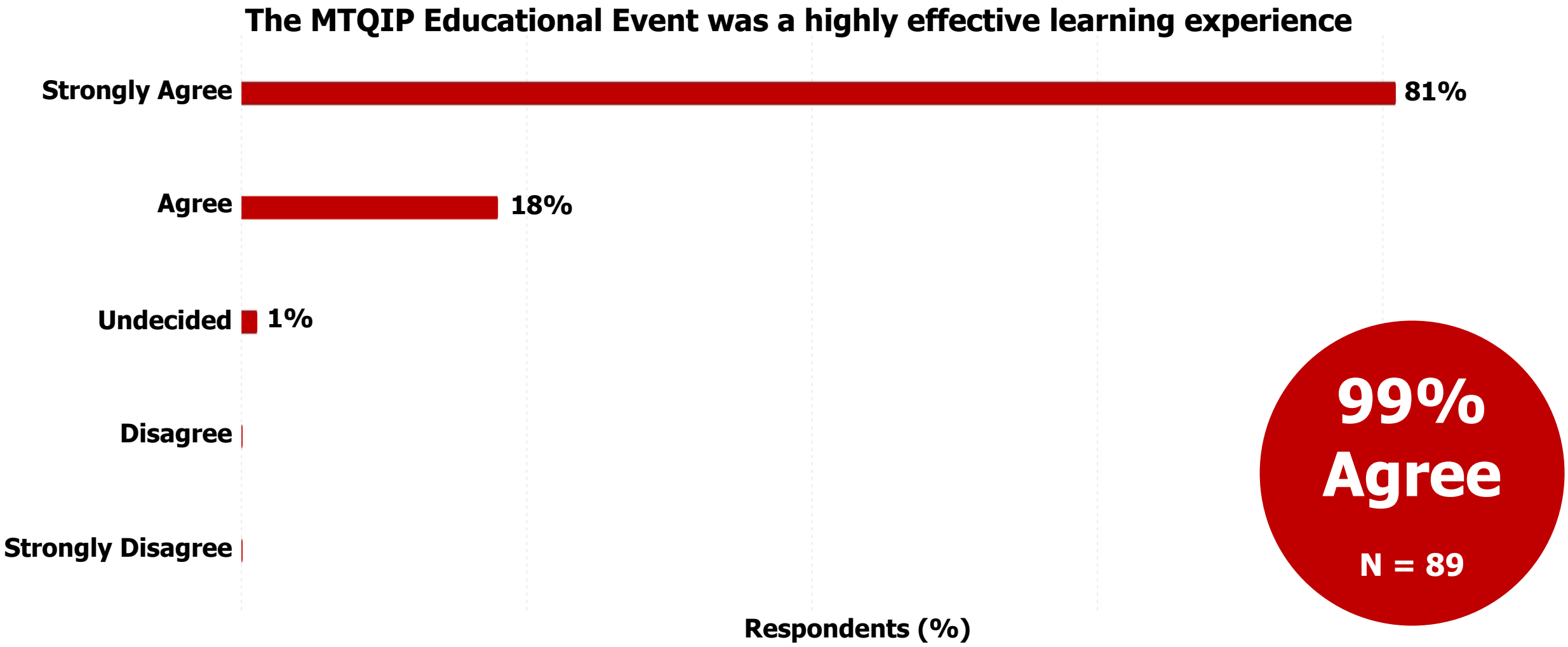
Calendly

Data Support Made Easy

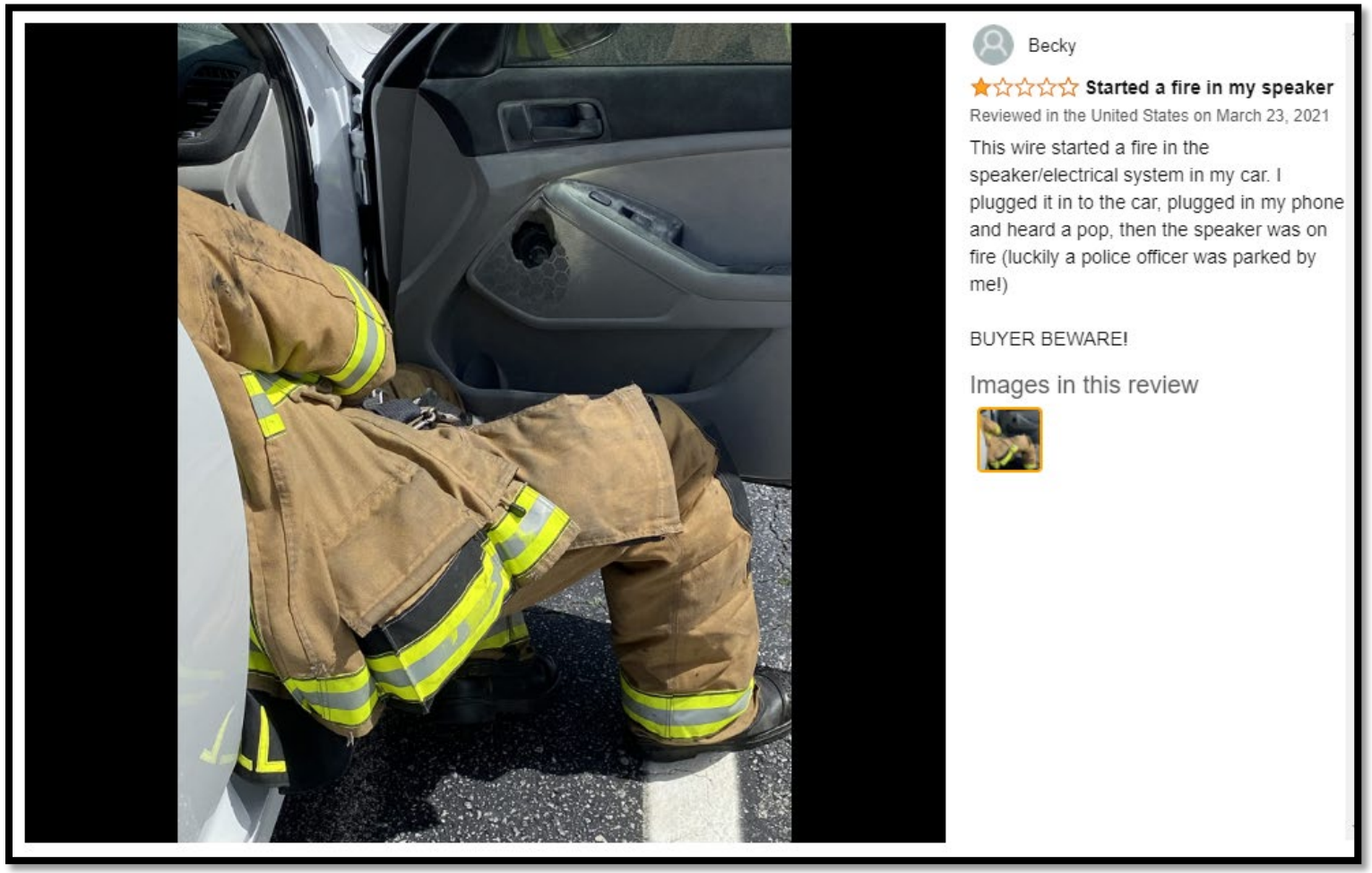


Calendly

Education Event Meeting Feedback



Opportunities for Improvement (OFI)



Becky

★☆☆☆☆ **Started a fire in my speaker**

Reviewed in the United States on March 23, 2021

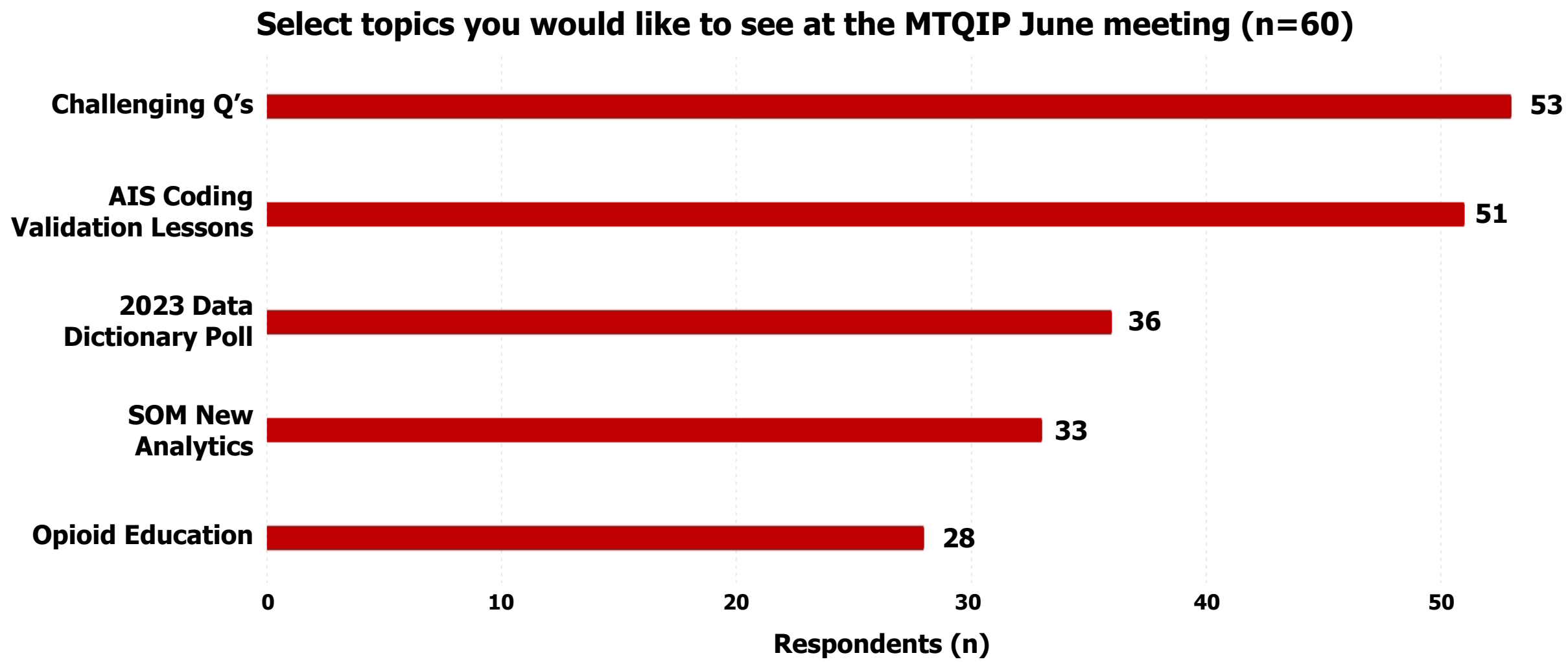
This wire started a fire in the speaker/electrical system in my car. I plugged it in to the car, plugged in my phone and heard a pop, then the speaker was on fire (luckily a police officer was parked by me!)

BUYER BEWARE!

Images in this review

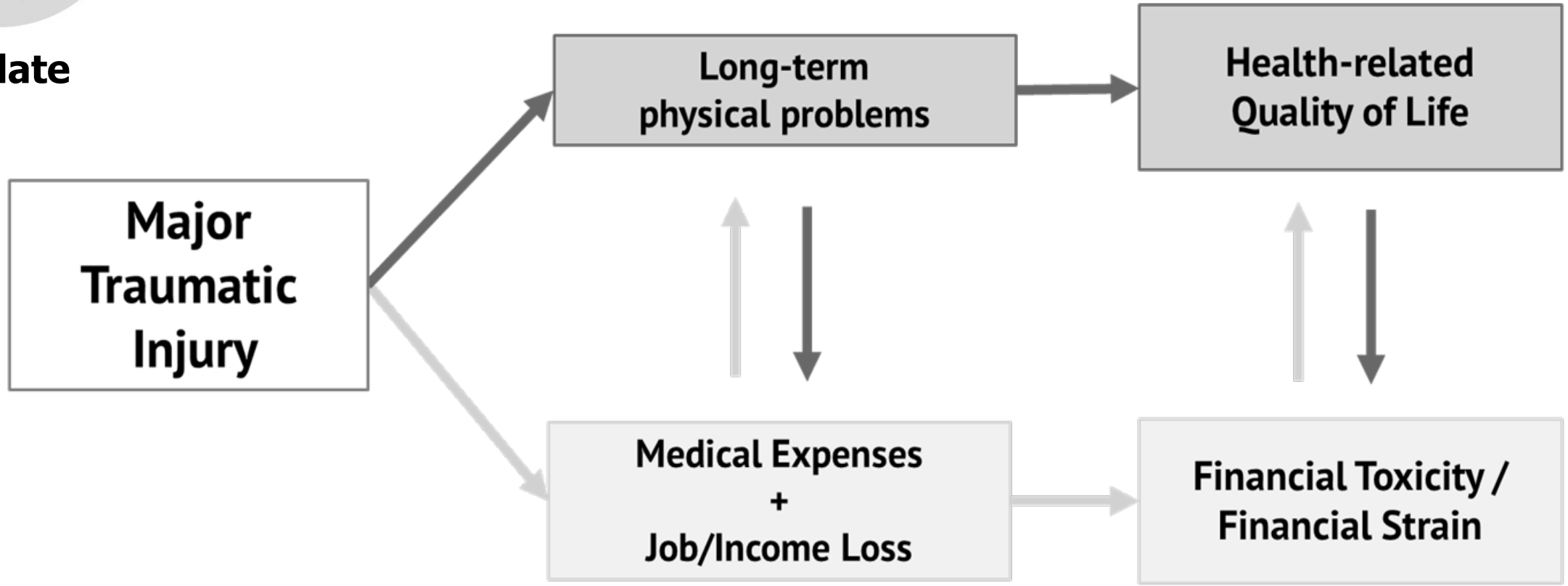

New staff
MTQIP dictionary
Level I/II reporting
Clinical staff
OBJECTIVE
Provide value for all participants
Experienced staff
NTDS dictionary
Level III reporting
Coding staff

Top 5 Meeting Requested Topics



Update

Long-term clinical and economic consequences of injury



Aim: Understand the clinical and economic burden of recovery after major injury

Single Trauma Center Registry

February 2021 - July 2021

1 center

Distribution:
Email/Phone

Timeline:
1 month post discharge

Six Participating Hospitals

September 2021 - May 2022

6 centers

Distribution:
Email/SMS/Postcard/Phone

Timeline:
1, 3, 6, 12 months post discharge

Inclusion Criteria

- **Age ≥ 18**
- **ISS ≥ 15**
- **Fracture**
  - **Long bone, pelvis, 2+ ribs**
- **Operation**
- **Mechanical ventilation**

Clinical Outcomes

- **5 measures of health related quality of life**
- **Opioid use**
- **Caregiver burden**

Economic Outcomes

- **Income loss**
- **Return to work**
- **Out-of-pocket spending**
- **New medical debt**
- **Financial toxicity**

Current Findings

50%

struggle with **health-related quality of life**

1 in 4

reported **poor economic outcomes**

Dynamic Responses

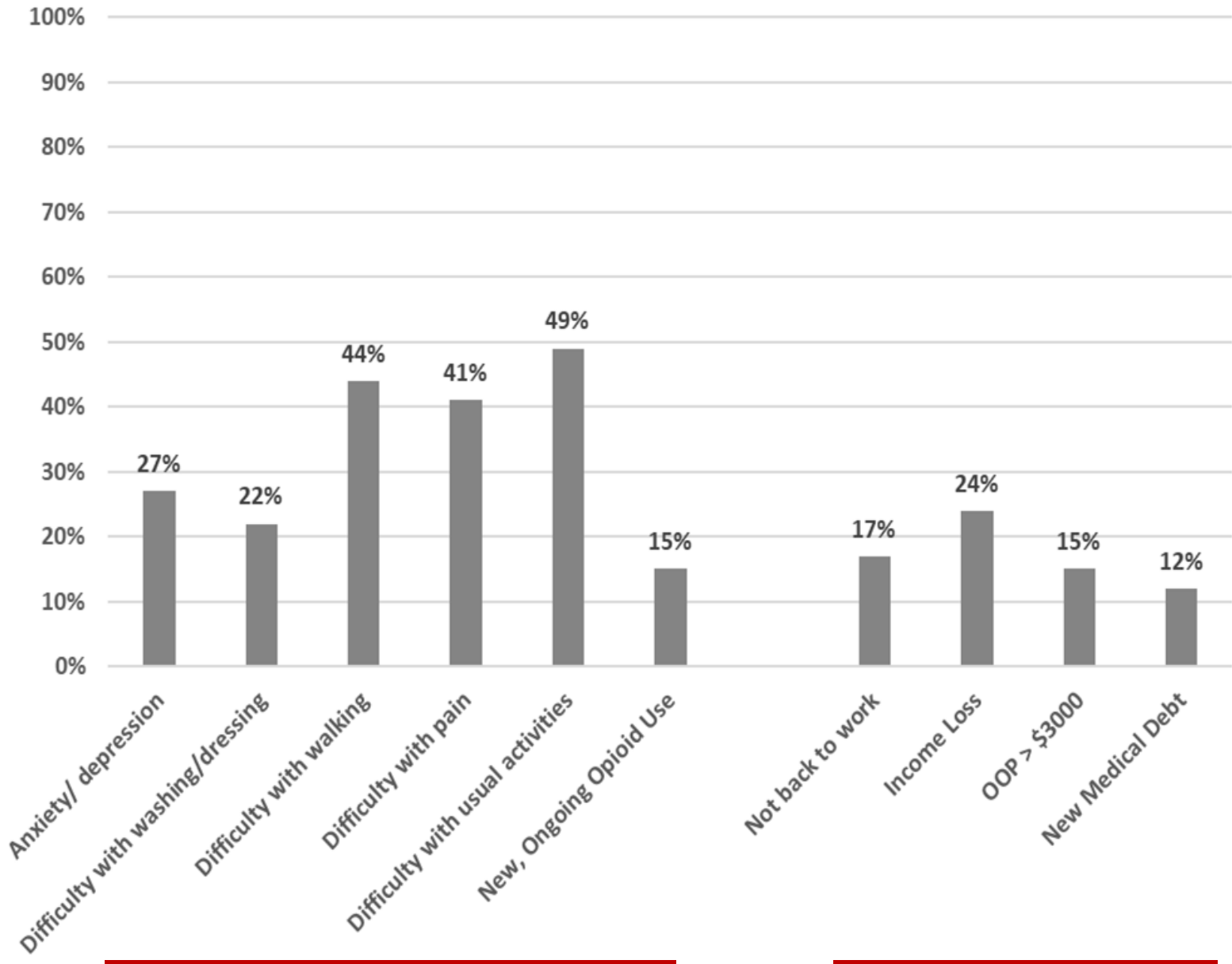
evolving challenges over the **course of recovery**

41 Responses

MTQIP

Distribution:

- **Email n=29**
- **SMS n=10**
- **Postcard n=2**



Next Phase of Project Expansion

- ***Increasing Representation across MTQIP***
  - Inviting other MTQIP members to take part and have our team contact their patients for PRO's
- ***Fine-tuning Data Collection System***
  - PRO team is continuing to develop an efficient and effective system to consistently capture 1, 3, 6, (9), and 12 month outcomes
  - Expanding the PRO team
- ***Patient Data Feedback to the Centers***
  - We're committed to feeding this data back to improve the recovery of all trauma survivors across the State of Michigan

Thank you to the hospitals who are currently participating and we hope to have more members involved!

Updates

Research in Progress

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

Center	PI	Topic	Phase
Detroit Receiving	Oliphant	The accuracy of orthopedic data in a trauma registry	
Henry Ford	Johnson	EMS vs. private car effect on outcomes	
Henry Ford	Kabbani	Impact of COVID-19 on outcomes in trauma patients	
Michigan Medicine	Chung	Hand trauma: A geospatial analysis	New
Michigan Medicine	Oliphant	Trauma center characteristics that drive quality, cost and efficiency in lower extremity injuries	
Spectrum Health	Chapman	Outcomes in operative fixation of rib fractures	Rerunning analysis
Spectrum Health	Miller	Outcomes in IMN of long bone fractures	Preparing manuscript
St Joseph Mercy	Curtiss	Infection rates in operative trauma patients	
St Joseph Mercy	Hecht	Early chemoprophylaxis in severe TBI patients reduces risk of VTE	Submitted for publication
St Joseph Mercy	Hecht	Effect of antiplatelet and anticoagulant agents on outcomes following emergent surgery for trauma	Finished analysis Preparing manuscript
St. Joseph Mercy	Hoesel	Rib fractures in the elderly	Preparing manuscript
St. Joseph Mercy	Sadek	Reversal of anticoagulants and antiplatelets following TBI	Finished analysis Preparing manuscript
St. Mary Mercy Livonia & Spectrum Health	Keyes	COVID-19’s impact on trauma and socioeconomic status in Michigan	Presented 5/13 SAEM Presented 5/18 MTQIP
U of M Health - West	Mitchell	Blunt cerebral vascular injury	

LOS Calculation

Logic

- **Problem review**
- **Data issues**
- **Solution**
- **Cohort consistency**
- **Data accuracy**

Problem review

LOS = Hospital Discharge Date/Time – ED/Hospital Arrival Date/Time

Rounding	Precision	Admitted ED
1.5 days = 1 or 2	2 min = 1 day	2 days = . or 0 day

Data Issues

Negative Hospital LOS

Negative ED LOS

Registry Under Capture Delta < -2 Days

Registry Over Capture Delta < 2 Days

Missing Dates/Times

Solution

- **Calculate hospital LOS (0.00 days)**
- **Calculate ED LOS (0.00 days)**
- **New hospital days = calculated hospital LOS**

Use vendor value if . . .

- **New hospital days negative**
- **New hospital days has missing data**

Use ED LOS value if . . .

- **Missing vendor value**

Additionally . . .

- **Added inclusion for admitted patients**

NATIONAL TRAUMA DATA STANDARD (NTDS) PATIENT INCLUSION CRITERIA

DESCRIPTION: To ensure consistent data collection across States into the National Trauma Data Standard, a trauma patient is defined as a patient sustaining a traumatic injury within 14 days of initial hospital encounter and meeting the following criteria*:

At least ONE of the following injury diagnostic codes defined as follows:

***International Classification of Diseases, Tenth Revision* (ICD-10-CM):**

- S00-S99 with 7th character modifiers of A, B, or C ONLY. (Injuries to specific body parts–initial encounter)
- T07 (unspecified multiple injuries)
- T14 (injury of unspecified body region)
- T79.A1-T79.A9 with 7th character modifier of A ONLY (Traumatic Compartment Syndrome–initial encounter)

EXCLUDING the

ICD-10-CM:

- S00 (Su
- S10 (Su
- S20 (Su
- S30 (Su

AND MUST INCLUDE ONE OF THE FOLLOWING IN ADDITION TO (ICD-10-CM S00-S99, T07, T14, and T79.A1-T79.A9):

- Death resulting from the traumatic injury (independent of hospital admission or hospital transfer status);

  OR
- Patient transfer from one acute care hospital** to another acute care hospital;

  OR
- Patients directly admitted to your hospital (exclude patients with isolated injuries admitted for elective and/or planned surgical intervention);

  OR
- Patients who were an in-patient admission and/or observed.

Cohort Consistency

- Blunt or penetrating mechanism of injury
- Age ≥ 16 years old
- ISS ≥ 5
- All deaths
- Length of stay ≥ 1 day who are discharged alive

2011

Cohort Consistency

- **Blunt or penetrating mechanism of injury**
- **Age ≥ 16 years old**
- **ISS ≥ 5**
- **Transfer to another acute care hospital or in-patient observation/admission or death**

2022

Data Accuracy

	calculated		vendor	
	hosp_los	ed_los	hospdays	new_hospdays
13 min	.0090278	.0090278	1	.0090278
	.0090278	.0090278	1	.0090278
	.0090278	.0090278	1	.0090278
	.0090278	.0090278	1	.0090278
11 min	.0076389	.0076389	1	.0076389
	.0076389	.0076389	1	.0076389
	.0076389	.0076389	1	.0076389
	.0076389	.0076389	1	.0076389
	.0076389	.0076389	1	.0076389
	.0076389	.0076389	1	.0076389
	.0076389	.0076389	1	.0076389

ArborMetrix

Questions ?

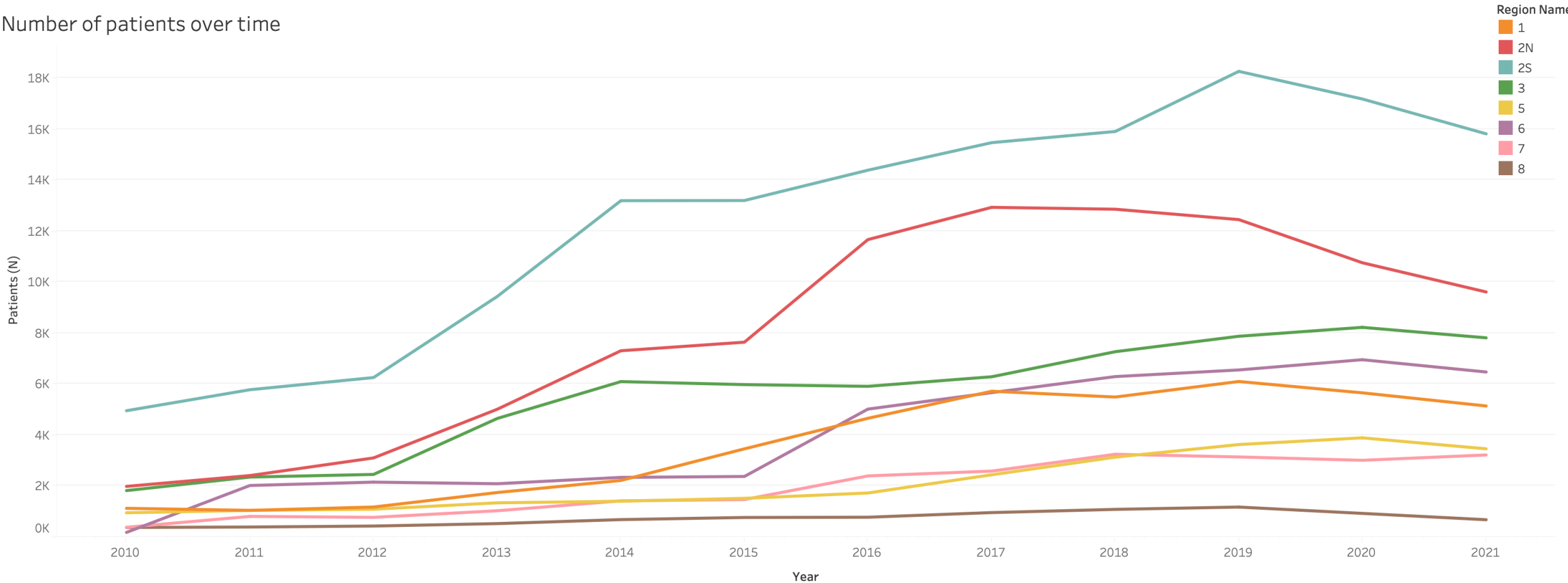
State of Michigan – New 2023 Data Feedback

Sara Samborn

2023 Variables

- Number of patients over time
- Number of patients level I centers over time
- Number of patients level II centers over time
- Number of patients level III centers over time
- Mean ED dwell time over time
- Mean ISS over time
- Mean age over time
- Frequency of blunt and penetrating mechanism over time
- Frequency of transport mode over time
- Number of patient with COVID diagnosis entered over time

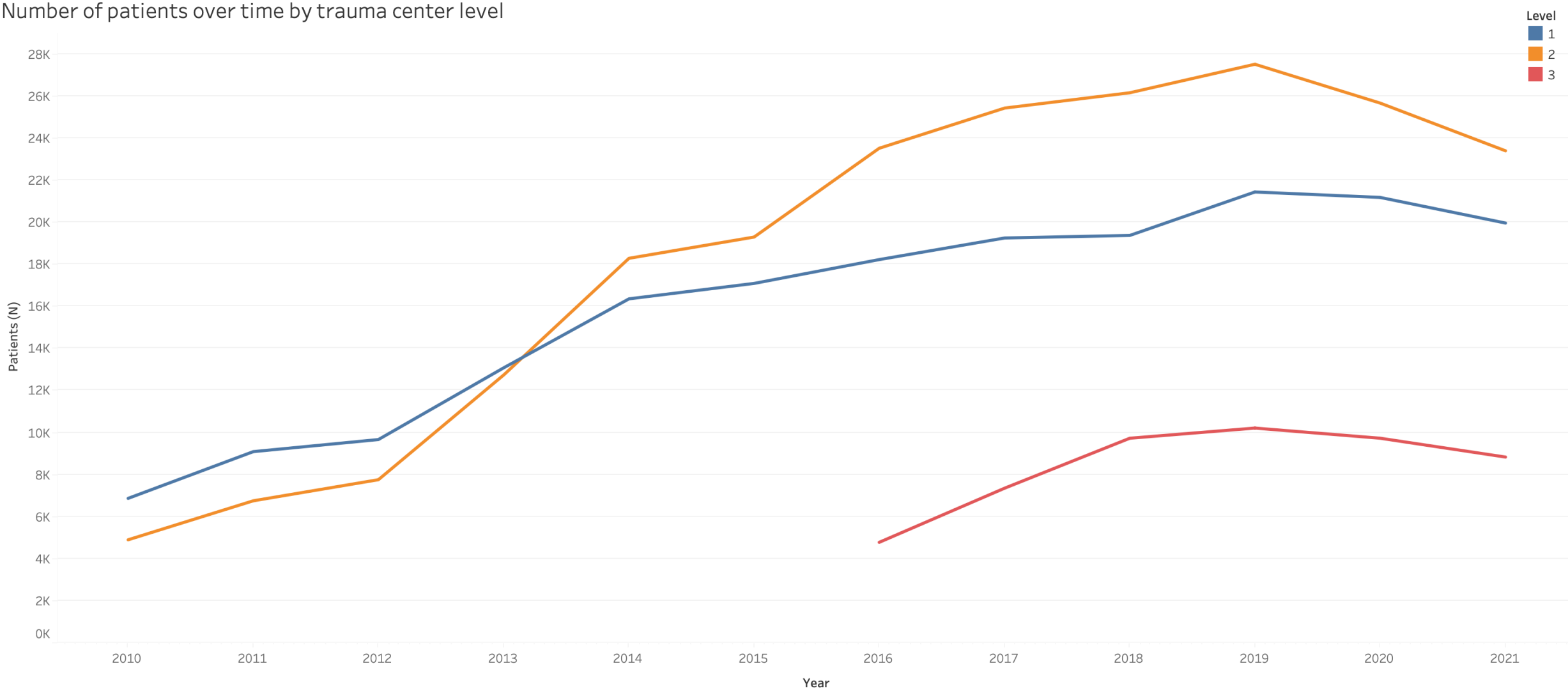
Number of patients over time



Year

Region Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Grand Total
1	1,124	1,045	1,175	1,744	2,217	3,456	4,657	5,767	5,556	6,152	5,658	5,143	**43,694**
2N	1,984	2,409	3,100	5,011	7,303	7,639	11,670	13,000	12,872	12,451	10,754	9,610	**97,803**
2S	4,952	5,775	6,252	9,435	13,189	13,197	14,388	15,474	15,911	18,272	17,178	15,812	**149,835**
3	1,820	2,350	2,453	4,649	6,093	5,975	5,911	6,284	7,306	7,891	8,234	7,825	**66,791**
5	949	1,043	1,088	1,340	1,402	1,516	1,725	2,445	3,131	3,625	3,888	3,458	**25,610**
6	180	2,020	2,151	2,089	2,337	2,373	5,015	5,661	6,290	6,550	6,952	6,470	**48,088**
7	381	807	770	1,029	1,418	1,477	2,512	2,707	3,334	3,191	3,007	3,219	**23,852**
8	374	391	429	525	682	766	780	961	1,090	1,177	929	677	**8,781**
Grand Total	**11,764**	**15,840**	**17,418**	**25,822**	**34,641**	**36,399**	**46,658**	**52,299**	**55,490**	**59,309**	**56,600**	**52,214**	**464,454**

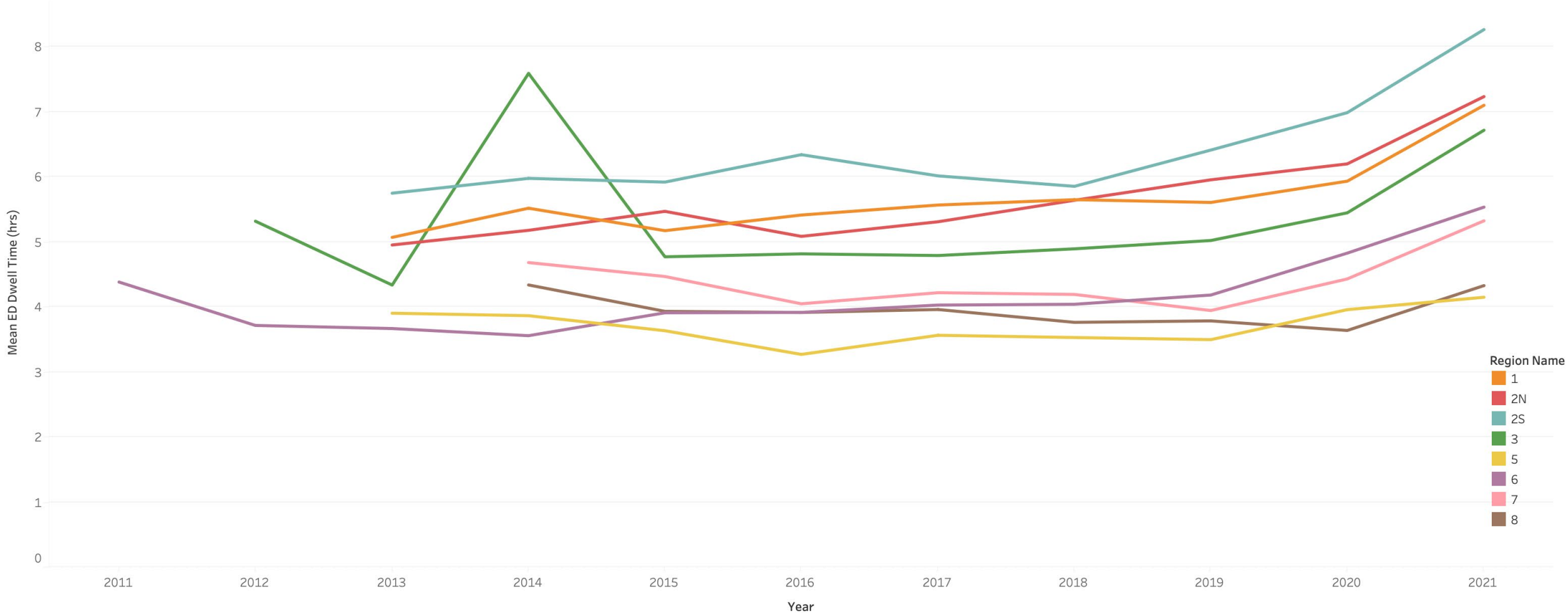
Number of patients over time by trauma center level



Year

Level	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Grand Total
1	6,867	9,089	9,664	13,080	16,356	17,092	18,229	19,368	19,448	21,501	21,180	19,962	**191,836**
2	4,897	6,751	7,754	12,742	18,285	19,307	23,650	25,568	26,266	27,568	25,672	23,400	**221,860**
3							4,779	7,363	9,776	10,240	9,748	8,852	**50,758**
Grand Total	**11,764**	**15,840**	**17,418**	**25,822**	**34,641**	**36,399**	**46,658**	**52,299**	**55,490**	**59,309**	**56,600**	**52,214**	**464,454**

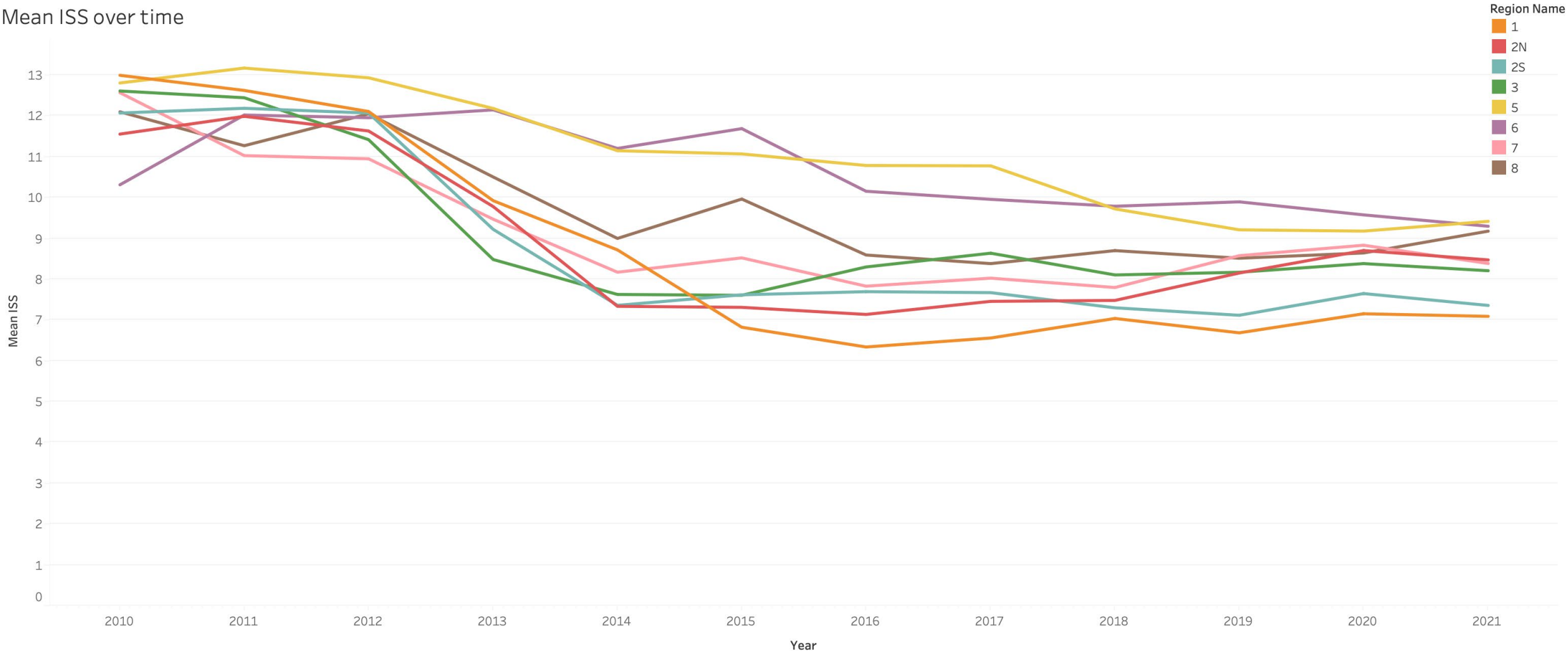
Mean ED dwell time over time



Year

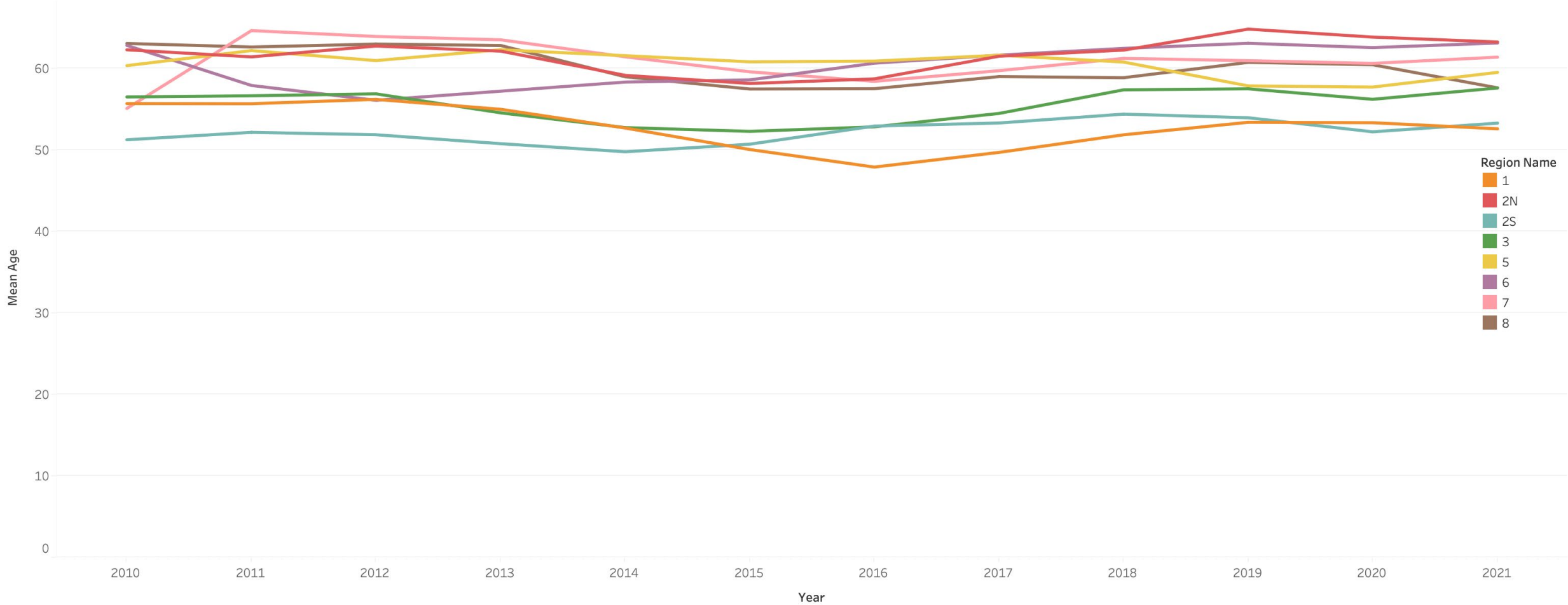
Region Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Grand Total
1				5.1	5.5	5.2	5.4	5.6	5.7	5.6	5.9	7.1	**5.8**
2N				5.0	5.2	5.5	5.1	5.3	5.6	6.0	6.2	7.2	**5.8**
2S				5.8	6.0	5.9	6.3	6.0	5.9	6.4	7.0	8.3	**6.5**
3			5.3	4.3	7.6	4.8	4.8	4.8	4.9	5.0	5.4	6.7	**5.4**
5				3.9	3.9	3.6	3.3	3.6	3.5	3.5	4.0	4.2	**3.7**
6		4.4	3.7	3.7	3.6	3.9	3.9	4.0	4.0	4.2	4.8	5.5	**4.3**
7					4.7	4.5	4.0	4.2	4.2	3.9	4.4	5.3	**4.4**
8					4.3	3.9	3.9	4.0	3.8	3.8	3.6	4.3	**3.9**
Grand Total		**4.4**	**3.9**	**4.4**	**5.7**	**5.2**	**5.2**	**5.2**	**5.2**	**5.4**	**5.9**	**6.9**	**5.6**

Mean ISS over time



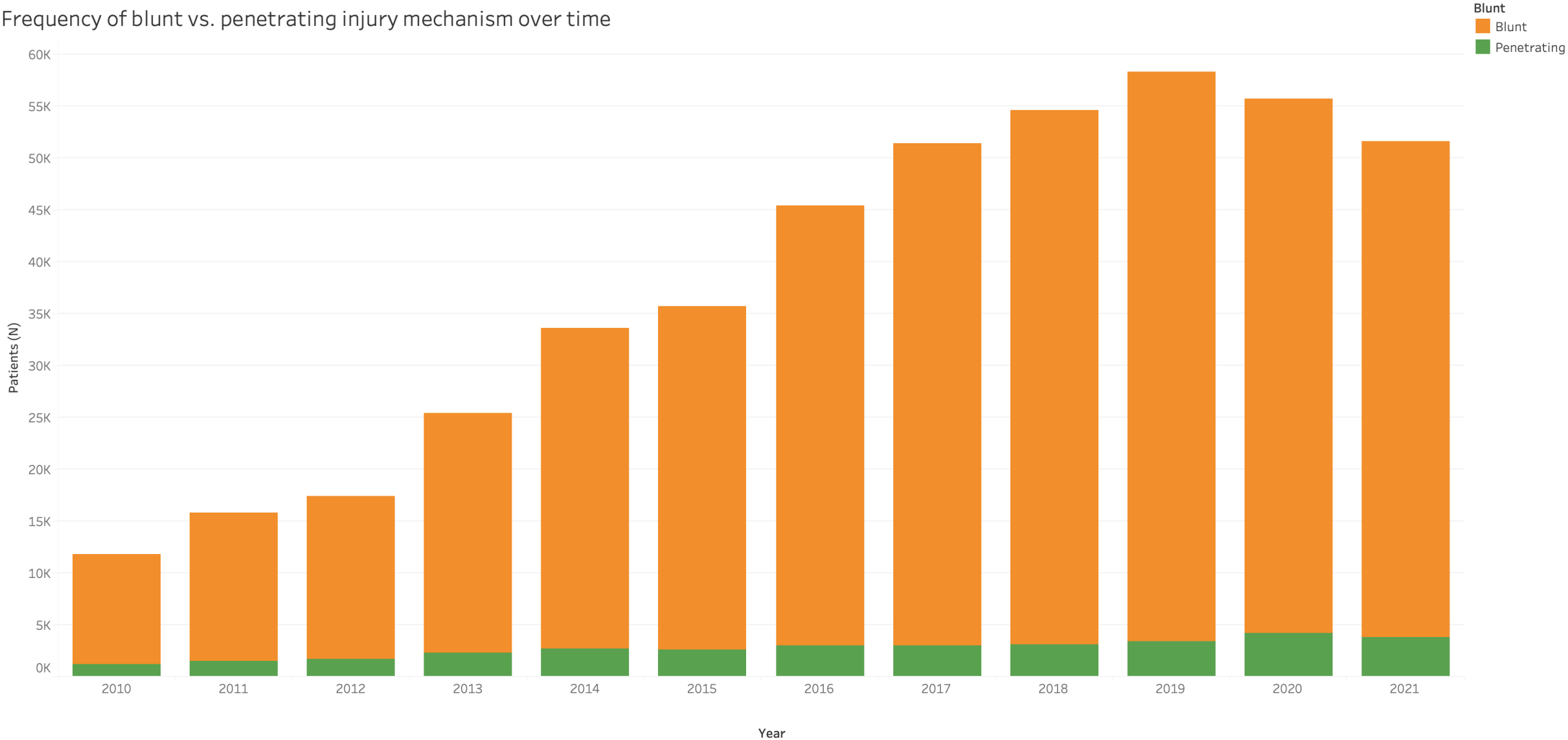
Region Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
						Year						
1	13.0	12.6	12.1	9.9	8.7	6.8	6.3	6.6	7.1	6.7	7.2	7.1
2N	11.6	12.0	11.6	9.8	7.3	7.3	7.1	7.5	7.5	8.2	8.7	8.5
2S	12.1	12.2	12.1	9.2	7.4	7.6	7.7	7.7	7.3	7.1	7.6	7.4
3	12.6	12.4	11.4	8.5	7.6	7.6	8.3	8.6	8.1	8.2	8.4	8.2
5	12.8	13.2	12.9	12.2	11.1	11.1	10.8	10.8	9.7	9.2	9.2	9.4
6	10.3	12.0	12.0	12.1	11.2	11.7	10.2	10.0	9.8	9.9	9.6	9.3
7	12.6	11.0	10.9	9.5	8.2	8.5	7.9	8.0	7.8	8.6	8.8	8.4
8	12.1	11.3	12.0	10.5	9.0	10.0	8.6	8.4	8.7	8.5	8.6	9.2

Mean age over time



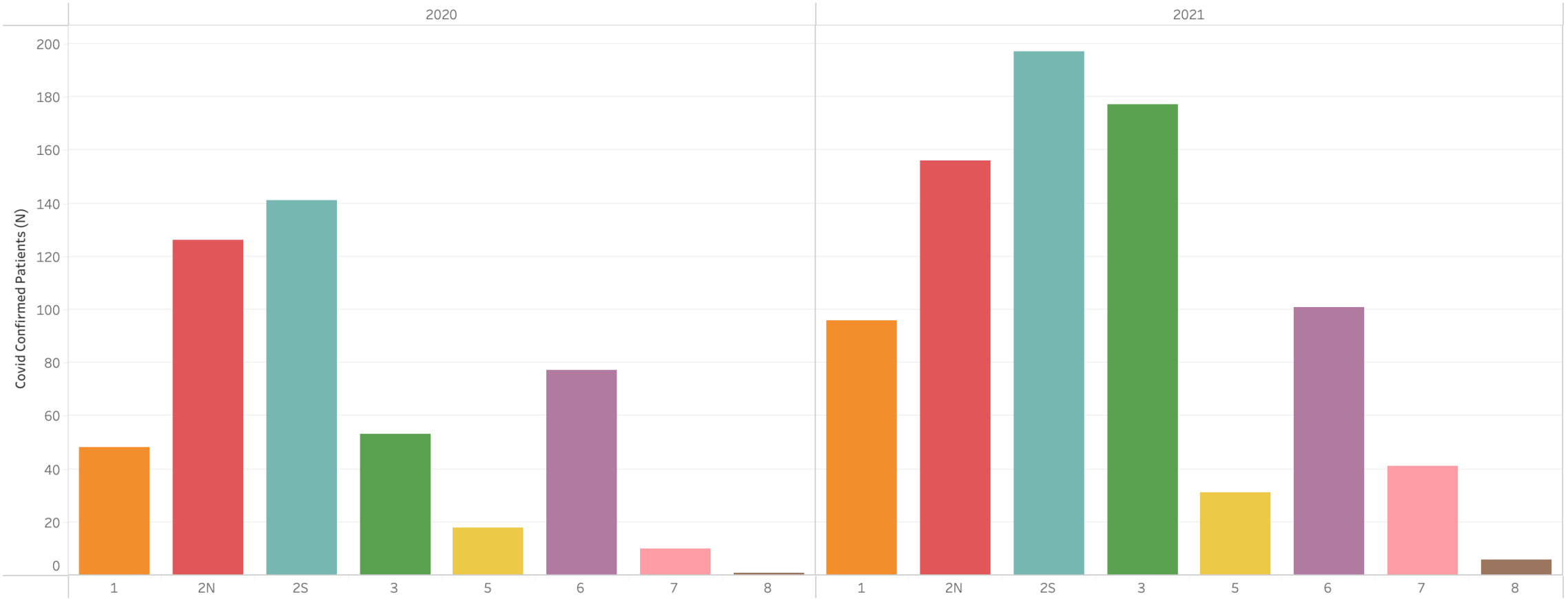
Region Name	Year 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	56	56	56	55	53	50	48	50	52	53	53	53
2N	62	61	63	62	59	58	59	61	62	65	64	63
2S	51	52	52	51	50	51	53	53	54	54	52	53
3	56	57	57	55	53	52	53	54	57	58	56	58
5	60	62	61	62	62	61	61	62	61	58	58	59
6	63	58	56	57	58	59	61	62	62	63	63	63
7	55	65	64	63	61	60	59	60	61	61	61	61
8	63	63	63	63	59	57	58	59	59	61	60	58

Frequency of blunt vs. penetrating injury mechanism over time



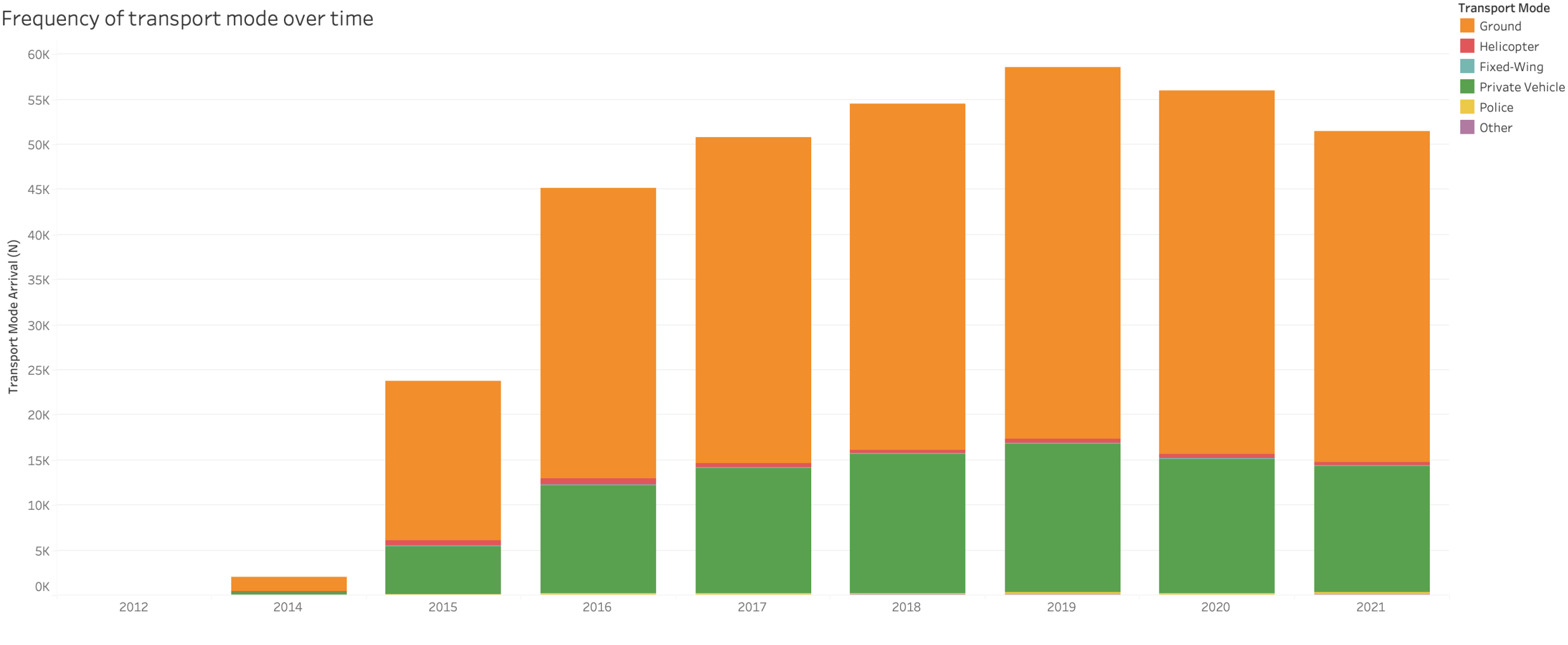
Blunt	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Grand Total
Blunt	90%	90%	91%	91%	92%	93%	94%	94%	94%	94%	92%	93%	**93%**
Penetrating	10%	10%	9%	9%	8%	7%	6%	6%	6%	6%	8%	7%	**7%**
Grand Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Frequency confirmed COVID diagnosis



Region Name	2020	2021	Grand Total
1	48	96	144
2N	126	156	282
2S	141	197	338
3	53	177	230
5	18	31	49
6	77	101	178
7	10	41	51
8	1	6	7
Grand Total	474	805	1,279

Frequency of transport mode over time



Transport Mode..	2014	2015	2016	2017	2018	2019	2020	2021	Grand Total
Ground	75.3%	74.6%	71.4%	71.2%	70.4%	70.4%	72.0%	71.3%	**71.4%**
Helicopter	3.2%	2.1%	1.3%	0.9%	0.7%	0.8%	0.8%	0.7%	**1.0%**
Fixed-Wing	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**
Private Vehicle	21.3%	22.9%	26.8%	27.5%	28.4%	28.4%	26.8%	27.3%	**27.2%**
Police	0.2%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.5%	**0.4%**
Other		0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	**0.1%**
Grand Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	100.0%

Feedback

- Are the graphs easy to read?
- Do you like the font?
- Do you like the colors used?
- Other suggestions?

AIS Coding Lessons from Data Validation

Shauna Di Pasquo

Severe Head Injury with LOC

- A patient fell from her balcony with +LOC (GCS 4 with no real improvement). Family made her comfort measures only upon arrival to the ED so no head CT was done. Pt with "massive head trauma" per physician's notes.
- ME did not do an internal autopsy.

- **Coding Question**: Could this injury be coded to "LOC 1-6 hours" (161006.3) when her LOC was actually > 6 hours without return (***as there is no other substantiated dx***) or would it be better suited as "Died of head injury without further substantiation" (100999.9).

AIS 2005	Injury Description
	WHOLE AREA
	Use one of the following two descriptors when such vague information, including traumatic brain injury or closed head injury, is the only information available. While these descriptors identify the occurrence of a head injury, they do not specify its severity.
100099.9	**Injuries to the Head** NFS
100999.9	Died of head injury without further substantiation of injuries or no autopsy confirmation of specific injuries.
161000.1	**Cerebral Concussion,** NFS
161001.1	mild concussion; no loss of consciousness
	Use 161000.1 and 161001.1 where there is convincing evidence of head injury and where the medical diagnosis is given as "concussion" with no other description or clarification.
	Code loss of consciousness (LOC) only where there is convincing evidence of head trauma and the diagnosis of loss of consciousness is made by a physician or recorded by a physician based on EMS corroboration. The Glasgow Coma Score (GCS) is only one indicator of brain injury and should never be used as the sole indicator. Self-reported LOC or reports of bystanders are insufficient for coding and should be disregarded.
161002.2	brief loss of consciousness NFS
161003.2	loss of consciousness <1 hour NFS
161004.2	loss of consciousness ≤ 30 mins
161005.2	loss of consciousness 31-59 mins
161006.3	loss of consciousness 1-6 hours (severe concussion)

AAAM Answer:

Died of head injury without further substantiation – Jan

Bilateral Rib Fractures

- Patient's chest CT showing bilateral 1st rib fractures

- **Coding Question:** If the rib cage is considered a single anatomical unit, would a patient with **bilateral 1st rib fractures** be coded as one rib fracture or two?

AIS 2005	Injury Description	⇒AIS98	⇐AIS98	FCI

CODING RULES: Rib Fractures

The rib cage is treated as a single anatomical structure for coding fractures without flail and for bilateral flail. However, if a flail chest is documented on one side (unilateral) and fractured ribs without flail are documented on the other side, code as two separate injuries.

"Flail chest" is defined as three or more ribs fractured in more than one location (e.g., posterolateral and anterolateral) and/or resulting in paradoxical chest movement.

Multiple rib fractures, if documented but not further described, should be assigned 450210.2.

Costal cartilage fracture or tear is coded as a rib fracture.

For patients who die before any radiology is done and no autopsy is performed, a clinical diagnosis of multiple rib fractures made by detecting thoracic cage instability is acceptable for AIS coding. In such cases, use AIS code 450210.2. However, clinically diagnosed rib fractures in survivors are never coded; these must be substantiated radiologically.

SKELETAL including thoracic wall involvement

450299.1	**Rib Cage** NFS	450299.1	450299.1	5
450289.1	contusion	450202.1	450202.1	
	Read "Rib Fractures" for coding rules.			
450210.2	multiple rib fractures NFS	450210.2	450210.2	5
450200.1	fracture(s) without flail, any location unilateral or bilateral NFS	450212.1	450212.1	5
450201.1	one rib [*OIS I*]	450212.1	450212.1	5
450202.2	two ribs [*OIS I*]	450220.2	450220.2	5
450203.3	≥3 ribs [*OIS II*]	450230.3	450230.3	5
450209.3	fractures with flail, NFS	450260.3	450260.3	5
450211.3	unilateral flail chest NFS [*OIS IV*]	450260.3	450260.3	5
450212.3	3-5 flail ribs [*OIS IV*]	450260.3	None	5
450213.4	>5 flail ribs [*OIS IV*]	450260.3[b]	None	5
450214.5	bilateral flail chest [*OIS V*]	450266.5	450266.5	5

AAAM Answer:

We still count individual ribs so this would be 2 ribs - Jan

Cervical Spine Injury

- A patient was ejected from her car during a highspeed rollover accident and although made it to the ED alive, coded very soon after arrival so no radiology exams were completed.
- The ME report notes “complete separation of the upper cervical spine from the base of the skull”.

- Coding Question: Would this injury be coded to Cervical cord laceration (which includes transection) – complete cord syndrome with dislocation? If not, what is the most appropriate code to assign?

AIS 2005	Injury Description
640240.5	**Cord** laceration NFS [includes penetrating injury, transection or crush]
640260.5	complete cord syndrome NFS (quadriplegia or paraplegia with no sensation or motor function)
640261.5	C-4 or below, but NFS as to fracture/dislocation
640262.5	with no fracture or dislocation
640264.5	with fracture
640266.5	with dislocation
640268.5	with both fracture and dislocation
640269.6	C-3 or above, but NFS as to fracture/dislocation
640270.6	with no fracture or dislocation
640272.6	with fracture
640274.6	with dislocation
640276.6	with both fracture and dislocation

AAAM Answer:

You have an atlanto-occipital dislocation (see p. 103 of the AIS dictionary) 650208.**2**. If you have no information about the status of the cord, we cannot code a cord injury.

CERVICAL SPINE

AIS 2005	Injury Description
650204.2	Dislocation [subluxation], no fracture, no cord involvement NFS
	Code as one injury and assign to superior vertebra.
650206.3	**atlanto-axial (odontoid)**
650208.2	**atlanto-occipital**
650209.2	**facet** NFS
650210.2	unilateral
650212.3	bilateral

Neuro Deficit Coding

- Patient attempted suicide by hanging > Initial EMS and ED GCS was 4 (E1,V1,M2)
- Patient was intubated and on vent for 8 days > patient's status improved and he left the hospital with a GCS of 15 and no neuro deficits.
- He did not sustain any other injury

- **Coding Question:** Would this injury be coded as **020002.3** "asphyxia – without neuro deficits" or **020004.4** " asphyxia - with neuro deficits" as he did present with them but did not leave this way.

OTHER TRAUMA

AIS 2005	Injury Description	
020000.3	**Asphyxia/Suffocation** NFS[a]	**Assign this category of injury to Head body region for calculating an ISS.**
020002.3	without neurological deficit	
020004.4	with neurological deficit	
020006.5	with cardiac arrest documented by medical personnel	

AAAM Answer:

Even though the patient did recover we believe it appropriate to code status at 24 hours and identify that he had neuro deficit even if it was transient.

Femoral Vein Injury

- Patient suffered a GSW to the abdomen and was taken to OR for sigmoid colon perforation repair as well as repair of a perforated external iliac vein and an intimal injury of the external iliac artery.
- Vascular OR report states that during the vessel repairs, "thrombus was removed from the common iliac vein and from the ***common femoral vein***".

- **Coding Question:** Can the thrombus be coded to "Femoral vein injury NFS" 820499.2?

  ****this would increase the patient's ISS by 4 as all other injuries are in the Abdominal Region

AIS 2005	Injury Description
	VESSELS
820499.2	**Femoral vein** NFS
820402.2	laceration; perforation; puncture NFS
820404.2	minor; superficial; incomplete circumferential involvement; blood loss ≤20% by volume
820406.3	major; rupture; transection; segmental loss; blood loss >20% by volume

AAAM Answer:

You **cannot** code anything with the femoral vein as there was no injury only a clot found.

Thoracic Injuries > Late Hemothorax

- Patient was in an MVC resulting in several thoracic injuries including multiple rib fractures and pulmonary contusions.
- Initial CT showed no pleural effusions or PTX.
- Hospital day 3 > CT showed “moderate left pleural effusion which may represent hemorrhage”
- Patient was taken to the OR same day for chest reconstruction > OR report notes that a chest tube was placed for a left hemothorax with **“1200 ml of hemothorax evacuated”.**

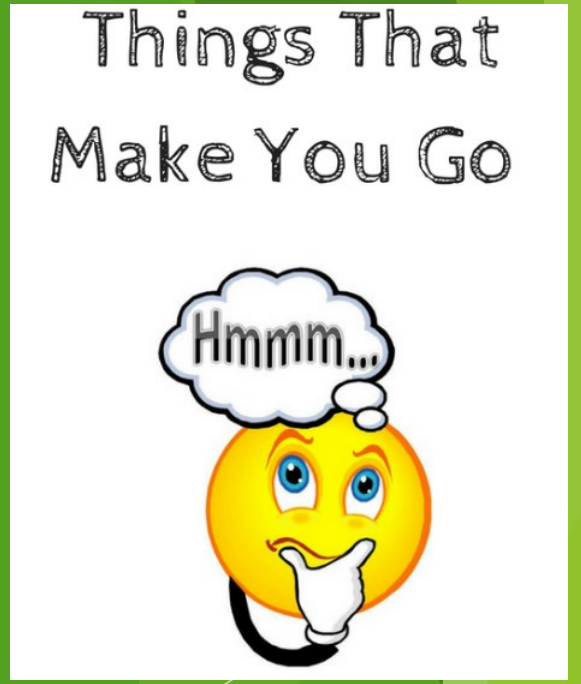
- **Coding Question:** Can this be coded to “Hemothorax > Major **442201.4**” even though it did not present for several days after MOI?

AIS 2005	Injury Description
	Code the following types of thoracic trauma separate from and in addition to all documented thoracic injuries.
442999.9	**Thoracic injury** NFS
442200.3	**Hemothorax** NFS[q]
442201.4	major; >1000cc blood loss on at least one side
442202.2	**Pneumothorax** NFS[q]
442203.4	major; >50% collapse of lung documented on xray; persistent air leak
442204.5	tension; massive air leak
442205.3	**Hemopneumothorax** NFS
442206.4	major; >1000cc blood loss on at least one side[a]

AAAM Answer:

1st Email: I decided to share this with the International faculty. Please expect answer in several days

2nd Email: After consultation with the faculty and our physician experts you should not code this hemothorax. It is a common, delayed result of this sort of injury to the lung and chest wall and similar to a DVT, it should be considered a late consequence rather than an acute injury.



Solid Organ Injuries

- Patient was an unrestrained driver involved in an MVC > significant seatbelt sign across chest and abdomen.
- Abdominal CT report = **“Left kidney shows area of laceration along the inferior and lateral aspect 1.73 cm and 1.3 cm in diameter”**.

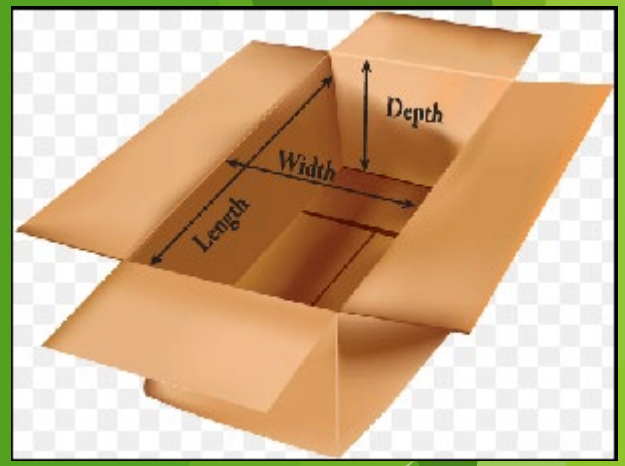
- **Coding Question:** Could the noted measurements or diameter of the laceration be used to code to “the parenchymal depth of renal cortex” of the kidney as specified in the AIS coding book (pg 91).

AIS 2005	Injury Description
541699.2	**Kidney** NFS
541610.2	contusion; hematoma NFS
541612.2	subcapsular, nonexpanding; confined to renal retroperitoneum; minor; superficial [*OIS I, II*]
541614.3	subcapsular, >50% surface area or expanding; major; large [*OIS III*]
541620.2	laceration NFS
541622.2	≤1cm parenchymal depth of renal cortex, no urinary extravasation; minor; superficial [*OIS II*]
541624.3	>1cm parenchymal depth of renal cortex, no collecting system rupture or urinary extravasation; moderate [*OIS III*]
541626.4	extending through renal cortex, medulla and collecting system; main renal vessel injury with contained hemorrhage; major [*OIS IV*]
541628.5	hilum avulsion; total destruction of organ and its vascular system [*OIS V*]
541640.4	rupture
	Use "rupture" only when a more detailed descriptor is not available.

AAAM Answer:

"Diameter" is diameter, which is describing the length across and the scenario you are providing is describing the length of the laceration to the kidney along the inferior and lateral aspects. This cannot be used to code parenchymal depth or how deep the laceration is.

In the case presented, you would code to Kidney laceration NFS unless there is further descriptive verbiage that can be used in your coding.



Lumbar Hernia with Avulsion Injury

- Patient was a restrained passenger in a vehicle that struck a telephone pole at 50 mph.
- **CT Report**: Traumatic right inferior lumbar hernia with complete avulsion of the abdominal wall musculature from the iliac crest. The hernia contains mesenteric fat and fluid, the ascending colon abuts the orifice.
- The abdominal wall muscle was completely ripped away or avulsed from the iliac crest internally but there was absolutely no outer tissue involvement > extremely rare injury per trauma surgery charting
- The lumber hernia does not involve the lumbar spine or discs.

- **Coding Question:** Would this type of injury be coded as a **"Rectus Abdominus rupture NFS - 510100.2"** or would it be coded under **"Skin/Subcutaneous/Muscle > Avulsion"** even though this would code to the "External" body region and this injury is in no way an external injury? If it is coded to Avulsion, could it be coded to Major?

ABDOMEN

AIS 2005	Injury Description
510100.2	**Rectus Abdominus** rupture NFS[a]
511000.6	**Torso** transection[a]
	Use the following section for blunt soft tissue injury to the abdomen. Assign to External body region for calculating an ISS. If injury is described as "degloving", code as avulsion.
510099.1	**Skin/Subcutaneous/Muscle [except rectus abdominus]** NFS
510202.1	abrasion
510402.1	contusion; hematoma
510600.1	laceration NFS
510602.1	minor; superficial
510604.2	major; >20cm long and into subcutaneous tissue
510606.3	blood loss >20% by volume
510800.1	avulsion NFS
510802.1	minor; superficial; ≤100cm^2
510804.2	major; >100cm^2
510806.3	blood loss >20% by volume

AAAM Answer:

I have done additional research on this injury - you would not code the rectus abdominus rupture as your radiology says “musculature from the iliac crest” (iliacus). So, I contacted a couple of tenured AIS faculty and discussed this scenario. The AIS 2005/2008 Update Dictionary which is currently in use at most facilities, doesn't have a clearly defined coding structure for muscle injuries. There are a few specific groups identified and available for coding, but not all. You can code this as an **"avulsion major" = 510804.2**. And yes, it is assigned to the ISS body region of "external" based on the rule box found on page 83 of the dictionary.

Hemoperitoneum Coding

- Patient was involved in a physical altercation > punched / kicked
- Unable to undergo abdominal CT with contrast d/t CKD
- Dx: “Hemoperitoneum” > *felt to be from* “small splenic laceration or subscapular hematoma” but unclear d/t limited imaging ***definitive splenic injury was never noted in charting
- Required blood products d/t injury.

- **Coding Question:** Can “hemoperitoneum” be coded under “**retroperitoneum hemorrhage or hematoma – 543800.2**”? If not, is there somewhere else this can be coded?

AIS 2005	Injury Description	=
543800.2	**Retroperitoneum** hemorrhage or hematoma	5

Code retroperitoneum hemorrhage or hematoma separate from and in addition to anatomically-described injuries unless an associated injury accounts for the blood loss into the retroperitoneal space. The following organs or structures, when injured, may cause retroperitoneal hemorrhage: pancreas, duodenum, kidney, aorta, vena cava, mesenteric vessel, pelvic or vertebral fractures.

AAAM Answer:

Hemoperitoneum indicates blood within the peritoneal cavity and retroperitoneum hemorrhage indicates blood behind the peritoneal cavity - two distinctly different areas. It should never be used to describe an injury such as you describe and when you read the rule box with it you will note that it most often is due to an injury in that space and should not be coded additionally there either. The end result is that it should only very rarely be used. I've probably coded it less than 5 times in my career.

In the case you presented you would not be able to code hemoperitoneum as a standalone injury diagnosis.

Midline Shift Coding (not AIS but still…)

- Patient sustained a fall hitting head on wall > on Plavix at home
- **Head CT:** describes an 8mm midline shift in the Findings and then lists an 8mm subfalcine herniation under Impression

- **Coding Question:** When a head CT shows a subfalcine herniation is that the same as midline shift?

Radiologist Answer:

Yes, they are same

Acute on Chronic ICBs

- Patient with a history of ETOH abuse and frequent falls to ED s/p fall at home
- Head CT: SDH with mixed high and low attenuation measuring approximately 12mm
- Initial report does not say “acute on chronic” but repeat CT specifies an “unchanged redemonstration of acute on chronic SDH”

- **Coding Question:** What does “high” and “low” attenuation mean in Head CT reports?

AIS 2005/2008 Update Dictionary - Clarification Document

Updated: 10/9/2019 15:16

2016	**HEAD**	***Acute on Chronic Bleeds***	If the clinician does not differentiate and document the acute from chronic bleed, code as NFS in the appropriate section.

AIS 2005	Injury Description
	Cerebrum (continued) hematoma
140650.3	subdural NFS
140651.3	tiny; <0.6cm thick [includes tentorial (subdural) blood one or both sides][a]
140652.4	small; moderate; ≤50cc or ≤25cc if ≤age 10; 0.6-1cm thick
140654.4	bilateral [both sides 0.6-1cm thick]
140656.5	large; massive; extensive; >50cc or >25cc if ≤age 10; >1cm thick
140655.5	bilateral [at least one side >1cm thick][c]

In cases of bilateral subdural hematoma where one side is tiny (i.e., <0.6cm thick) and the other side is ≥0.6cm thick, code only the larger one.

Radiologist Answer:

High attenuation refers to acute blood products. Low attention refers to chronic

Pelvic Fracture with Hematoma

- Patient to ED s/p MVC > Hypotensive on arrival
- **Pelvic / Abdominal CT / Ortho Consult**: Unstable LC2 pelvis fractures with associated large expanding pelvic hematoma
- Patient to cath lab - “large area of active extravasation arising from traumatic pseudoaneurysm of the left obturator artery” noted > embolization performed

- Coding Question: Can both the unstable pelvic fx with blood loss > 20% (which the 2013 AIS Clarification Documents say is appropriate when a large/extensive pelvic hematoma is documented) **AND** the artery injury (which is the actual source of blood loss) be coded?

  ****These injuries code to two different body regions (Lower Extremity / Pelvis and Abdomen so changes ISS

2013 - Pelvic Ring Fracture Stability and Medical Documentation / AIS Code Applicability

STABLE	PARTIALLY UNSTABLE	TOTALLY UNSTABLE
Isolated simple fracture of: Pubic ramus Ilium Ischium Sacral ala	Wide symphysis pubis Separation (>2.5cm)	Pubic ramus fracture with sacroiliac fracture/dislocation
Transverse fracture of sacrum and coccyx - with or without sacrococcygeal dislocation	Anterior compression fracture of sacrum	Fracture involving posterior arch with complete loss of posterior osteoligamentous integrity
Minor symphysis pubis separation (<2.5cm)	Fracture involving posterior arch with posterior ligamentous integrity partially maintained	Fracture involving posterior arch with pelvic floor disruption
Tile Classification - A	Fracture involving posterior arch, but pelvic floor intact	Tile Classification - C
OTA Classification - A	Bilateral fractures with posterior ligamentous integrity partially maintained	OTA Classification - C
Young/Burgess Classification - AP1	Tile Classification - B	Young/Burgess Classification - LC3, AP3 and VS
	OTA Classification - B	Vertical Shear Malgaigne Fracture
	Young/Burgess Classification - LC1, LC2, AP2	Sacroiliac joint with posterior disruption
	Sacroiliac joint with anterior disruption	

Pelvic fracture codes (p.159) incomplete or complete disruption with blood loss:
Blood loss ≤ 20% by volume may be used for documented small / moderate pelvic hematoma
Blood loss > 20% by volume may be used for documented large / extensive pelvic hematoma
The following chart may be helpful in coding pelvic fractures:

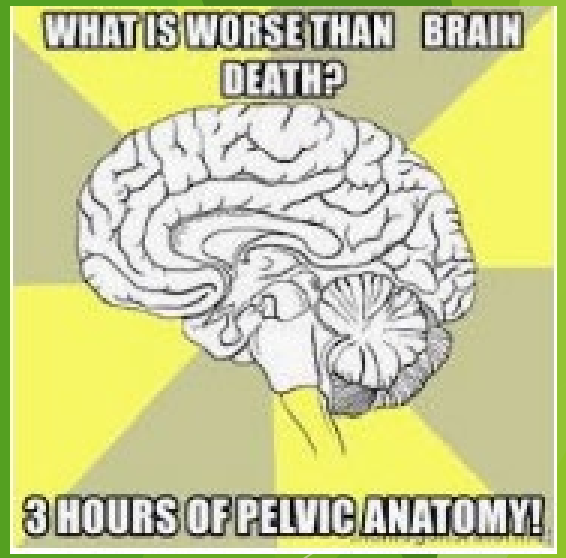
AIS 2005	Injury Description
	Use one of the following four descriptors for any one or combination of the following fracture descriptions *if the fracture is partially or vertically stable:* lateral compression; "open book"; symphysis pubis separation; sacroiliac joint anterior disruption; anterior compression of sacrum.
856161.3	**Pelvic ring** fracture, incomplete disruption of posterior arch NFS
856162.4	open
856163.4	blood loss ≤ 20% by volume
856164.5	blood loss > 20% by volume

The obturator artery is **a branch of the anterior division of the internal iliac artery**. It originates in the pelvis, just below the umbilical artery. The artery then courses anteroinferiorly over the pelvic wall, being superior to the obturator vein and inferior to the obturator nerve.

AIS 2005	Injury Description
	VESSELS
	Vessel injuries are coded separately from other injuries to the abdomen unless an organ injury descriptor includes the vessel injury. Branches of vessels are not coded unless they are named vessels and/or are listed within a specific vessel descriptor.
520699.3	**Iliac Artery [common, internal, external]** and its named branches NFS
520698.4	bilateral[c] **for common iliac artery only**
520602.3	intimal tear, no disruption
520604.3	laceration; perforation; puncture NFS
520606.3	minor; superficial; incomplete circumferential involvement; blood loss ≤20% by volume
520608.4	major; rupture; transection; segmental loss; blood loss >20% by volume

AAAM Answer:

Yes, you may code both.



Pneumothorax vs Hemopneumothorax Coding

- Patient to ED s/p fall hitting chest
- Chest CT: Extensive right pneumothorax with complete lung collapse and component of hemopneumothorax
- Chest tube placed with 200 mls bloody output

- **Coding Question:** Would this injury code to the higher post dot of **442203.4** for "Pneumothorax – major" or to **442205.3** for "Hemopneumothorax NFS" since he does have this component of injury? Should we code both?

AIS 2005	Injury Description
	Code the following types of thoracic trauma separate from and in addition to all documented thoracic injuries.
442999.9	**Thoracic injury** NFS
442200.3	**Hemothorax** NFS[q]
442201.4	major; >1000cc blood loss on at least one side
442202.2	**Pneumothorax** NFS[q]
442203.4	major; >50% collapse of lung documented on xray; persistent air leak
442204.5	tension; massive air leak
442205.3	**Hemopneumothorax** NFS
442206.4	major; >1000cc blood loss on at least one side[a]
442207.5	**Air Embolus**
442208.2	**Hemomediastinum**
442209.2	**Pneumomediastinum**
442210.3	with cardiac tamponade[a]

AAAM Answer:

The international faculty recently discussed this and agreed that if a patient meets the criteria for major in **either** the hemothorax or the pneumothorax portion you may use the code for major hemopneumothorax (4422206.4).

Superior Orbital Wall Fracture Coding

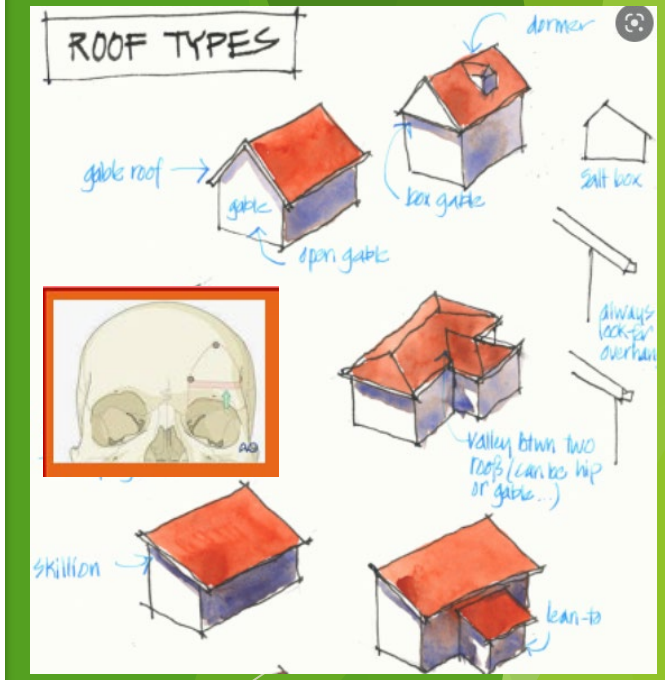
- Patient arrives to ED s/p trauma to the head
- Head / Face CT: Acute minimally displaced fracture of the right superior orbital wall involving the right frontal sinus

- **Coding Question:** Would the diagnosis of superior orbital wall fx be coded as ***orbital roof – 150200.3*** (under skull base) or as ***superior orbital rim – 251215.2*** (under facial region)?

AIS 2005	Injury Description
251200.2	**Orbit** fracture, closed or NFS
	Code orbital roof under skull base.
251201.2	open but NFS as to site
251205.2	multiple fractures of same orbit, closed or NFS[a]
251206.2	open[a]
251211.2	orbital rim, closed or NFS[a]
251212.2	open NFS
251213.2	inferior orbital rim
251214.2	open
251215.2	superior orbital rim
251216.2	open
251221.2	orbital floor, closed or NFS[a]
251222.2	open
251223.2	"blowout" fracture
251224.2	open
251231.2	medial wall, closed or NFS[a]
251232.2	open
251235.2	lateral wall, closed or NFS[a]
251236.2	open
150000.2	**Skull** fracture NFS[a]
	The skull base includes the following bones: orbital roof ethmoid; sphenoid; basilar process of occipital bone; petrous, squamous and mastoid portions of temporal bone. The following clinical signs may be used to corroborate a diagnosis of a basilar skull fracture: hemotympanum; perforated tympanic membrane with blood in canal; mastoid hematoma ("*Battle's* sign"); CSF otorrhea; rhinorrhea; periorbital ecchymosis ("racoon eyes").
150200.3	**Base (basilar)** fracture NFS
150202.3	without CSF leak
150204.3	with CSF leak
150206.4	complex; open with torn, exposed or loss of brain tissue; comminuted; ring; hinge

AAAM Answer:

It would be coded to the orbital ROOF
- Kathy



Lunch

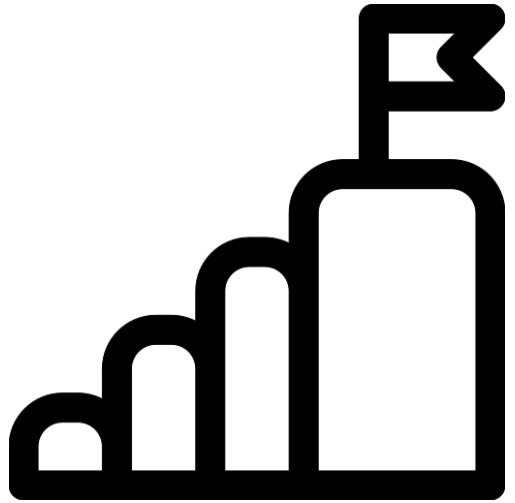
Return at 12:15

Challenging Questions

Jill Jakubus

Instructions

- **Show questions submitted to MTQIP**
- **Definition**
- **Your response via poll**
- **Provided response**



The Challenge

The Challenge

slido

Don’t torment me with more apps to download

It would be helpful to see the definition and the question at the same time. . .

I love the new polling formats, but it didn’t work on my computer

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Question 0

How familiar are you with today's topics?

- I’m an expert
- I have some solid background
- I have some basic knowledge
- I’m completely green

Multiple-choice poll

Q0: How familiar are you with today's topics?

1 1 2

I'm an expert

0 %

I have some solid background

49 %

I have some basic knowledge

46 %

I'm completely green

4 %

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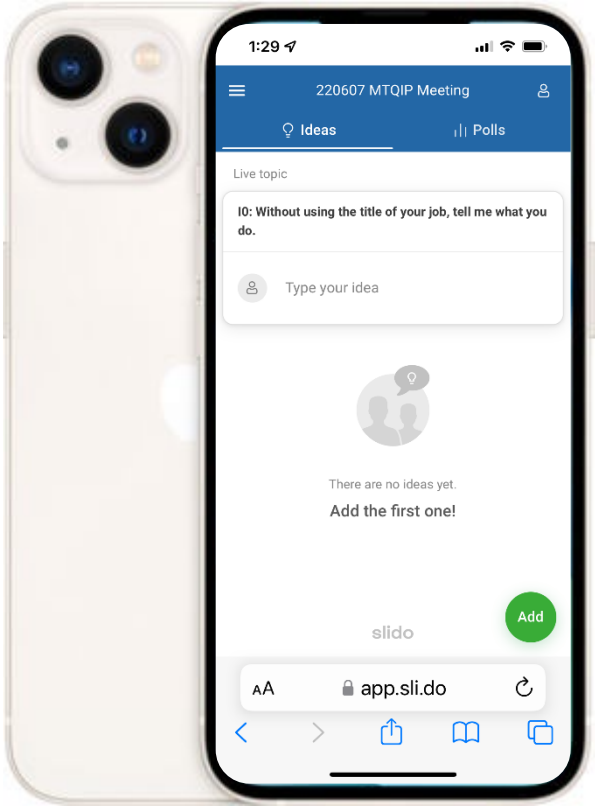
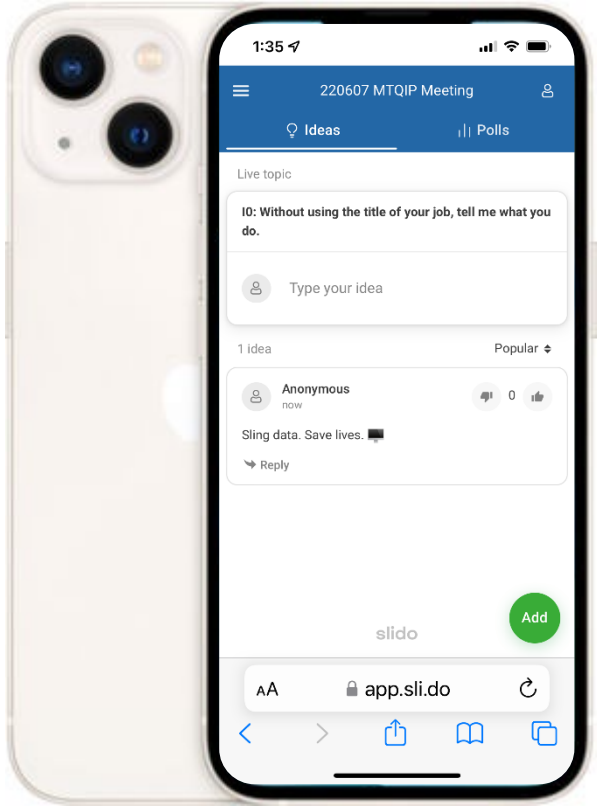
Idea 0

Without using the title of your job, tell me what you do.





Idea 0 - Most Upvoted Responses

Glorified tattletale
Hunt for injuries
Documentation drill Sargent
Read ALOT of charts!
Solve mysteries of missing charting
I investigate charts to find opportunities for process and quality improvement
Nitpick patient charts.
Private investigator
Help provide meaningful data to improve patient care
Abstract
Data abstraction
Collect data on trauma patients
Abstract data into trauma registry
Save lives and stamp out disease and pestilence in a timely quality manner.
Performance Improvement
Help improve the care of the injured patient
Read about accidents
Try to decipher physician notes
Resident genius of mystery

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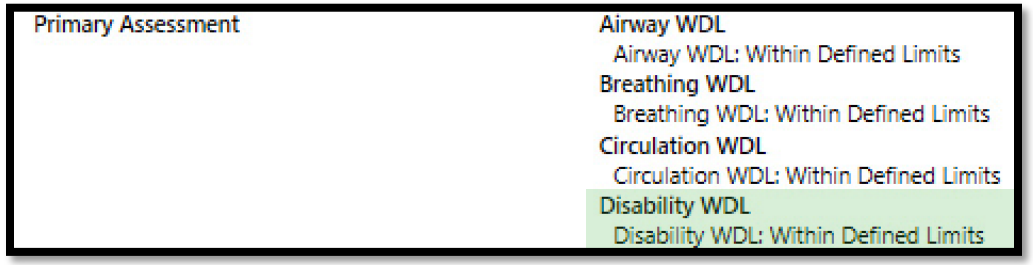
Question 1

For Initial ED/Hospital Pupillary Response, the EMR Primary Assessment, Disability Section documents "Within Defined Limits (WDL)" within 30 min of arrival and there is no contradicting documentation for a TBI patient. What should be reported?

- **Both Reactive**
- **One Reactive**
- **Neither Reactive**
- **Not Known/Not Recorded**



12.5 INITIAL ED/HOSPITAL PUPILLARY RESPONSE

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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

Physiological response of the pupil size within 30 minutes or less of ED/hospital arrival.

Element Values

1. Both Reactive
2. One Reactive
3. Neither Reactive

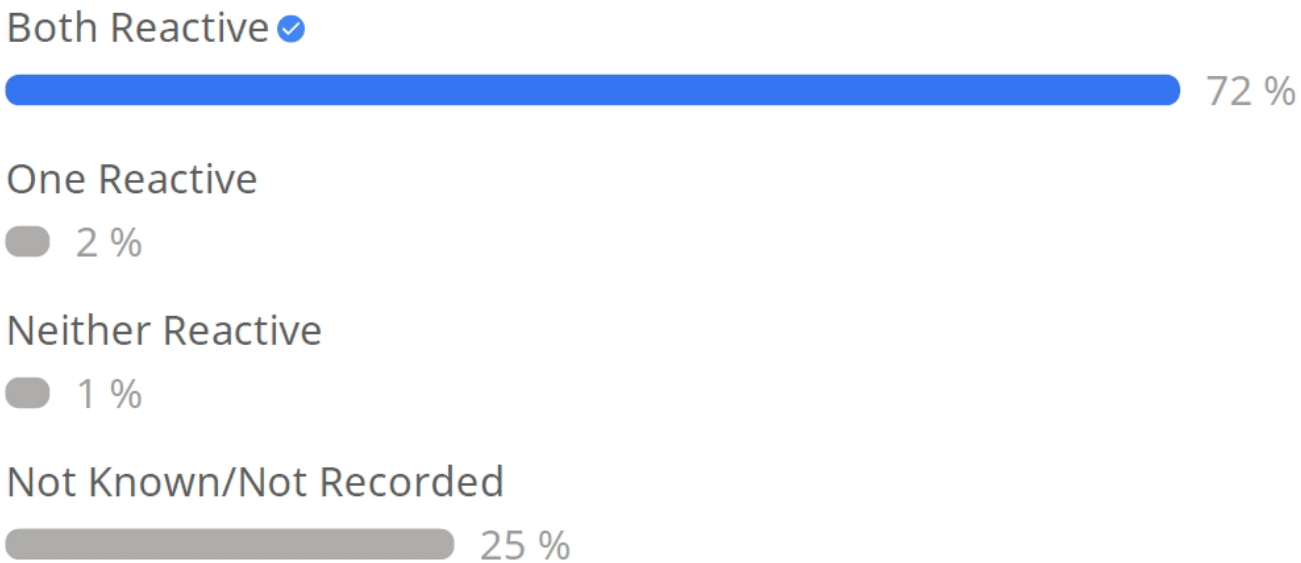
Additional Information

- Please note that the first recorded hospital vitals do not need to be from the same assessment.
- The provider evaluation time, staff arrived time, and similar assessment time should be used when the specified provider's note documents this assessment.
- If a patient does not have a listed element value recorded, but there is documentation related to their pupillary response such as PERRL "Pupils Equal Round Reactive to Light", both cranial nerves II & III intact, no cranial nerve deficit, no focal deficit, or neuro exam WNL submit element value 1. Both reactive IF there is no other contradicting documentation.
- Documentation of a "blown pupil" indicates a non-reactive pupil.
- The null value "Not Known/Not Recorded" should be reported if this information is not documented or if assessment is unable to be obtained due to facial trauma and/or foreign object in the eye.
- Element value 2. One reactive should be reported for patients who have a prosthetic eye.
- The null value "Not Applicable" is reported for patients who do not meet the reporting criterion.

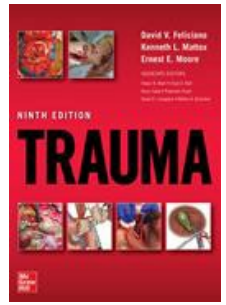
Multiple-choice poll

Q1: For Initial ED/Hospital Pupillary Response, the EMR Primary Assessment, Disability Section documents "Within Defined Limits (WDL)" within 30 min of arrival and there is no contradicting documentation for a TBI patient. What should be reported?

1 1 2



Thought Journey



The disability exam focuses on the patient's neurologic status. The GCS score should be assessed immediately upon presentation and sequentially during the resuscitation. As outlined earlier, a persistent GCS less than or equal to 8 should prompt endotracheal intubation. Pupillary response and overall neurologic status (movement and sensation) should be examined and abnormalities noted for early intervention. In patients with an adequate blood pressure, presumptive osmotherapy (ie, mannitol) can be considered for lateralizing signs (see Chapter 22). It should be also remembered that generalized agitation and combativeness are also classic symptoms of class III and IV shock. Patients who present with signs of spinal cord injury should have rapid assessment of their likely injury level. A more detailed neurologic exam, including assigning an American Spinal Cord Injury Association (ASIA) level, should be performed in the secondary assessment (see Chapter 26).

Fox AD, Livingston DH. Initial Assessment. In: Feliciano DV, Mattox KL, Moore EE. eds. Trauma, 9e. McGraw Hill; 2020.

Response

Answer: Both reactive

Response: Bullet 3 allows for reporting of both reactive if no other contradicting documentation.

- If a patient does not have a listed element value recorded, but there is documentation related to their pupillary response such as PERRL "Pupils Equal Round Reactive to Light", both cranial nerves II & III intact, no cranial nerve deficit, no focal deficit, or neuro exam WNL submit element value 1. Both reactive IF there is no other contradicting documentation.

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Question 2

For Chemotherapy for Cancer, should this comorbidity be reported for a patient currently on Herceptin (trastuzumab) for breast cancer?

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

7.12 CHEMOTHERAPY FOR CANCER

Description

A patient who is currently receiving chemotherapy treatment for cancer.

Element Values

- Chemotherapy for Cancer (NTDS 5)

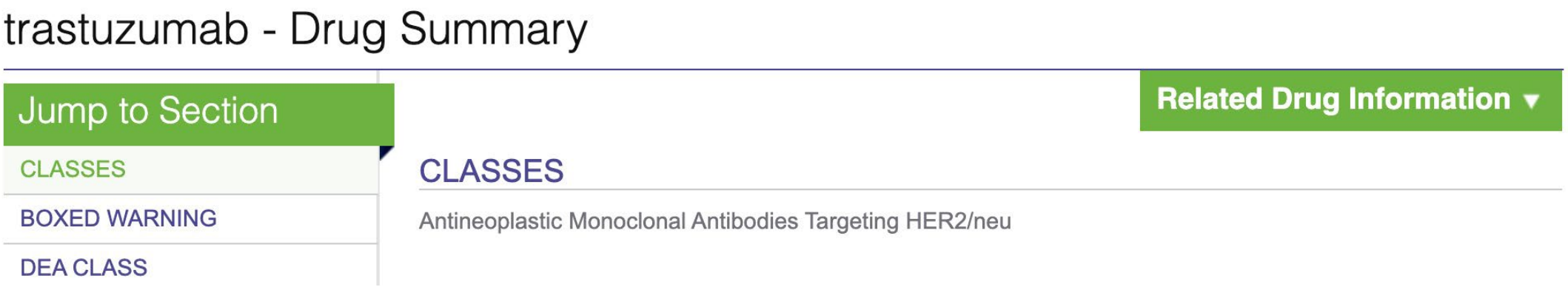
Additional Information

- Prior to injury.
- Chemotherapy may include, but is not restricted to, oral and parenteral treatment with chemotherapeutic agents for malignancies such as colon, breast, lung, head and neck, and gastrointestinal solid tumors as well as lymphatic and hematopoietic malignancies such as lymphomas, leukemia, and multiple myeloma.
- Exclude if treatment consists solely of hormonal therapy or cell cycle inhibitors.

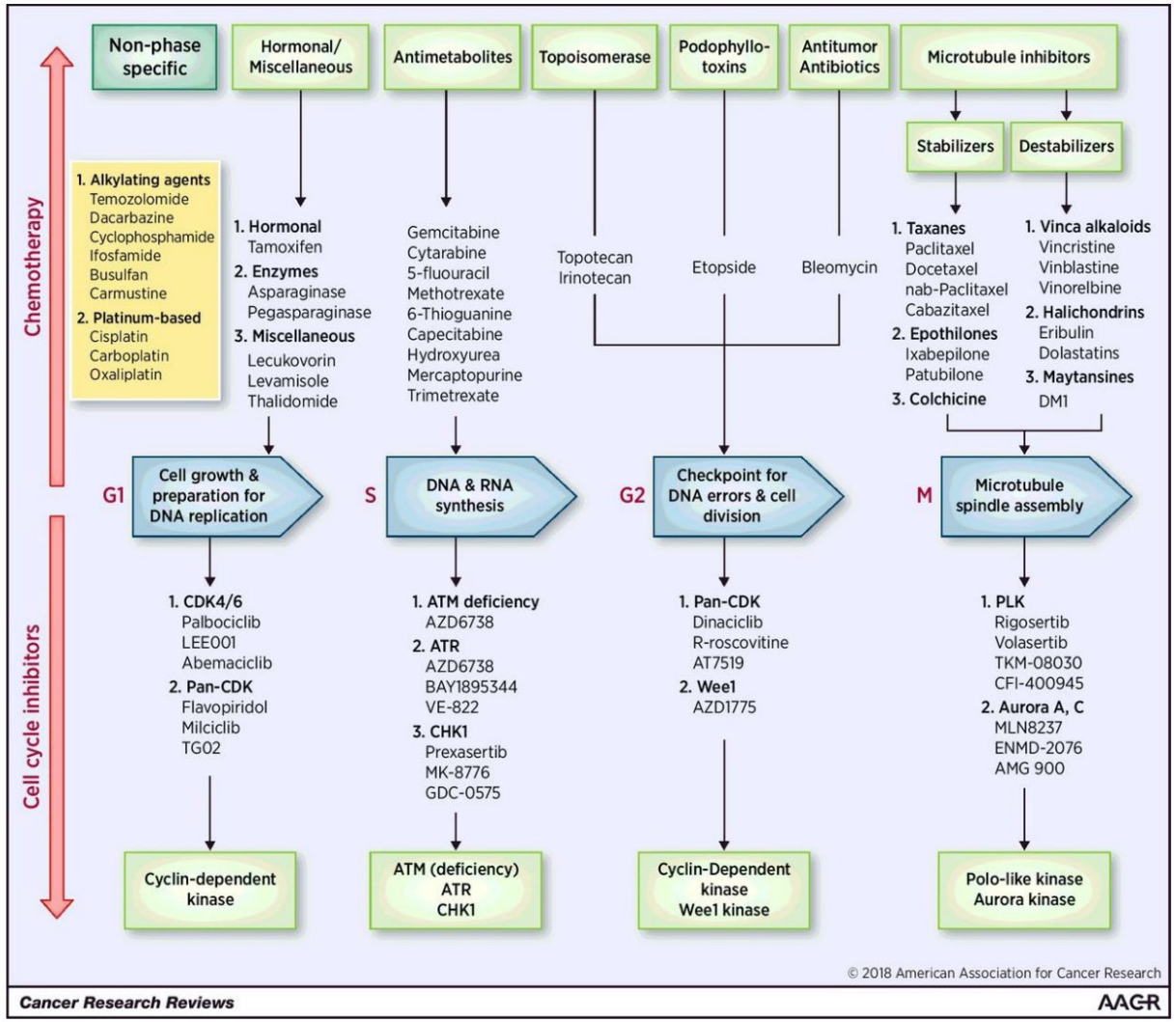
Resources

- Drug search
- Therapy types

Resources


trastuzumab - Drug Summary
Jump to Section
CLASSES
BOXED WARNING
DEA CLASS
Related Drug Information
CLASSES
Antineoplastic Monoclonal Antibodies Targeting HER2/neu

Resources



Christopher C. Mills et al. Cancer Res 2018;78:320-325

Resources

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Is Herceptin a form of chemotherapy?

No, Herceptin is not a chemo drug, it is a targeted therapy anticancer drug. Anticancer drugs can be divided into different groups: targeted therapy. chemotherapy (often called chemo) Oct 19, 2021

https://www.drugs.com › medical-answers › herceptin-che...

What is Herceptin? Is Herceptin a chemo drug? How does it work?

Trastuzumab

Brand name: Herceptin

Chemotherapy

It can treat breast, stomach, and esophageal cancer.

Availability: Prescription needed

Pregnancy: Consult a doctor

Alcohol: No known interactions with light drinking

Drug class: HER2/neu receptor inhibitor

side effects interactions wa

For informational purposes only. Consult your local medical authority for advice.

Sources: First Databank and others. Learn more

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7.12 CHEMOTHERAPY FOR CANCER

Description

A patient who is currently receiving chemotherapy treatment for cancer.

Element Values

- Chemotherapy for Cancer (NTDS 5)

Additional Information

- Prior to injury.
- Chemotherapy may include, but is not restricted to, oral and parenteral treatment with chemotherapeutic agents for malignancies such as colon, breast, lung, head and neck, and gastrointestinal solid tumors as well as lymphatic and hematopoietic malignancies such as lymphomas, leukemia, and multiple myeloma.
- Exclude if treatment consists solely of hormonal therapy or cell cycle inhibitors.

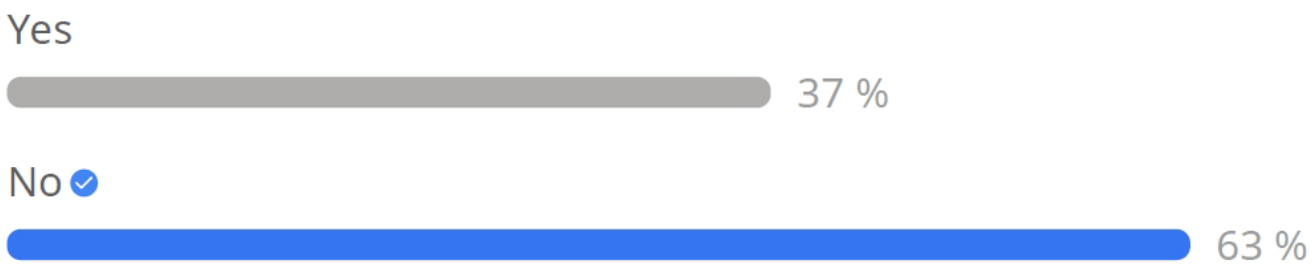
Resources

- Drug search
- Therapy types

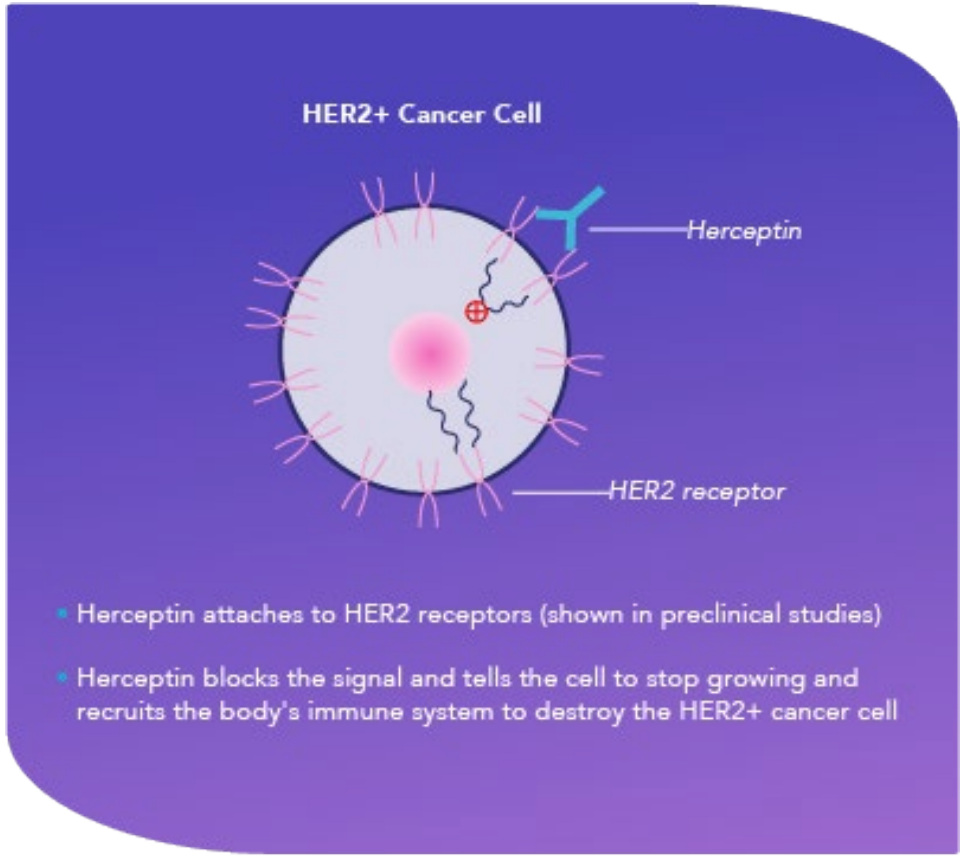
Multiple-choice poll

Q2: For Chemotherapy for Cancer, should this comorbidity be reported for a patient currently on Herceptin (trastuzumab) for breast cancer?

1 1 0



Thought Journey

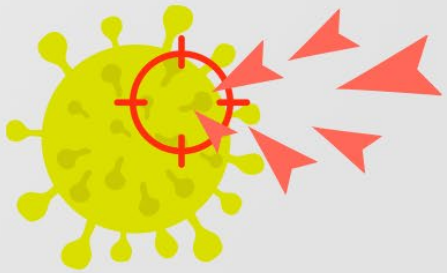
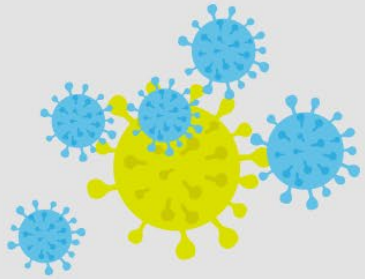


Targeted Therapy > Monoclonal Antibody

- As part of a treatment course including the chemotherapy drugs doxorubicin, cyclophosphamide, and either paclitaxel or docetaxel. This treatment course is known as "AC→TH"

https://www.herceptin.com/patient/about-herceptin.html

Thought Journey

Anticancer Drugs	 Chemotherapy	 Targeted Therapy	 Immunotherapy
How does it work?	Targets rapidly dividing cells (mostly cancer cells)	Targets Proteins required for cancer growth	Uses our immune system against cancer
Side Effects	Hair loss, intestinal damage, nausea	Liver problems, diarrhea, skin rash	Autoimmune effects
Limitations	Cancer cells develop resistance to chemotherapy, not specific	Cancer cells develop resistance	Tailored and expensive

Response

Answer: No

Response: Patients on Herceptin alone are not reported.

Please confirm this patient isn’t on an additional agent since this drug is often used in conjunction with chemotherapy.

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Question 3

For Myocardial Infarction, should this hospital event be reported? Patient with high-sensitivity troponin > 3x the upper level in the setting of shock/PE and cardiology documentation of "Troponin elevation, likely type II MI" after arrival?

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

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9.19 MYOCARDIAL INFARCTION

Description

An acute myocardial infarction (including NSTEMI type II) must be noted with documentation of an acute MI

AND

New elevation in troponin greater than three times the upper level of the reference range in the setting of suspected myocardial ischemia

AND

Physician diagnosis of an acute myocardial infarction that occurred subsequent to arrival at your center.

Multiple-choice poll

Q3: For Myocardial Infarction, should this hospital event be reported? Patient with high-sensitivity troponin > 3x the upper level in the setting of shock/PE and cardiology documentation of “Troponin elevation, likely type II MI” after arrival?

0 8 9

Thought Journey

Question to TQIP

Does the "troponin greater than three times the upper level" apply to high-sensitivity troponin?

Response from TQIP

The definition does not take into consideration the type of test used.

Thought Journey

Do shock or pulmonary embolism cause myocardial ischemia?

Shock or PE can sometimes an imbalance between myocardial oxygen supply and demand.

Myocardial oxygen demand is dependent upon several factors, including heart rate, myocardial contractibility, afterload (for practical reasons systolic blood pressure is often taken as a surrogate), and ventricular wall tension (preload). Given this clinical complexity, multiple criteria are used for reporting.

Response

Answer: No

Response: After further discussion with the center, the only mention of MI was "likely MI", and the patient was not treated.

If this pattern of documentation reoccurs, please reach out to the medical staff for diagnosis confirmation and creation of addendum by them if present.

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Question 4

For Pressure Ulcer, should this hospital event be reported for a patient with a stage 1 pressure ulcer documented as present on arrival, but progresses to a stage 2 during hospital stay?

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

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9.24 PRESSURE ULCER

Description

A localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated. Equivalent to NPUAP Stages II-IV, Unstageable/Unclassified, and Suspected Deep Tissue Injury.

Element Values

- Pressure Ulcer (NTDS 37)

Additional Information

- Excludes intact skin with non-blanching redness (NPUAP Stage I), which is considered reversible tissue injury.

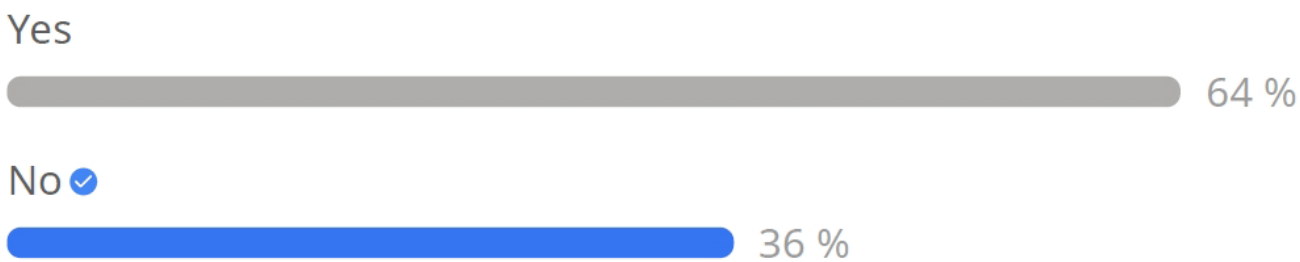
Resources

- NPUAP Pressure Injury Stages

Multiple-choice poll

Q4: For Pressure Ulcer, should this hospital event be reported for a patient with a stage 1 pressure ulcer documented as present on arrival, but progresses to a stage 2 during hospital stay?

102



Response

Answer: No

Response: After thoughtful reflection, there is a potential for evolution of injury sustained prior to arrival. This approach is also consistent with TQIP.

Either will be accepted on data validation for 2022. Preference to capture as "No." You will see this clarified in the 2023 data dictionary.

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Question 5

For VTE Prophylaxis Time, what should be reported? Patient with hand trauma started on heparin gtt in OR. At 00:05, heparin 5000 units IV given (dose does not meet IV weight-based dosing criteria). At 00:10, gtt was started.

- **00:05**
- **00:10**
- **Not Applicable**

13.1 VENOUS THROMBOEMBOLISM PROPHYLAXIS TYPE

Reporting Criterion

Report on all patients.

Description

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

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

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.

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13.3 VENOUS THROMBOEMBOLISM PROPHYLAXIS TIME

Reporting Criterion

Report on all patients.

Description

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

Element Values

- Relevant value for data element.

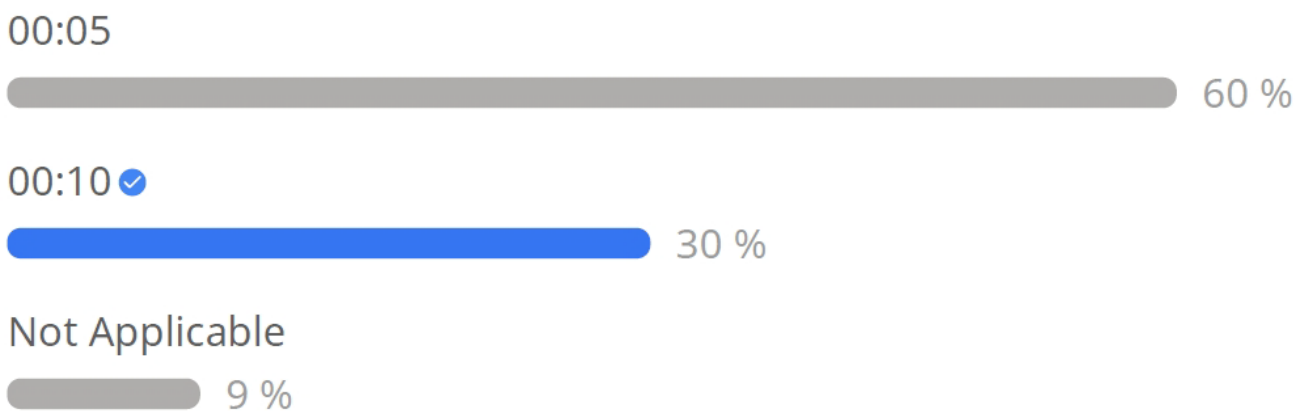
Additional Information

- Reported as HH:MM military time.
- Refers to time at which patient first received the prophylactic agent indicated in Venous Thromboembolism Prophylaxis Type.
- The null value "Not Applicable" is reported if Venous Thromboembolism Prophylaxis Type is Element Value “5. None.”

Multiple-choice poll

Q5: For VTE Prophylaxis Time, what should be reported? Patient with hand trauma started on heparin gtt in OR. At 00:05, heparin 5000 units IV given (dose does not meet IV weight-based dosing criteria). At 00:10, gtt was started.

0 9 6



Response

Answer: 00:10

Response: Please use start time of heparin gtt. Please do not use time of heparin injection.

The indication for the heparin IV injection is not provided in the notes, flowsheets, or orders. Additionally, the IV injection is not consistent with the order set bolus of 50 mg/kg that would be used for bolus prior to infusion.

Documentation is most consistent with the indication of vascular patency/line clearance which are excluded from reporting.

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Idea 1

What resources would you use at your institution to identify if the indication for the heparin IV injection as prophylaxis vs. line clearance?

Idea 1 - Most Upvoted Responses

Order might say “flush” or “lock”.
Call Jill
Check the order set and reason for administration
Pharmacist
Pharmacy comment
MAR
Our policies-procedures
Dosing amount
Excellent question….
Notes, anesthesia record
Orders, physician notes, anesthesia note, consult notes, pharmacy dosing info, ph
Our MAR specifies irrigation/line clearance heparin vs. VTE heparin
MAR, doctor’s notes,
The concentration of the heparin
Pharmacy, or standard order set. Our line clearance is 100 or 300 units.
IV team protocols for central lines, indication in notes
Pharmacy
Flow sheet in emr
Provider progress notes
Ordering provider
Check the order set and reason for administration
Orders
Med summary-check orders

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Question 6

For Disseminated Cancer, should this comorbidity be reported? Patient with known stage IV endometrial adenocarcinoma without mention of specific site of metastasis in radiology or notes.

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

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7.22 DISSEMINATED CANCER

Description

Cancer that has spread to one site or more sites in addition to the primary site and in the presence of multiple metastases indicates the cancer is widespread, fulminant, or near terminal.

Element Values

- Disseminated Cancer (NTDS 12)

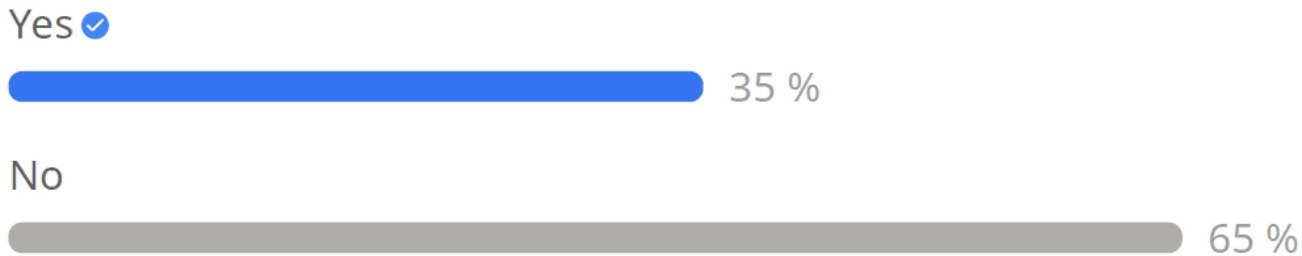
Additional Information

- Present prior to injury.
- Another term describing disseminated cancer is "metastatic cancer."
- A diagnosis of cancer that has spread to one or more sites must be documented in the patient's medical record.
- Report Acute Lymphocytic Leukemia (ALL), Acute Myelogenous Leukemia (AML), and Stage IV Lymphoma under this variable.
- Do not report Chronic Lymphocytic Leukemia (CLL), Chronic Myelogenous Leukemia (CML), Stages I through III Lymphoma, or Multiple Myeloma as disseminated cancer.

Multiple-choice poll

Q6: For Disseminated Cancer, should this comorbidity be reported? Patient with known stage IV endometrial adenocarcinoma without mention of specific site of metastasis in radiology or notes.

100



Thought Journey

Stage IV cancers

Stage IVA: These endometrial cancers have grown into the bladder or bowel.

Stage IVB: These endometrial cancers have spread to lymph nodes outside the pelvis or para-aortic area. This stage also includes cancers that have spread to the liver, lungs, omentum, or other organs.

Some endometrial cancers are stage IV because they have spread to lymph nodes in the abdomen (and not just the pelvis and para-aortic area), but they haven't spread to any other areas. Women with this kind of cancer spread may have better outcomes if all the cancer that's seen can be removed (debulked) and biopsies of other areas in the abdomen do not show cancer cells.

In most cases of stage IV endometrial cancer, the cancer has spread too far for it all to be removed with surgery. A hysterectomy and removal of both fallopian tubes and ovaries may still be done to prevent excessive bleeding. Radiation therapy may also be used for this reason. When the cancer has spread to other parts of the body, hormone therapy may be used. But high-grade cancers and those without detectable progesterone and estrogen receptors on the cancer cells are not likely to respond to hormone therapy.

Response

Answer: Yes

Response: Please report stage IV endometrial adenocarcinoma as Disseminated Cancer. This stage by definition has spread.

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Question 7

For Tablet Type 1, what should be reported. Patient is discharged on Ultram.

- None
- Bupenorphine
- Codeine
- Tapentadol
- Tramadol
- Other

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).

Multiple-choice poll

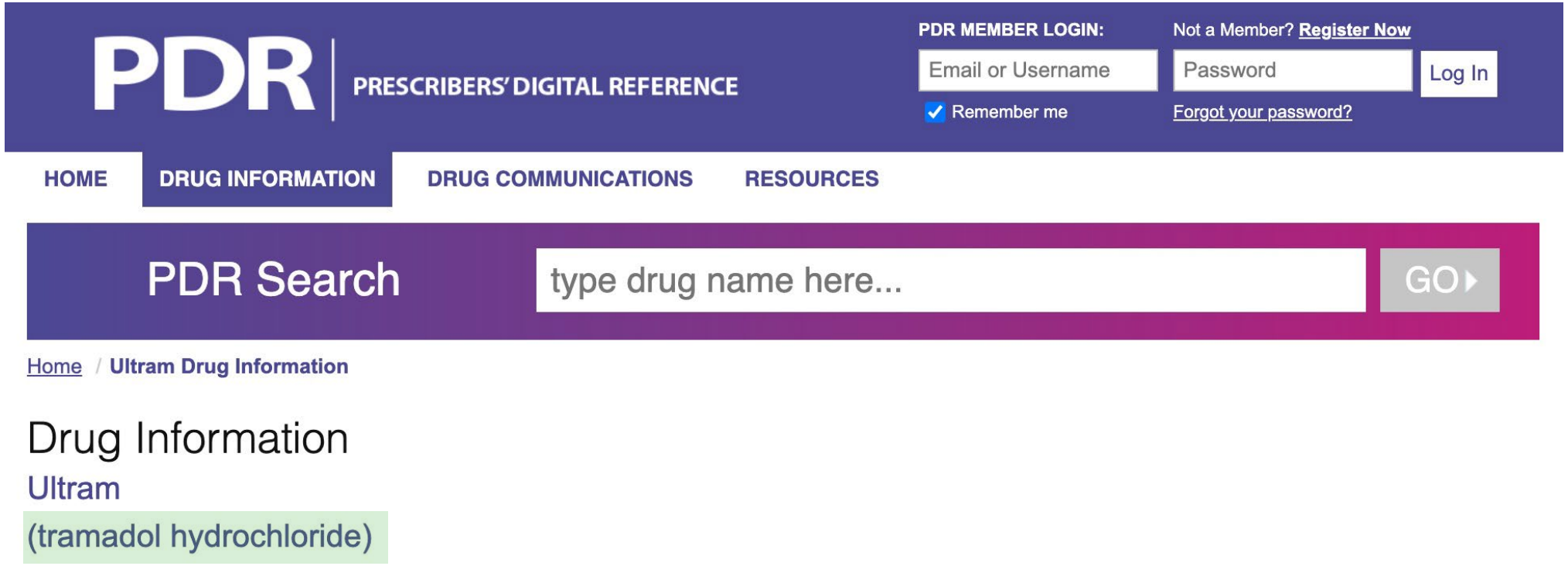
Q7: For Tablet Type 1, what should be reported. Patient is discharged on Ultram.
(1/2)

0 8 9

Response

Answer: Tramadol

Response:



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Question 8

For Tablet Type 1, what should be reported. Patient is discharged on Suboxone.

- None
- Bupenorphine
- Codeine
- Tapentadol
- Tramadol
- Other

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).

Multiple-choice poll

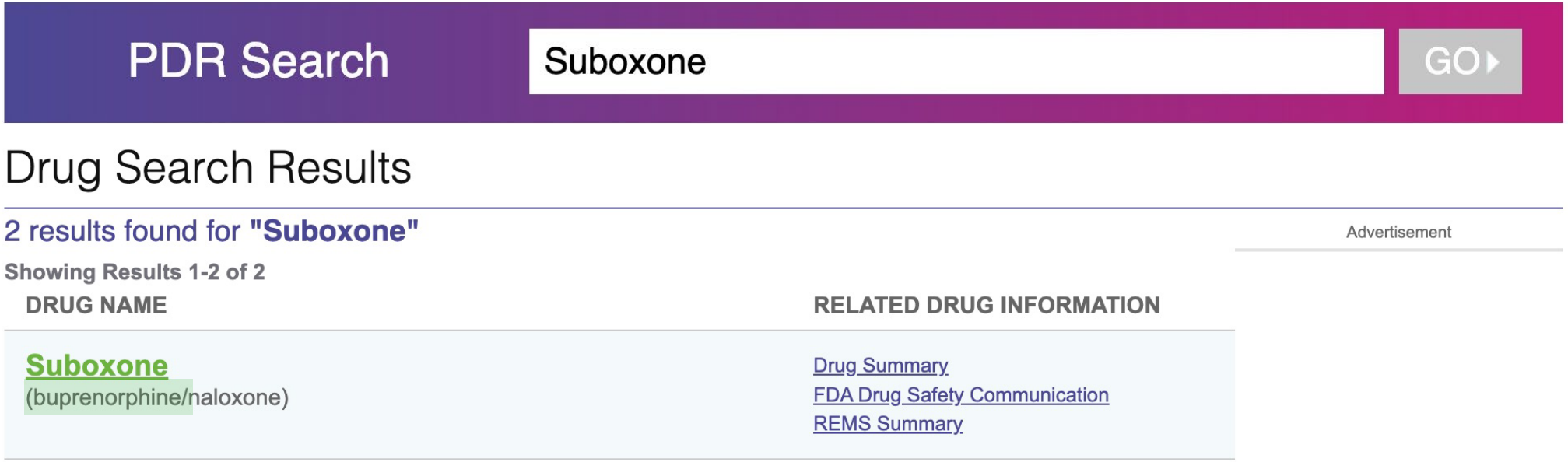
Q8: For Tablet Type 1, what should be reported. Patient is discharged on Suboxone.
(1/2)

0 9 0

Response

Answer: Buprenorphine

Response:



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Question 9

For Maximum per Dose, what should be reported? Patient is discharged with oxycodone elixir 5mg/5mL with instruction to take 5-10 mL every 4 hours as needed for pain.

- **5**
- **10**
- **Leave null blank in place (oxycodone is not an opioid)**

Reporting Criterion

Report on all patients.

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Description

The maximum per dose opioid prescribed at discharge.

Element Values

- Relevant value for data element.

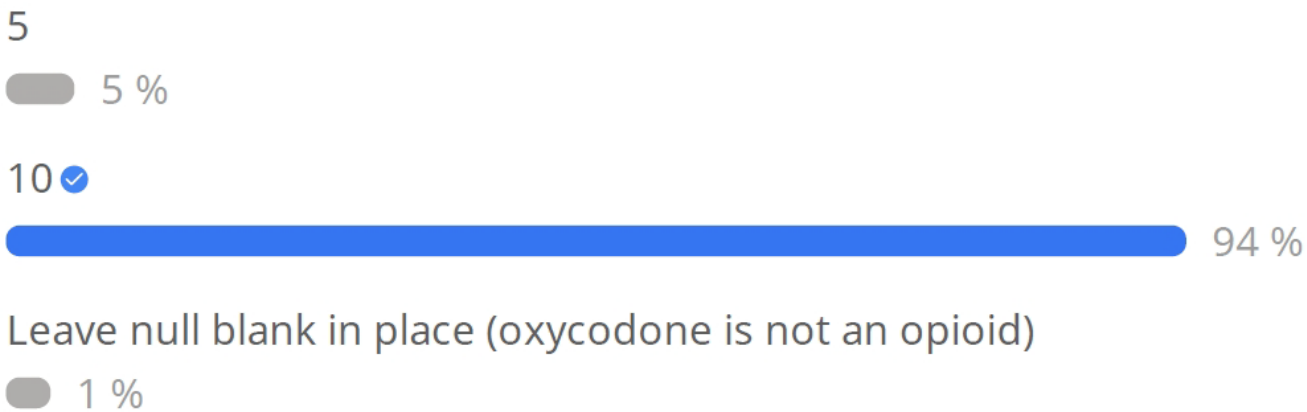
Additional Information

- Round to the tenth decimal place where applicable.
- Example 1 (Tablets): oxycodone 5 mg 1-2 tabs PO Q 4-6 h prn pain is prescribed.
    - The patient can take a maximum amount of 2 tabs for each dose.
    - Report the numeric value 2.
- Example 2 (Tablets): oxycodone 10 mg 1 tab PO Q 12 h pain is prescribed.
    - The patient can take a maximum amount of 1 tab for each dose.
    - Report the numeric value 1.
- Example 3 (Solution): acetaminophen/codeine solution 120 mg/12 mg per 5 mL take 5-10 mL Q 6 h prn pain.
    - The patient can take a maximum amount of 10 mL for each dose.
    - Report the numeric value 10.
- Example 4 (Other): fentanyl transdermal 50 mcg/h 1 patch Q 72 h is prescribed.
    - The patient can apply 1 patch for each dose.
    - Report the numeric value 1.

Multiple-choice poll

Q9: For Maximum per Dose, what should be reported? Patient is discharged with oxycodone elixir 5mg/5mL with instruction to take 5-10 mL every 4 hours as needed for pain.

0 9 8



Response

Answer: 10

Response: The maximum amount of mL the patient can take with each dose is 10 mL.

Resources – Oxycodone Tablets

24 h / 3 = 8 Freq/Day

oxyCODONE 5 mg tablet Refills: 0 Commonly known as: ROXICODONE	5-10 mg, Oral, EVERY 3 TO 4 HOURS PRN, You may also cut tablets in 1/2 and take less Quantity: 35 tablet

Opioid Process Measures

Tablet Type 1	Strength	Units		Max Dose (Tabs)	Max Freq/Day	Quantity (Tabs)
oxycodone	5	mg		2	8	35
Tablet Type 2	**Strength**	**Units**		**Max Dose (Tabs)**	**Max Freq/Day**	**Quantity (Tabs)**
Solution Type	**Strength**	**Units**	**mL**	**Max Dose (mL)**	**Max Freq/Day**	**Quantity (mL)**
Other Type	**Strength**	**Units**	**Form**	**Max Dose (Product)**	**Max Freq/Day**	**Quantity (Product)**

Resources – Oxycodone Elixir

24 h / 4 = 6 Freq/Day

oxyCODONE 5 mg/5 mL solution	5-10 mg, Oral, EVERY 4 HOURS PRN
Refills: 0	Quantity: 100 mL
Commonly known as: ROXICODONE	

Opioid Process Measures

Tablet Type 1	Strength	Units		Max Dose (Tabs)	Max Freq/Day	Quantity (Tabs)
Tablet Type 2	Strength	Units		Max Dose (Tabs)	Max Freq/Day	Quantity (Tabs)
Solution Type	Strength	Units	mL	Max Dose (mL)	Max Freq/Day	Quantity (mL)
oxycodone	5	mg	5	10	6	100
Other Type	Strength	Units	Form	Max Dose (Product)	Max Freq/Day	Quantity (Product)

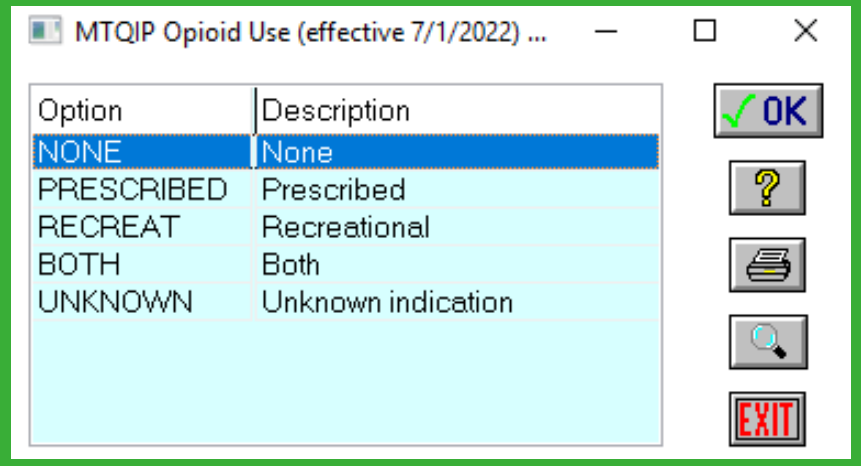
Resources – Tylenol #3 Elixir

Opioid Process Measures

Tablet Type 1	Strength	Units		Max Dose (Tabs)	Max Freq/Day	Quantity (Tabs)
Tablet Type 2	**Strength**	**Units**		**Max Dose (Tabs)**	**Max Freq/Day**	**Quantity (Tabs)**
Solution Type	**Strength**	**Units**	**mL**	**Max Dose (mL)**	**Max Freq/Day**	**Quantity (mL)**
codeine	12	mg	5	10	6	
Other Type	**Strength**	**Units**	**Form**	**Max Dose (Product)**	**Max Freq/Day**	**Quantity (Product)**

Max dose converting from mg to mL

- Formula: (strength mL/strength mg) x (max dose mg)
- Example Rx: acetaminophen/codeine 120 mg/12 mg per 5 mL: take 24 mg Q 4 hours prn
- Calculation: (5 mL/12 mg) x 24 mg = 10 mL
- Report: 10



Prior Opioid Use

- **CDM members**
- **On hold for 2022**

Discussion

2023 MTQIP Data Dictionary Requests

Jill Jakubus

VARIABLE	PAGE	REQUESTED CHANGE
Patient's First/Last Name	8-9	Clarify data entry when no legal name is ever known for the patient.
Congenital Anomalies	119	Remove Congenital Anomalies from data validation for 2023 since the age range has been restricted in reporting. Update data dictionary to include age range restriction consistent with NTDS.
Congestive Heart Failure	120	To answer your question, since there is no exclusion in the definition for pregnancy induced CHF, and there is a CHF diagnosis documentation in the patient's medical record, you must report Element Value , 1. Yes, to TQIP for the Congestive Heart Failure data element.
Functionally Dependent Health Status	127	Clarify exclusion of medical devices (non-DME) from definition per ACS clarification email 3/1/22. For example, LVAD, intrathecal pain pump, pacemaker. A patient with a medical device does not meet the NTDS definition criteria of the Functionally Dependent Health Status data element. The reason is because the patient must be partially or completely dependent on a devise or person to perform their ADLs due to a cognitive or physical limitation, not a physiological limitation.
Prematurity	134	Add information listed under Additional Information in NTDS to MTQIP data dictionary.
Pressure Wound	178	Add clarification for POA stage I that progresses to stage II
Pressure Wound	178	Clarify inclusion/exclusion of mucosal membrane injuries and unstageable pressure injuries mentioned in the NPUAP link.
Sepsis	180	It has come to my attention that a positive culture is needed to meet the Sepsis reporting criteria. The current Sepsis definition states "documented infection" which the staff at my center interpret as physician documentation (charting) of the patient having an infection. I do not see anywhere in the definition saying there must be a positive culture associated with this documented infection. Clarification in the definition would be helpful to assure this complication is captured accurately throughout MTQIP centers.
Cerebral Monitor	215	Reply to email about reporting BTOM with/without ICP monitoring capabilities. Short answer: For 2022, please report BTOM (brain tissue oxygen monitor) as Licox. Long answer: Reviewing the literature provided by the manufacturer, these devices may or may not offer ICP monitoring capabilities (see attached, red circle). I will add this as a point for clarification/discussion for the 2023 updates.
Antibiotic Days	254	Verbiage in definition states to capture partial days. During validation, one center was capturing the date the antibiotic was started and the date it finished if it ran into the next calendar day. This gave them two antibiotic days for one dose. Could clarify to capture the date the antibiotic was started.

Multiple-choice poll

Survey (1/10)

Patient's First/Last Name

0 8 0

Make requested change/clarification

68 %

Retain unchanged

33 %

Multiple-choice poll

Survey (2/10)

Congenital Anomalies

0 8 2

Make requested change/clarification

91 %

Retain unchanged

9 %

Multiple-choice poll

Survey (3/10)

Congestive Heart Failure

0 7 9

Make requested change/clarification

89 %

Retain unchanged

11 %

Multiple-choice poll

Survey (4/10)

Functionally Dependent Health Status

0 8 0

Make requested change/clarification

71 %

Retain unchanged

29 %

Multiple-choice poll

Survey (5/10)

Prematurity

0 7 3

Make requested change/clarification

84 %

Retain unchanged

16 %

Multiple-choice poll

Survey (6/10)

Pressure Wound - Progression

0 4 6

Make requested change/clarification

100 %

Retain unchanged

0 %

Multiple-choice poll

Survey (7/10)

Pressure Wound - Mucosal Membranes

0 6 9

Make requested change/clarification

97 %

Retain unchanged

3 %

Multiple-choice poll

Survey (8/10)

Sepsis

0 7 5

Make requested change/clarification

99 %

Retain unchanged

1 %

Multiple-choice poll

Survey (9/10)

Cerebral Monitor

0 7 1

Make requested change/clarification ✓

89 %

Retain unchanged

11 %

Multiple-choice poll

Survey (10/10)

Antibiotic Days

0 7 3

Make requested change/clarification ✓

79 %

Retain unchanged

21 %

Where to submit suggestions?

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

Wrap Up

Jill Jakubus

Conclusion

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