

Colorado Trauma Network

January 12, 2022



CTN

- If you used the ZOOM link, please type your name and facility in the chat box
- If you are calling in, please email your information to wendy.Hyatt@uchealth.org
- Please mute your computer or phone during the meeting



Reflection

2022 Elected Officers

- President: Mize Archuleta, Centura Trauma System
- Vice President: Jessica Cofran, UC Health
- Treasurer: Val Peaslee, Longs Peak Hospital
- Secretary: Wendy Hyatt, Highlands Ranch Hospital





CTN email List

Please send your updates and email
address to:

Wendy.Hyatt@uchealth.org



Treasurer Report

Valorie Peaslee, BSN, RN

CTN 2021 Financials

- Dues Collected (12/2020-12/2021)
 - \$6,998.00
- Accounts Payable
 - \$6,875.00 – KJ Consulting – ICD-10 Course
- Current Balance
 - \$15,096.57



CTN Dues Structure-2021

- **Individual-**
- *Per person- \$60*
- **Facility-**
- *Level 1- \$300*
- *Level 2- \$175*
- *Level 3- \$100*
- *Level 4/5- \$60*
- **System-**
- *Total of all facilities in system minus a 10% discount*

Make checks payable to :

COLORADO TRAUMA NETWORK, INC.

Send payments to:

CTN Treasurer

25704 County Road 54 1/4

Kersey, CO 80644



CTN Treasurer Updates

- Invoice for 2022 Dues structure is posted on CTN website
- Please send any inquiries Valorie.Peaslee@uchealth.org for a quicker response.



CTN Logo Update


Rules

- Must include "CTN" in the design
- CTN members will vote on the winner
- Submissions due by February 9th
- Submit to wendy.Hyatt@uchealth.org
- \$100 Cash Prize
- Winning submission will be put in a high-resolution format for use on CTN materials



**Amber
Nadeau
Brittany
Howland**

CTN
Registry
Committee
Review
Registry
Quiz



CTN Registry Subcommittee Winter 2021 Quiz Review

Brittany Howland & Amber Nadeau

CTN Registry Subcommittee

Co-Chair: Brittany Howland, BSN RN TNC/Registrar Children's Hospital Colorado - Colorado Springs

brittany.howland@childrenscolorado.org

Co-Chair: Amber Nadeau, CAISS, Trauma Registrar UCHHealth Memorial Hospital Central

amber.nadeau@uchealth.org

- Sheri Alvarado
- Alynn Hass
- Desiree Clark
- Virginia Dietz
- Jodi Greenwood
- Lori Kennard
- Jennifer Landis
- Melissa Sorensen
- Christopher Provost
- Pam Vanderberg
- Stephanie Vega

CTN Registry Subcommittee: Who are We?



Group of registrars and registry-minded individuals from across the state of CO who meet roughly every quarter



Discuss current challenges and coding questions



Write & share a semi-annual registry related quiz to address hot coding topics



Work on coordinating Trauma Registry-specific educational opportunities with the CTN to foster professional development & encourage continuing education (upcoming scholarship opportunity April 2022!)



What we are not: a reference for State & NTDB rules or AIS specific coding rules/questions - Please direct these to appropriate entity.

Speaking of Registry Education Opportunities...

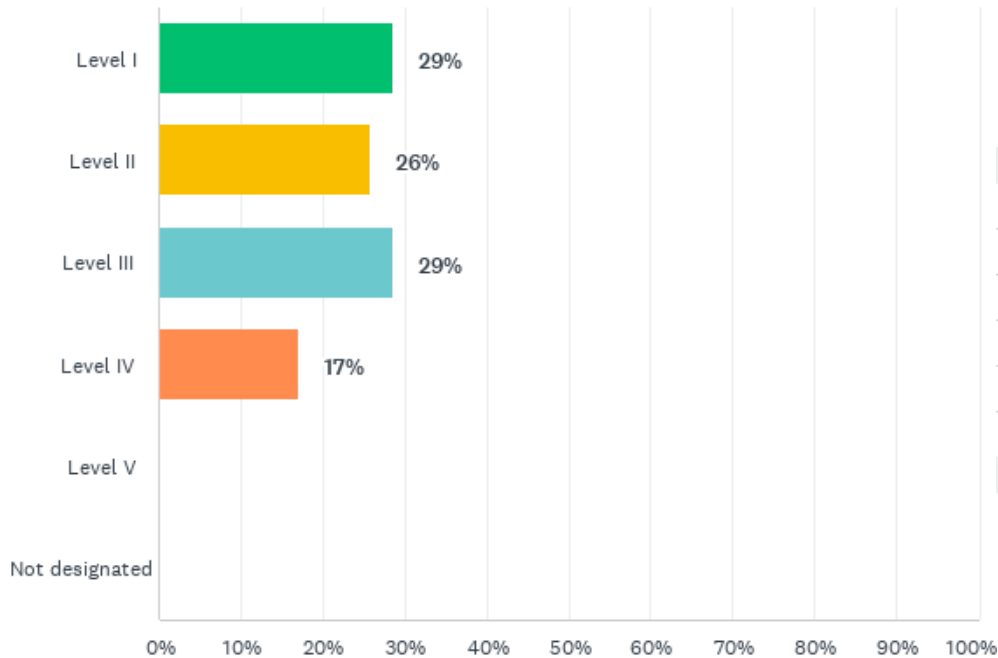
Quick Points	Introduction to ICD-10 Trauma Injury Coding
Host	American Trauma Society
Date Offered	4/14/2022 – 4/15/2022
Class Size	Up to 25 people
Length of class - hours per day	8:00am – 5:30pm MST (9.5hrs/day)
Cost per person	\$540 (ATS member), \$600 (non-ATS member)
Discounts	Yes! If we get 20 people to register from CO, all will receive member pricing (\$540), no matter individual's member status
Extras offered by Hosts	Yes - access to class roster for support & conversation via Trauma Analytics, 1yr free subscription to AHIMA Vlab & 3M Encoder (online resource)
CTN SCHOLARSHIPS!!!!	\$150/person (max 2 per facility)
Keep an eye out:	Email will follow soon for registration details and form

Demographics of Winter Quiz Participants



Q1: What is the State-Designation Level for your Trauma Center?

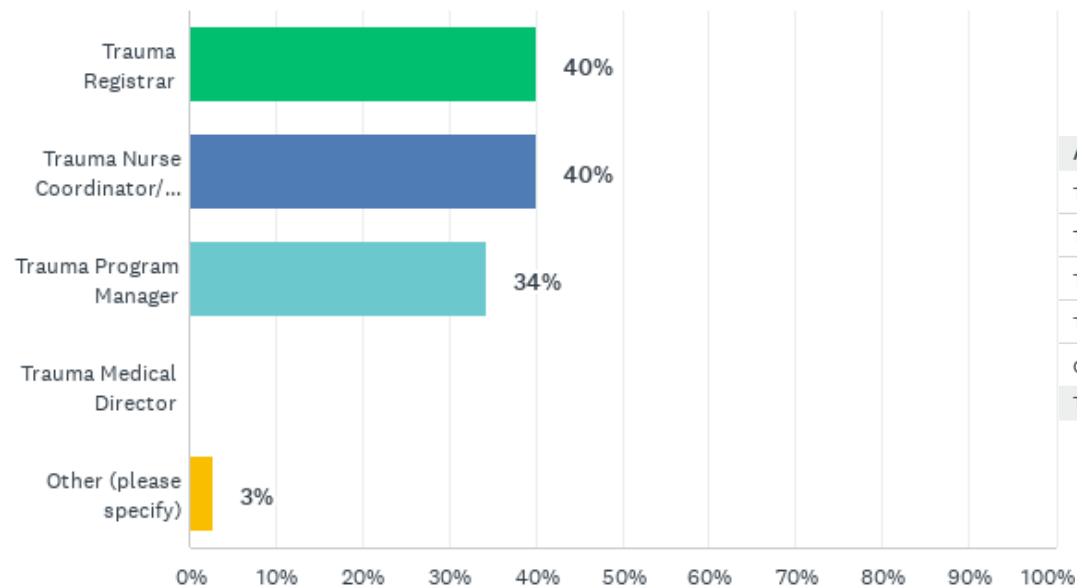
Answered: 35 Skipped: 0



ANSWER CHOICES	RESPONSES	
Level I	29%	10
Level II	26%	9
Level III	29%	10
Level IV	17%	6
Level V	0%	0
Not designated	0%	0
TOTAL		35

Q2: What is your role in your facility's trauma program? Select all that apply.

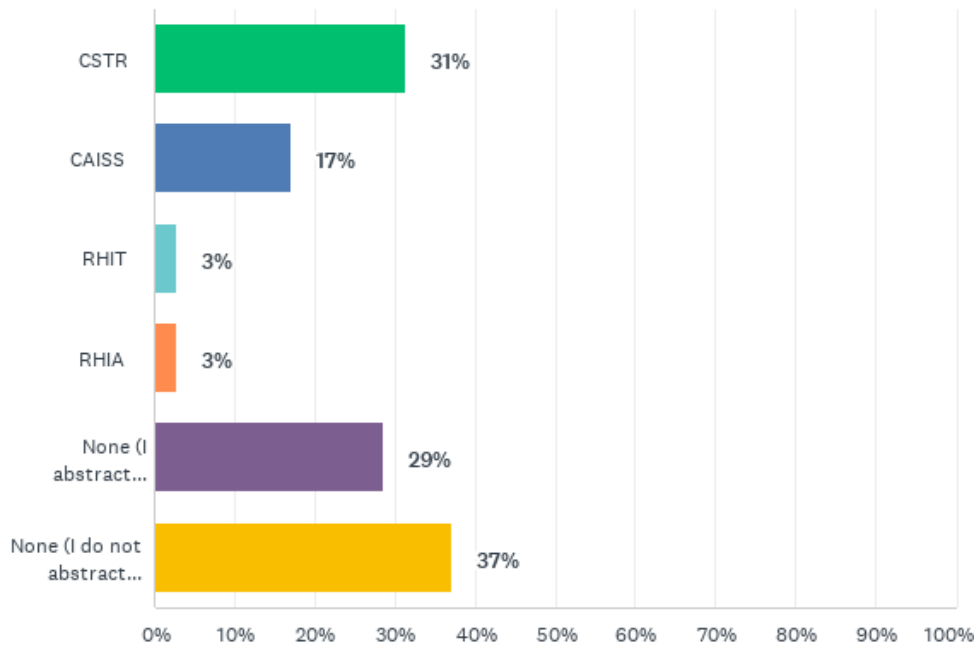
Answered: 35 Skipped: 0



ANSWER CHOICES	RESPONSES	
Trauma Registrar	40%	14
Trauma Nurse Coordinator/Quality Specialist/PI Coordinator	40%	14
Trauma Program Manager	34%	12
Trauma Medical Director	0%	0
Other (please specify)	3%	1
Total Respondents: 35		

Q3: If you have registry certifications, what do you have? Select all that apply.

Answered: 35 Skipped: 0



ANSWER CHOICES	RESPONSES	
CSTR	31%	11
CAISS	17%	6
RHIT	3%	1
RHIA	3%	1
None (I abstract registry data)	29%	10
None (I do not abstract registry data)	37%	13
Total Respondents: 35		



Winter Quiz Questions/Rationale

Q4: ICD-10 PCS Procedure Code Question

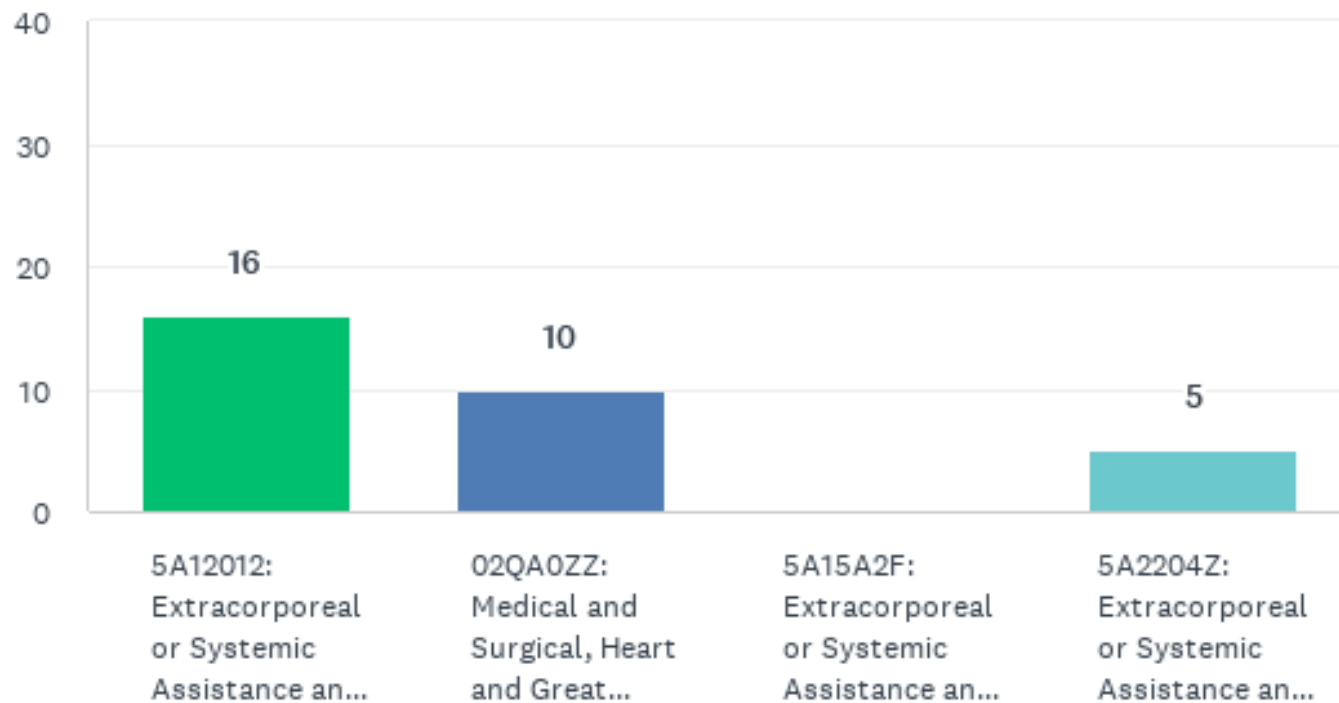
A 30YO male arrives by EMS after GSW to the right hip, with tachycardia and hypotension on arrival. The patient was unable to follow commands and thus was intubated for airway protection. Shortly after intubation, the patient lost pulses. CPR was initiated and an emergent thoracotomy was performed. There was no blood in the left chest, pericardial sac or concern for tamponade. The aorta was flat and subsequently cross clamped. Internal cardiac massage was performed. Following further blood resuscitation, the patient had return of spontaneous circulation. The patient was transported to the OR for definitive management.

What is the most appropriate ICD10 procedure code for Internal Cardiac Massage?

- A.** 5A12012 Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Performance, Cardiac, Single, Output, Manual
- B.** 02QA0ZZ Medical and Surgical, Heart and Great Vessels, Repair, Heart, Open, No Device, No Qualifier
- C.** 5A15A2F Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Performance, Circulatory, Intraoperative, Oxygenation, Membrane - Central
- D.** 5A2204Z Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Restoration, Cardiac, Single, Rhythm, No Qualifier

Q4: ICD-10 PCS Procedure Code Results

Answered: 31 Skipped: 4



Q4: ICD-10 PCS Procedure Code Rationale

CORRECT ANSWER:

B “02QA0ZZ Medical and Surgical, Heart and Great Vessels, Repair, Heart, Open, No Device, No Qualifier”

The AHIMA Book of Knowledge for ICD-10 PCS identifies that Repair functions as the Not Elsewhere Classified (NEC) root operation, to be used when the procedure performed does not meet the definition of one of the other root operations.

The table most fitting that allows proper assignment of all character values for this procedure is the 02Q ____ PCS table.

RATIONALE:

A. 5A12012 Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Performance, Cardiac, Single, Output, Manual. This is the appropriate code for CPR. It is the only available code that allows the qualifier of “manual” to identify that this is the manual performance of CPR

C. 5A15A2F Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Performance, Circulatory, Intraoperative, Oxygenation, Membrane – Central. This is a code specifically for ECMO. “This is utilized for the intraoperative support from ECMO that is utilized as life support. Intraoperative ECMO may be used as temporary circulatory support for the duration of a procedure such as a lung transplant or a high-risk percutaneous coronary intervention (PCI).” In this code, the 7th digit qualifier may have 3 different choices based on the membrane. ICD-10-CM/PCS Coding Clinic, Fourth Quarter ICD-10 2019, Pages 39-41. (AHIMA)

D. 5A2204Z Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Restoration, Cardiac, Single, Rhythm, No Qualifier. This is a procedure code that is most applicable to cardioversion-type procedures. See following slides for more information as to why it would not be the appropriate code to use for Internal Cardiac Massage.

Q4: ICD-10 PCS Procedure Code Rationale (cont'd)

With the procedure of Open Cardiac Massage the section would not be appropriately coded to the section of (5) **Extracorporeal or Systemic Assistance and Performance, and body system of (A) Physiological Systems**, as we find that the only available root operations for assigning a code in this section and body system are (0) Assistance, (1) Performance, and (3) Restoration.

Each of these root operations state by extracorporeal means and this procedure is an open procedure.

ICD-10-PCS coding convention A9 directs that for coding that we must assign codes from the root operations in the same row. Therefore, we can't use repair as a root operation for the 5A____ PCS code table.

Convention A9: "Within a PCS table, valid codes include all combinations of choices in characters 4 through 7 contained in the same row of the table."

In the example here, 0JHT3VZ is a valid code, and 0JHW3VZ is not a valid code

Section:	0 Medical and Surgical		
Body System:	J Subcutaneous Tissue and Fascia		
Operation:	H Insertion: Putting in a nonbiological appliance that monitors, assists, performs, or prevents a physiological function but does not physically take the place of a body part		
Body Part	Approach	Device	Qualifier
S Subcutaneous Tissue and Fascia, Head and Neck	0 Open	1 Radioactive Element	Z No Qualifier
V Subcutaneous Tissue and Fascia, Upper Extremity	3 Percutaneous	3 Infusion Device	
W Subcutaneous Tissue and Fascia, Lower Extremity		Y Other Device	
T Subcutaneous Tissue and Fascia, Trunk	0 Open	1 Radioactive Element	Z No Qualifier
	3 Percutaneous	3 Infusion Device	
		Y Other Device	

Q4: ICD-10 PCS Code Rationale (cont'd)

Additionally, when choosing a root operation, in compliance with Coding guideline B3.1a we must choose the one whose full definition is aligned with the intent of the procedure described.

General guidelines B3.1a

“In order to determine the appropriate root operation, the full definition of the root operation as contained in the PCS Tables must be applied.”

Since the 5A____ PCS table, illustrated below, doesn't have a root operation and we can't break the coding convention A9, we must choose another PCS table that allows for coding the procedure to the most correct body system, root operation, body region (part), Approach (duration), Device (function), Qualifier characters values describing the procedure details.

Therefore, the table most fitting that allows proper assignment of all character values for this procedure is the 02Q____ PCS table.

The screenshot shows the ICD-10 PCS coding interface. At the top, there is a 'Clear All' button and a text search box. Below this, the 'Section' is set to '5 Extracorporeal or Systemic Assistance and Performance' and the 'Body System' is set to 'A Physiological Systems'. The 'Operation' dropdown is currently set to 'Assistance'. A 'Definitions' window is open, showing the definitions for the three root operations:

Operation	Definition
Assistance	Definition: Taking over a portion of a physiological function by extracorporeal means
Performance	Definition: Completely taking over a physiological function by extracorporeal means
Restoration	Definition: Returning, or attempting to return, a physiological function to its original state by extracorporeal means.

Q5: Level I & II Process Measure TQIP: TBI – Midline Shift Question

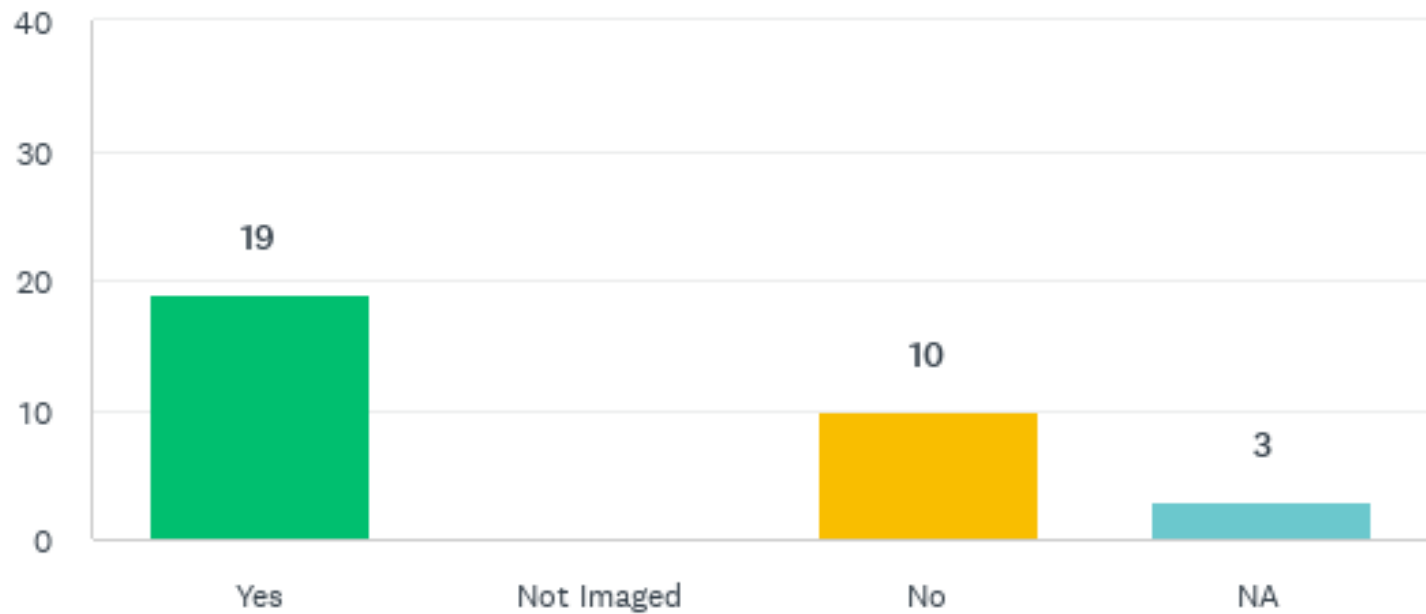
A 16YO M arrives to your facility after falling approx. 6ft out of a tree and hitting his head on the ground. +LOC for about 30 seconds. Pt is now GCS of 14 with some confusion but following commands. A CT scan of the head is ordered while the patient is in the ED. The results of the CT Head read: “R frontoparietal subdural hematoma up to 6mm thick. No mass effect. Leftward shift of 5mm.”

Based on the information provided, what answer would you choose to report to TQIP for the field “Midline Shift”?

- A.** Yes
- B.** Not imaged
- C.** No
- D.** NA

Q5: Level I & II Process Measure TQIP: TBI – Midline Shift Question

Answered: 32 Skipped: 3



Q5: Level I & II Process Measure TQIP: TBI – Midline Shift Rationale

CORRECT ANSWER: C “No”.

RATIONALE:

- A.** Yes – Only answer yes if midline shift is greater than 5mm on CT scan within 24 hours from the time of injury. May also report value “yes” if radiology report states “massive midline shift” in lieu of >5mm shift measurement. NTDS 2021 page 147
- B.** Not imaged – Report this value if the patient was not imaged within 24 hours from the time of injury.
- C.** No – The midline shift is not greater than 5mm per information available.
- D.** NA – “Not Applicable” is reported for patients that do not meet the reporting criterion.

Q6: Discharge Question

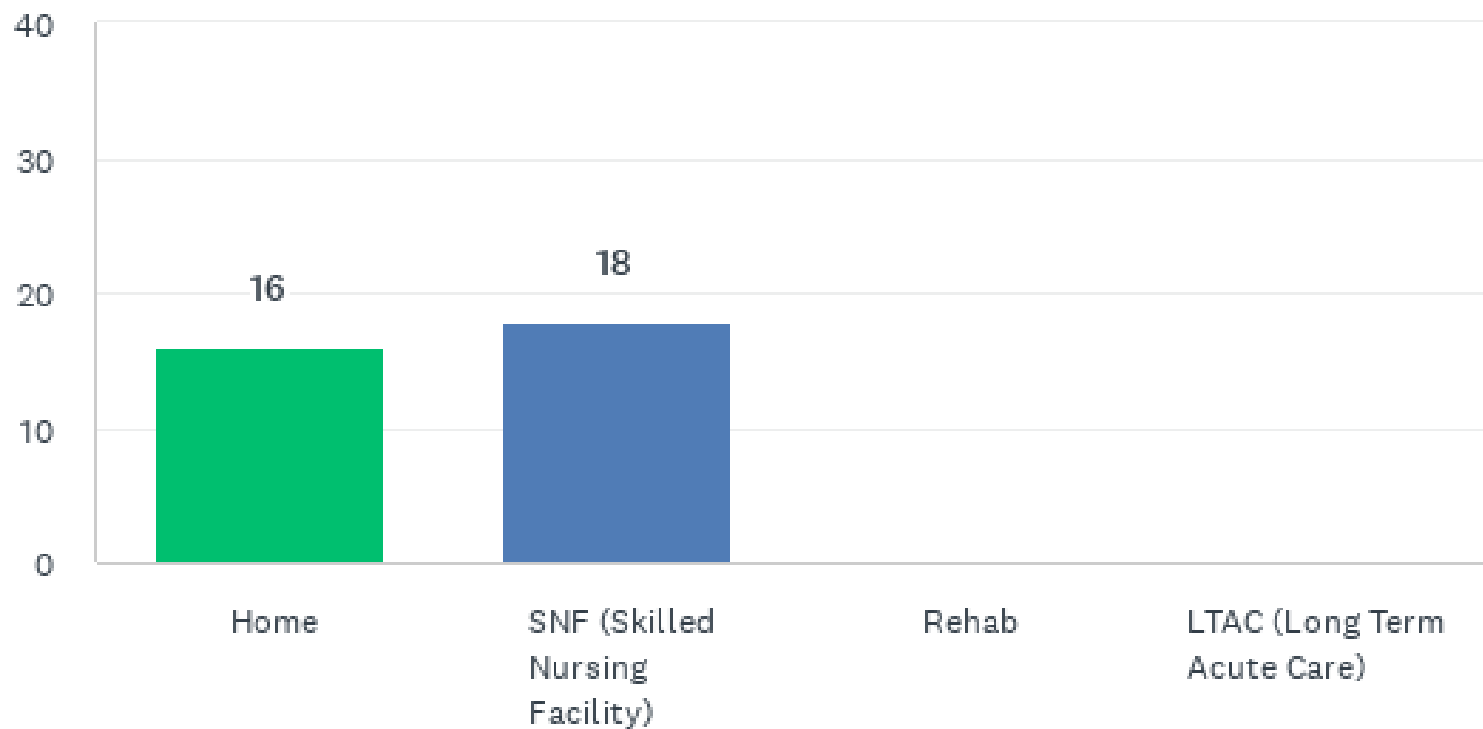
75YO M was staying in FAR AWAY SNF after a recent surgery and presents to the ED after a fall, requiring him to be admitted for further trauma workup and injury management. Approaching his time of discharge from the hospital, the case management note states: "Pt does not want to return to FAR AWAY SNF and prefers to discharge to CLOSE TO HOME SNF where his wife is currently admitted." Case management confirms CLOSE TO HOME SNF can manage the patient's injuries. The day of discharge, the attending physician writes the discharge order: "Discharge to CLOSE TO HOME SNF" and patient leaves the hospital with medical transport shortly after.

What is the Hospital Discharge Disposition?

- A. Home**
- B. SNF**
- C. Rehab**
- D. LTAC**

Q6: Discharge Question

Answered: 34 Skipped: 1



Q6: Discharge Answer/Rationale

CORRECT ANSWER: B “SNF”.

RATIONALE:

- A. Home** – If the patient discharged to the same SNF as the one he was admitted from, the correct field would be “HOME/SELF CARE”.
- B. SNF** – The patient was discharged to a different SNF than the one he was admitted to the hospital from, so the appropriate discharge location would be SNF instead of HOME/SELF CARE.
- C. Rehab** – The patient did not discharge to a rehab facility.
- D. LTAC** – The patient did not discharge to a LTAC.

Q7: ICD-10 E-Code Question: NAT/Abuse

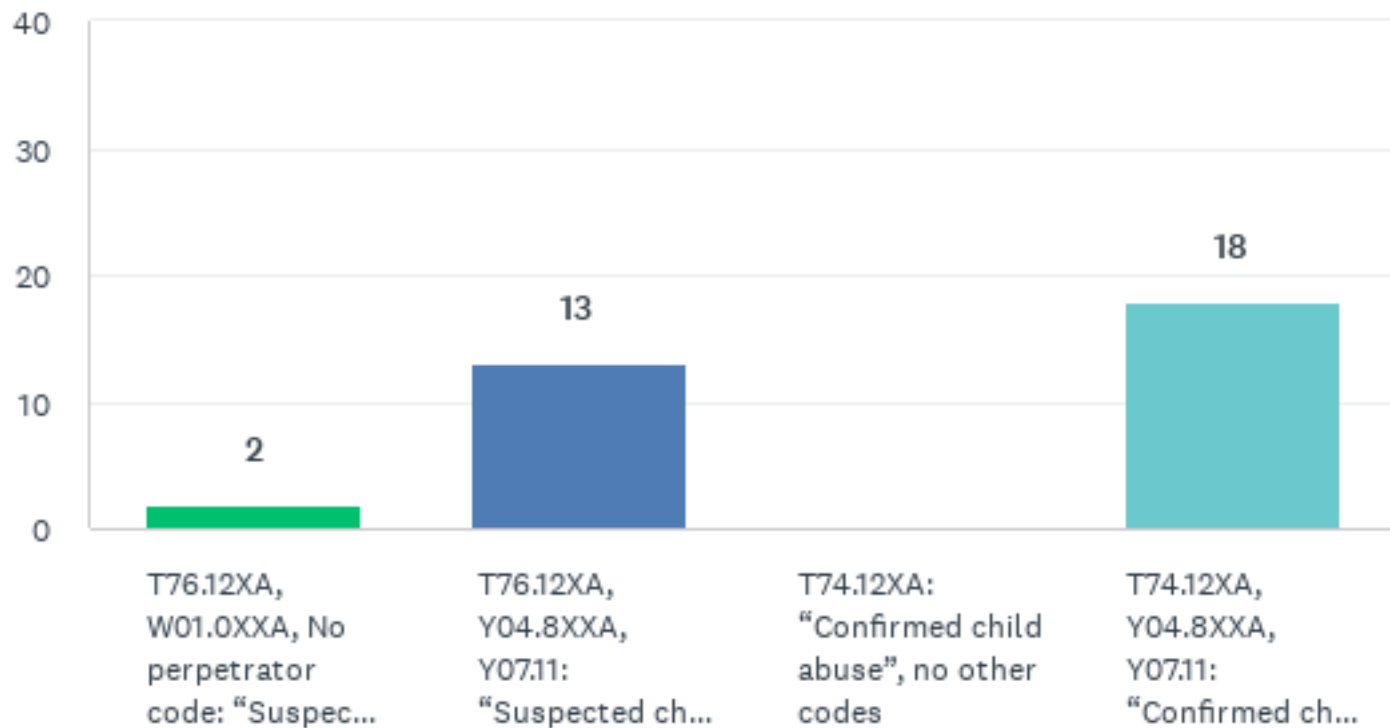
A 3YO F arrives to your facility with a spiral humerus fx and multiple bruises across her body in different stages of healing. The patient's father states she tripped & fell from standing height onto outstretched hands and that she falls frequently. An NAT workup is conducted d/t mechanism not matching injury. Later in the patient's stay, it is determined that the father of the patient grabbed her arm and yanked her across a room and has been hitting her regularly. The patient discharges after her treatment to a kinship placement with social services.

What ICD10 E-codes would you use to document this injury mechanism?

- A.** T76.12XA, W01.0XXA, No perpetrator code: "Suspected child abuse, fall on same level due to tripping and stumbling without subsequent striking against object, no perpetrator code"
- B.** T76.12XA, Y04.8XXA, Y07.11: "Suspected child abuse, assault by other bodily force, biological father - perpetrator of maltreatment and neglect"
- C.** T74.12XA: "Confirmed child abuse", no other codes
- D.** T74.12XA, Y04.8XXA, Y07.11: "Confirmed child abuse, assault by other bodily force, biological father - perpetrator of maltreatment and neglect"

Q7: ICD-10 E-Code Question: NAT/Abuse

Answered: 33 Skipped: 2



Q7: ICD-10 E-Code: NAT/Abuse Answer/Rationale

CORRECT ANSWER: D “T74.12XA, Y04.8XXA, Y07.11”: confirmed child abuse, assault by other bodily force, biological father, perpetrator of maltreatment and neglect

RATIONALE:

First Question: What is the definition of “confirmed abuse”

There is no standard definition for confirmed abuse. Pediatric trauma hospitals across the country do not have a good answer to this definition.

“Confirmed Abuse” definition used by the Children’s Hospital Colorado System:

1. When DHS/DSS takes custody of the child
2. There are some cases in which one parent, a babysitter outside the home, or another caregiver is responsible for the abuse. In these instances, a child may return home with the perpetrator removed. This would also be considered an incident of confirmed abuse and could be coded as such.

It is essential to review all multidisciplinary notes to determine the use of “suspected abuse” or “confirmed abuse” (including Child Protection Team notes, social work notes, DHS documentation, and law enforcement information)

This definition is used by Children’s Hospital Colorado – Anschutz and Children’s Hospital Colorado – Colorado Springs, shared in this setting to provide a starting point for open conversation about how your facility defines and codes “confirmed” vs. “suspected” abuse.

Q7: ICD-10 E-Code: NAT/Abuse Answer/Rationale

CORRECT ANSWER: D “T74.12XA, Y04.8XXA, Y07.11”: confirmed child abuse, assault by other bodily force, biological father, perpetrator of maltreatment and neglect

RATIONALE:

D. T74.12XA, Y04.8XXA, Y07.11 : Confirmed abuse contains up to three E-Codes.

- 1) The 1st code listed is the type of abuse ex: child abuse confirmed. In this case T74.12XXA would be the appropriate abuse code because the child abuse is confirmed, evidenced by the patient’s discharge to social services & kinship placement. There is no standard definition for confirmed or suspected abuse. **A confession from the perpetrator is not required to code confirmed abuse. The key to choosing confirmed vs. suspected is the discharge disposition.**
- 2) The 2nd code listed is used to **identify the cause of the current injury** if it is applicable. In this case, the appropriate injury code would be Y04.8XXA. The patient was assaulted by known bodily force that does not fit into other Y04 code descriptions. This code is also appropriate if the bodily force is Not Otherwise Specified (NOS).
- 3) The 3rd code listed is the external cause code to **identify the perpetrator, if known**. In this example, there is documentation that the patient’s father was the perpetrator of assault. **This code is ONLY to be used in cases of confirmed abuse in which the perpetrator is identified.**

Q7: ICD-10 E-Code: NAT/Abuse Answer/Rationale

CORRECT ANSWER: D “T74.12XA, Y04.8XXA, Y07.11”: confirmed child abuse, assault by other bodily force, biological father, perpetrator of maltreatment and neglect

A. T76.12XA, W01.0XXA, No perpetrator code: “Suspected child abuse, fall on same level due to tripping and stumbling without subsequent striking against object, no perpetrator code” – This would be an appropriate answer if information available at this facility did not support confirmed abuse, but abuse was suspected and worked up.

B. T76.12XA, Y04.8XXA, Y07.11: “Suspected child abuse, assault by other bodily force, biological father - perpetrator of maltreatment and neglect” – This would not be an appropriate answer based on the directions above: the assault and perpetrator codes would not be used with suspected child abuse.

C. T74.12XA: “Confirmed child abuse”, no other codes. – This would not be an appropriate answer as any confirmed abuse code also requires an identification of the cause of injury & perpetrator (if available) as well.

Q8: Risk-Adjusted Measures: Pre-existing Conditions Question

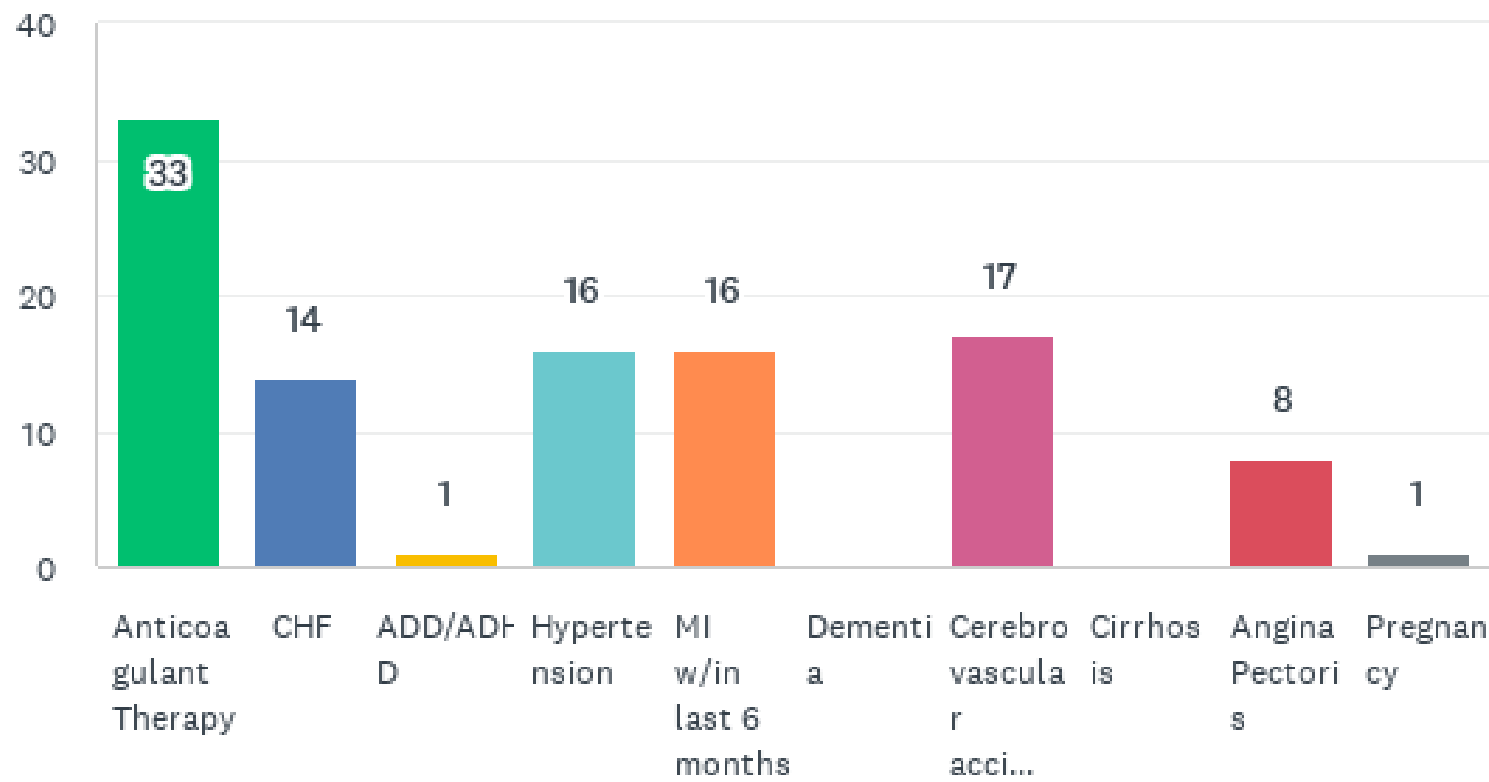
A patient with a femur fracture arrives to your facility and is admitted for operative management scheduled for the next morning. She has a past medical history of a-fib documented in her medical record. The incredible registrar assigned this patient's chart would be aware that a history of a-fib could coincide with other pre-existing conditions that are reportable to the State and NTDB, based on definition criteria.

If the patient has documented a-fib, what other pre-existing conditions may also be identified, related to the a-fib, upon chart review? Select all that apply.

- A. Anticoagulant therapy
- B. CHF
- C. ADD/ADHD
- D. Hypertension
- E. MI w/in last 6 months (confirm in rules)
- F. Dementia
- G. Cerebrovascular accident (CVA)
- H. Cirrhosis
- I. Angina pectoris
- J. Pregnancy

Q8: Risk-Adjusted Measures: Pre-existing Conditions Question

Answered: 34 Skipped: 1



Q8: Risk-Adjusted Measures: Pre-existing Conditions Rationale

CORRECT ANSWER: A, B, D, E, G, I

RATIONALE: The registrar can develop strong critical thinking skills when having an awareness that the documentation of one pre-existing condition in the patient's medical record merits a search in the record for documentation of other pre-existing conditions that may coincide in a patient. It is imperative the registrar confirms the presence of other pre-existing conditions with proper documentation in the chart based on the state & NTDB definitions of each pre-existing condition.

The purpose of this question is to encourage a thought process among registrars to consider all areas in a chart where pre-existing conditions may be documented separately. Just because a patient is diagnosed with a-fib, does not mean the registrar can assume and include other pre-existing conditions in the registry data without confirming. However, the diagnosis of a-fib would be a flag in the registrar's head to consider the possibility of other cardiovascular conditions, and research/review the patient's chart to confirm. The integrity of each facility's data is affected by the inclusion of all confirmed pre-existing conditions for a patient. Data integrity impacts multiple purposes for the facility, the state, the NTDB, and research.

Q8: Risk-Adjusted Measures: Pre-existing Conditions Rationale (cont'd)

- A. Anticoagulant therapy: Patients diagnosed with a-fib can often be prescribed anti-coagulant therapy as a treatment. Anticoagulant therapy may not be documented in the patient's H&P but may be documented in the patient's list of home medications with dates last taken. It is still important for the registrar to confirm the use of anticoagulants in the patient's EMR as well as per the NTD definition.
- B. CHF is another cardiovascular condition to consider if a patient is diagnosed with a-fib.
- C. ADD/ADHD is not directly associated with a-fib.
- D. Hypertension is another cardiovascular condition that can be related to or coincide with a-fib.
- E. MI w/in last 6months – a-fib can cause clots to develop and travel to the heart vessels causing an MI, so would be something to consider, especially if the patient has a recent diagnosis of new-onset a-fib and/or is non-compliant with taking anticoagulants.
- F. Dementia is not directly associated with a-fib.
- G. CVA – a-fib can cause clots to develop and travel to the brain vessels, causing a CVA, so this is another disease event that can relate to a-fib.
- H. Cirrhosis is not directly associated with a-fib.
- I. Angina pectoris is another cardiovascular condition that can be related to or coincide with a-fib.
- J. Pregnancy is not directly associated with a-fib.

Thank you! Questions? Please reach out!

All slides will be uploaded to the CTN website for future reference.

<https://cotrauma.org/trauma-registry/>

Any suggestions or ideas for future trauma registry education topics? Please email us and share!

CTN Registry Subcommittee – New members are always welcome! Please email Amber and Brittany to share your interest receive more information. First meeting of 2022 coming soon!

Co-Chair: Brittany Howland, BSN RN TNC/Registrar Children's Hospital Colorado - Colorado Springs

brittany.howland@childrenscolorado.org

Co-Chair: Amber Nadeau, CAISS, Trauma Registrar UCHealth Memorial Hospital Central

amber.nadeau@uchealth.org

Resources

- CTN: <https://cotrauma.org/>
- NTDB: <https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb>
- ACS: <https://www.facs.org/quality-programs/trauma>
- American Trauma Society (ATS): <https://www.amtrauma.org/default.aspx>
- ICD-10: www.cms.gov/ICD10
- AAAM & AIS: <https://www.aaam.org/abbreviated-injury-scale-ais/>
- CDPHE: <https://cdphe.colorado.gov/emergency-care/trauma>
- SEMTAC: <https://cdphe.colorado.gov/emergency-care/engage-with-us/councils-boards-and-task-forces/state-emergency-medical-and-trauma>

Awards Committee

- Chair: Lauren Stenger, St. Joseph Hospital
- Co-Chair: Steve Clayton, Lutheran Medical Center
- Mike Archuleta, Centura Trauma System
- Robbie Dumond, University of Colorado Hospital
- Sherrie Peckham, Denver Health
- Heather Finch, UCHealth Memorial Hospital



Nomination Season

Levels I-II

Trauma Medical Director	Outreach & Education
Trauma Program Manager/Director	Injury Prevention
Trauma Nurse Coordinator	Trauma Registrar
PI Coordinator	

Levels III-V

Trauma Medical Director	Outreach & Education
Trauma Program Manager/Director	Injury Prevention
Trauma Nurse Coordinator	Trauma Registrar
PI Coordinator	

Grace Sandeno Award
Hospital, Facility, Community
Agency (Pre-hospital)

- Accepting nominations until February 28th, 2022
- Awards criteria can be found on the CTN website under the Awards tab
- All nominations are submitted through survey monkey found on CTN website

Colorado Trauma Network Award Nominations 2021-2022



<https://www.surveymonkey.com/r/CTNAwards>

- Help us acknowledge our amazing colleagues, managers, co-workers, community organizations, and pre-hospital providers impacting trauma care everyday!
- Accepting nominations until: 2/28/2022

Award Categories

- Trauma Medical Director
- Trauma Program Manager/Trauma Program Director
- Trauma Nurse Coordinator
- PI Coordinator
- Trauma Registrar
- Outreach/Education
- Injury Prevention
- Agency (Pre-hospital)
- Hospital, Facility, Community
- Grace Sandeno Award



Project Presentations

Implementation of House-wide Trauma Carts

Trauma Nurse Coordinators

Stephanie Smith RN, MSN, CCRN, TCRN

Steve Clayton RN, BSN, CEN, TCRN

Lutheran
Medical Center
SCL Health

January 12, 2022



Problem:

- Delays in emergent cricothyrotomies, chest tube insertions, and hemorrhage control with getting the standardized supplies for the surgeons for trauma patients
- Trauma Surgeons and staff requested a consistent process and uniform supplies for these emergencies for trauma patients

Intervention:

WHAT?

Trauma
Supplies



Airway



Breathing



Circulation



WHERE?

- ICU-A
- ICU-B
- NCC
- PCU
- HMI-Ortho



Emergent TRAUMA Cart supplies:

Draw #	Supply Item:	PAR #	# Order
1	Sterile gloves Size-6, 6.5, 7, 7.5, 8	2 each	164274, 164275, 164276
1	Procedure Masks	2 each	30318
1	Sterile gown	2 each	302545
1	Bouffant Caps	2 each	110452
1	Syringe 10cc	1 each	158150
1	#10 scalpel	1 each	16464
1	2.0 silk suture curved #1588	1 each	22224
1	Abd pads	4 each	10656
1	Boots of 4x4 gauze	2 each	158424
1	Kerlix	2 each	158418
AIRWAY			
A	Cricothyrotomy sterile tray-with supply bag (Call CS)	1 each	Call CS
A	Yankauer suction	1 each	202450
BREATHING			
B	Chest Tube sterile tray- with supply bag (Call CS)	1 each	Call CS
B	Chest tube, extra 28fr Straight (NO trochar)	2 total	46192
B	Atrium Chest drain Express Dry seal	1 each	117767
B	CT connectors 5 in 1	2 each	202361
CIRCULATION			
C	Quick clot-large 12in x12in	4 each	168453
C	Tourniquet	1 each	Unavailable
C	Pelvic Binder	1 each	Call CS
C	Percutaneous Sheath Introducer Kit(Cordis)9fr/10cm/.035	1 each	61807
C	Femoral line kit(20Ga, 12cm , 0.025inch diam.)	1 each	14487
C	Belmont rapid infusion tubing	1 each	202240
C	Y-Type Blood Set(RBC & platelet tubing)	1 each	29951
C	1 L LR	1 each	16019
C	1 L NS	1 each	214038

Comparison:

- Compared to retaining current emergent trauma practices

Outcomes:

- Designed a new standardized sterile Chest Tube Tray and Cricothyrotomy Tray that were designed by an interdisciplinary team and are included on all trauma carts
- Developed house-wide Trauma Carts for patients requiring a cricothyrotomy, chest tube insertion, and hemorrhage control
- Provided increased education and awareness in a collaborative effort across all departments and disciplines to ensure standards of care are met to improve outcomes for trauma Level II patients
- Decreased delays with getting supplies to the trauma patient
- Increased physician, RT, RN satisfaction
- Improved and more rapid emergent patient care

Thank you!



Questions?

A Simple Guide: How to Create a Hospital Data Dictionary

Intro

A Hospital Based Data Dictionary (HDD) provides framework for managing registry knowledge at the hospital level.

Trauma registries have specific hospital data requirements that are unwritten and not widely known by others, resulting in data discrepancies.

Good documentation adds value to the registry for consistent data collection.

Content

Identify two to three project owners to develop the content. One person should be a subject matter expert, and include a team member who has experience with word processing software.

To begin, go line by line through your registry and determine which fields are defined by the NTDS and/or local agencies and need further clarification or which fields are undefined and require documentation of field values.

Our data dictionary highlights the undefined fields, and is also used to document items that need further clarification.

Layout:
Table of Contents, Sections and Headings, Screenshots as needed.

Appendix Documents/SOP:
ICD10 Procedure Coding, Autopsy Report, Donor Referral Report, Prehospital Care Report (PCR) Process, Readmissions

Maintaining

Key times to update:

- When someone asks a question
- After an upload--look for trends in errors
- During the validation process
- Registry meetings

Hospital Data Dictionaries can drive data efficiency with other common uses:

- Onboarding new employees
- Guidance on how to document for reports
- Guidance for the PRQ or ACS Verification
- Research
- PI Initiatives

Best Practice

University of Colorado Hospital

Hospital Data Dictionary

Purpose: To define University of Colorado Hospital Trauma Registry fields that are not defined by the National Trauma Data Bank Data Dictionary (NTDB) or the Colorado State Trauma Data Dictionary (CDPHE). This registry manual also provides further clarification of fields that are defined by the NTDB and CDPHE. Fields that are highlighted yellow are not defined by the NTDB and CDPHE. All other fields are included to provide further clarification as needed.

TABLE OF CONTENTS BY SECTION FOR NON-DEFINED FIELDS

PATIENT DATA	2	PROCEDURES	24
PATIENT NUMBER	2B	CODE	24A
COMMENTS	3	EPISODE	24B
COMMENTS NOTES	3	LOCATION	24C
DEMOGRAPHIC DATA	4	PROCEDURE DETAIL	24F
D.E. INITIALS	4A	PROVIDER	24G
ADMIT NUMBER	4B	RESULTS	24L
ABSTRACTOR	4C	24 H BLOOD UNITS	24M
VALIDATOR	4D	BLOOD UNITS IN ML	24N
ABSTRACT	4E		
ABSTRACT DATE	4F	DIAGNOSIS DATA	25
EVENT LOCATION	6	AIR POST DOT	25B
EXACT LOCATION	6F	REGION	25H
		INCLUSION	25J
PREHOSPITAL DATA	9	PV HOSPITAL EVENTS	28
DISTANCE	9J	ROUNDING NOTES	28A
EVENT DATA	12	COMPLICATIONS	28B
CAUSE CODE	12A	CRITIQUES	28C
FULL VITALS TABLE	19	UCH TRIAGE	28D
DAYS TO CLIC BP	19D	REVIEW NARRATIVE	28E
		REVIEWS	28F
HOSPITAL DATA	20	DEATH DATA	29
ADMIT TYPE	20C	DOA	29A
TEAM ACTIVATED BY	20E	AUTOPSY STATUS	29C
SIGNS OF LIFE	20G	ORGANS REQ GRANTED	29E
INPATIENT UNITS	21	ORGANS DONATED	29F
INPATIENT UNITS	21	DEATH PREVENTABLE	29H
HOSPITAL DATA 2	22	CAUSE OF DEATH	29I
TRANSPORT OUT MODE	22K	PLACE OF DEATH	29J
COMMENTS	22L	AUTOPSY ID	29K
TIME IN ED	22M	DEATH TIME	29L
TOTAL LOS	22N	DEATH DATE	29L
STEP-DOWN LOS	22O		
FIRST ICU LOS	22P		
PROVIDERS	23		
PROVIDERS	23		

LAST UPDATED 06/29/21
UCH Hospital Data Dictionary - 2021.docx

Section Example:

24. Procedures

- Code** – UCH defined for multiple reports. Use the service who performed the procedure unless listed in the Procedures Section of the Appendix in this manual
- Episode** – This is the episode indicator for OR procedure. All OR procedures are given an episode number. The first time the patient goes to the OR his episode would be 1 for all procedures. If the patient goes to the OR for a second time, his OR procedures would be given a 2 and so on. All other procedures not done in the OR would be NA.
- Location** – This is where the procedure was performed; OR, IR, HYBOR, ICU, Floor or ED
- ICD-10 Procedure Code** – Use F2, 3M ICD-10 Procedure Cheat Sheets etc. to locate code
- Procedure Detail** – Cut and paste or free text description from OR, Imaging, etc./ If blood say how much is given in the 1st 4 hours and 1st 24-hour period.
- Provider** – Who performed the procedure
- Start Time** – OR Time taken from Anesthesia Event/ Surgical Incision. Procedure start times cannot be after discharge order time.
- Start Date**
- Stop Time** – Not needed for anything but vents
- Stop Date** Not needed for anything but vents
- Results** – This is used for FAST, Audit C, Total Units of Blood in 24 Hrs, Total Vent Days, NIVA (Diagnostic ultrasounds for blood clots)
- 24hr Blood Units** – List total number of units admitted per blood type
- 24hr Blood Unit Volumes** – List total number of ml admitted per blood type

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A Performance Improvement Program Through the Lenses of Trauma Nurse Coordinators:

Where are we with rural trauma?

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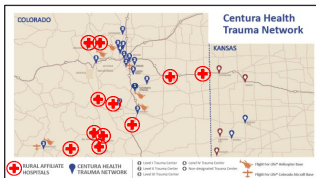


Keywords: Performance improvement; Trauma nurse coordinators; Rural trauma centers

OBJECTIVES:

- ❖ To better understand the population of trauma nurse coordinators (TNCs) that are contributing to our performance improvement (PI) program.
- ❖ To identify the level of knowledge of PI concepts.
- ❖ To identify targeted PI areas and improvement of the issues.
- ❖ To describe how the PI program has benefited the facilities.
- ❖ To identify other PI metrics that should be collected.

DESIGN & SETTING: 13 TNCs across 11 rural trauma centers (10 level IV & 1 level III) completed a two-part anonymous questionnaire on SurveyMonkey (19 questions total).



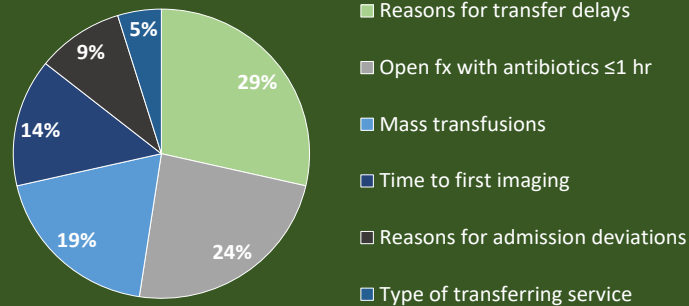
RESULTS:

Participants & experience:

- ❖ 58% of facilities had been a designated trauma center for ≥10 years.
- ❖ The majority (74%) of TNCs were 45-54 years old and had been a practicing nurse for an average of 15 years.
- ❖ 42% had been a TNC ≥5 years.
- ❖ 33% of TNCs were “moderately experienced” with PI and 33% had “no experience” prior to the program.
- ❖ 67% have been working on the rural PI project ≥2 years.
- ❖ 33% had taken a TOPIC course and of those, 75% felt it improved their understanding of PI concepts.

33% of trauma nurse coordinators were “moderately experienced” with performance improvement prior to the program 33% had “no experience”, 17% had “minimal experience”, & 17% were “very experienced”.

TNC Selections for 2020 PI Audit Filters



TNCs primarily used their PI data for:

1. 64% targeted education;
2. 55% state reviews;
3. 45% policy/guidelines;
4. 27% other loop closure; EMS follow-up;
5. 9% PIPS meetings;
6. 9% equipment purchase.

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*Please scan QR code to see our publication in *Journal of Trauma Nursing* for details of the rural PI project.



TNC Management:

- ❖ Met with TMDs: 33% monthly; 33% weekly; 25% bi-weekly.
- ❖ Senior Management: 58% reported to a CNO; 17% ED Director; 17% CEO; 8% other.

Targeted PI metrics:

- ❖ 92% trauma team activation;
- ❖ 75% admission criteria;
- ❖ 67% documentation of GCS;
- ❖ 58% ED LOS prior to transfer;
- ❖ 42% airway management (GCS<9).

TNCs frequently used the PI data for:

- ❖ 64% targeted education;
- ❖ 55% state reviews;
- ❖ 45% policy/guidelines;
- ❖ 27% other: loop closure, EMS follow-up;
- ❖ 9% PIPS meetings;
- ❖ 9% equipment purchase.

TNC improvement in PI:

- ❖ Yes (83%)
- ❖ No (17%)

DISCUSSION: Overall, we found that TNCs were very satisfied with the program and felt that it enforced their understanding of PI concepts. Although most nurses in the program have been practicing for many years, less had experience in trauma-specific PI and outcomes, and few had taken TOPIC.

This project has led to sharing of data within trauma committees and benchmarking among facilities. Moving forward, we will be growing the program and implementing several of the new filters for our 2020 PI template.

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The Evolution of a Multicenter Performance Improvement Program for Rural Trauma Centers:

Where are we after 4 years?

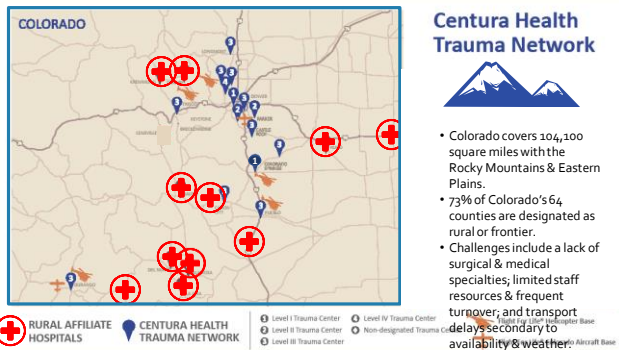
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*Please scan QR code to see our publication in
Journal of Trauma Nursing for details of the rural PI

Keywords: Performance improvement; Rural trauma; Benchmarking; Trauma system.



Background & Purpose:

- Since 2016, our trauma system has worked with several rural trauma centers to standardize, measure, and benchmark their performance improvement (PI) data.
- In 2019, we ran into challenges maturing our PI program after documenting a high yearly Trauma Nurse Coordinator (TNC)-turnover rate (23%) and a low attendance rate for the Trauma Outcomes and Performance Improvement Course.
- Thus, we developed a new set of audit filters with feedback from the TNCs to improve participation and enthusiasm for the PI program.

Purpose: To examine and describe a new set of targeted PI filters identified by TNCs to improve the evaluation of patient care and participation in the PI program.

Methods:

- Retrospective descriptive study from January 1, 2020-December 31, 2020 (4 quarters).
- Data collected from 11 Level IV and one Level III trauma centers across rural CO.
- Compliance with the following Level III **FILTERS EXAMINED:**
 1. Time from admission to first definitive diagnosis (emergent patients).
 2. Diagnosis method used (labs; imaging; other).
 3. Appropriate trauma team activation.
 4. Time from arrival to antibiotics (abx) for open fractures (fxs).
 5. ED LOS by transfer patient criteria (emergent ≤ 2 hours (hrs); urgent: ≤ 3 hours).
 6. Admission criteria adherence.
 7. Reason for transfer delay (weather; patient refusal; receiving hospital; lack of transportability; other).

Highlights:

- 1,216 trauma patients were included from 2020; 10/12 facilities provided complete data.
- 53% met trauma activation criteria with an average compliance of 94%, and a significantly decreasing compliance across all quarters ($p=0.006$).
- Median (IQR) time to diagnosis for emergent patients was 15 (6-29) minutes; 60% definitive imaging.
- 62% of open fx patients received abx ≤ 1 hr of arrival and there was an increasing rate of compliance, trending towards significance.
- 39% of emergent patients were transferred out in ≤ 2 hrs. and 44% of urgent patients ≤ 3 hrs.

Summary

- 39% of transfers experienced a delay, which significantly increased across all quarters in 2020 ($p=0.002$).
- Despite a high TNC turnover rate and complications due to COVID-19, we have seen strong overall compliance with admission criteria, function of the trauma team (activation), and open fx management.
- Targeted areas for improvement include better understanding the reasons for transfer delays as well as addressing the increased rate of under activations in December 2020.