

2017

PENNSYLVANIA TRAUMA SYSTEMS FOUNDATION

**OPERATIONAL MANUAL FOR THE
DATA BASE COLLECTION SYSTEM**



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PREFACE

This Operations Manual is intended to be a tool in orienting new registrars in the State of Pennsylvania as well as a reference for the more experienced Pennsylvania registrar.

As the trauma registry developed and the volume of trauma patients increased in accredited trauma centers, clear and more concise definitions of data elements were required. Additional data elements were necessary to provide a more useful registry for very experienced trauma registrars who fully support the accredited trauma centers. Therefore, an ad hoc committee was formed for the purpose of revising this manual. Many hours of planning, revising, and consulting were devoted to this publication.

The trauma registry serves several purposes. It provides:

- ◆ A basis for the trauma center accreditation process.
- ◆ A mechanism for the review of the quality of care provided by the state's trauma system and trauma centers.
- ◆ Uniform, consistent data for systems and clinical research.

The importance and value of this trauma registry cannot be over-emphasized in the role it plays in the overall objective of coordinated trauma care to reduce death/disability in Pennsylvania.

Data submitted by participating hospitals are returned in the form of reports and analyses, which compare the outcomes of that institution's patients with those of comparable institutions in Pennsylvania. The analyses are useful for quality assurance, education and research. All data received from participating hospitals and analysis results are treated as strictly confidential by the Pennsylvania Trauma System Foundation (PTSF).

From the time the Pennsylvania Trauma Outcome Study (PTOS) registry began operation on October 1, 1986, more than 805,300 trauma patients have been entered into the database. This data is being utilized by the PTSF for several purposes:

- ◆ To identify cases for site surveys and peer review conferences.
- ◆ For reevaluation of the Standards for Trauma Center Accreditation.
- ◆ For defining the criteria for the Major Trauma patient

and various other projects. The completeness and accuracy for registry data is imperative when applied to such research projects. For example, completed information regarding the patient's pre-existing conditions provides insight when examining the patient's recovery and discharge disability.

We recognize your continued efforts to collect and submit accurate data to the PTOS registry. Comments or suggestions regarding registry definitions, additional elements or reports are welcome. Your input and experience allows the registry to grow and be a benefit in dealing with the trauma patient.

GENERAL INSTRUCTIONS

All data abstracted must be **verifiable** within the paper or computer based patient record.

1. Documentation by physician extenders (defined as **Physician Assistant (PA)**, **Nurse Practitioner (NP)**, **Certified Registered Nurse Anesthetist (CRNA)**) is to be considered equivalent to physician documentation.
2. Unless otherwise instructed, **do not leave any fields blank** because blanks may be interpreted by the computer as inappropriate. This may lead to false conclusions when aggregating data.
3. Use **U** or **?** for “unknown” information. Use **I** or **L** for “inappropriate” (not applicable).
4. Record time in **military** time only.
5. All ICD-9 or ICD-10 codes must be coded to the farthest character applicable.
6. Cases are to be reported within six weeks of discharge, including deaths. Please reference Policy No. TR-110 Timeliness of Submission to the Central Site for more information. *Results of the autopsy reports should be retransferred within six months of the case.*
7. You can submit cases as often as you like, i.e. every two or three days, however, a data transfer is expected weekly. **Please Note: A facility MAY create and send two transfers on the same date through the web portal.**

The following people should be contacted with any questions
regarding the PTOS study or data abstraction:

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PTOS PATIENT INCLUSION CRITERIA

ALL *patients treated for a diagnosis of trauma* (ICD-10-CM injury codes S00-S99, T07-T79/ICD-9-CM injury codes 800-995, excluding ICD-10-CM T15-T19.9/930-939.9) and who meet any of the following criteria:

- All Intensive Care Unit (ICU) admissions (2:1 ratio) - Excluding ICU used as PACU
- All step-down unit admissions (4:1 ratio)
- All Dead on Arrivals (DOA), pronounced dead after arrival
- All Trauma Deaths
- All trauma patients remaining at your facility over 48 hours, beginning from the time of arrival to the Emergency Department. Trauma patients are defined as patients remaining at your facility for the treatment or diagnosis of trauma.
- All trauma patients remaining at your facility between 36 and 48 hours, beginning from the time of arrival to the Emergency Department, with an Injury Severity Score (ISS) of nine or greater. Trauma patients are defined as patients remaining at your facility for the treatment or diagnosis of trauma.
- All admitted transfers In and out

e.g. Any patient transferred to (or from) your hospital via another hospital using EMS or air ambulance.

NOTE: Patients transferred into your facility and then discharged home from your ED should **not** be included in the PTOS.

- Burn cases which meet one of the above criteria **plus** one of the following:
 - burned area 2^o >10%
 - burned area 3^o : any age group
 - chemical burn
 - electrical injury, including lightning injury
 - burn of face, hands, feet or perineum or major joints
 - inhalation injury
- burn accompanied by:
 - significant associated injury or pre-existing disease
 - suspected abuse
- Cases meeting **any of** the above criteria, but have no documented injuries

OPTIONAL Elective admissions (patients not admitted through the Emergency Department not transferred from another facility) with an injury date > 72 hours prior to admission and an Injury Severity Score \geq 13 may be submitted to PTOS. Elective admissions with injury > 72 hours prior to admission and ISS < 13 need not be submitted.

EXCLUDING - Patients who only suffer a solitary hip fracture, (ICD-10-CM S72.00-S72.26/ICD-9-CM code 820.00 - 820.9) with no other injuries (contusion and abrasions of skin should not be considered other injuries) as a result of a fall on the same level (ICD-10-CM codes V00.111A, V00.121A, V00.131A, V00.141A, V00.151A, V00.211A, V00.221A, V00.281A, V00.311A, V00.321A, W00.0XXA, W01.____A, W03.XXXA, W18.30XA, W18.31XA, W18.39XA, W19.XXXA/ ICD-9-CM Ecodes E885.0-E888.9). The intent is to exclude solitary hip fractures that are pathological or osteopenic in nature
-Peri-prosthetic fractures with a traumatic mechanism should be coded to the traumatic fracture area.

- Asphyxiation with no other injuries
- Drownings
- Poisonings (Chemical Ingestion, including internal organ burns from chemical ingestion, classifiable to the ICD-10-CM for Corrosion – T28.5-T28.90, T28.99/ICD-9-CM code 947)
- Admitted patients injured while in a trauma center, i.e. a patient who fell out of bed.
- Patients only having a hypothermia or hyperthermia diagnosis with no other injuries.
- Diagnosis codes /T15-T19.9 (ICD-10-CM)/ 930-939.9 (ICD-9) (Effects of Foreign Body Entering Through Orifice) should be excluded.

FYI: Exclusions override inclusions

DEFINITION OF MAJOR TRAUMA PATIENT

The patient with severe multi-system or major uni-system injury, the extent of which may be difficult to ascertain, but which has the potential for producing mortality or major disability.

Approved by the
Pennsylvania Trauma System Foundation
Board of Directors
July 11, 1986

SECTION I: DEMOGRAPHIC DATA

SECTION I: DEMOGRAPHIC DATA

INSTITUTION NUMBER

Unique four-digit number assigned by the Pennsylvania Trauma Outcome Study (PTOS) to each participating hospital

TRAUMA NUMBER

Unique eight-digit number assigned by each participating hospital submitting the electronic data form for each **State** qualifying patient. ***The first four digits will represent the current year (year of ED admission). The last four digits are determined by consecutive sequence numbering***

For example: 2017 cases – 20170001, 20170002, 20170003, etc.

- It is strongly suggested that a confidential log of patient name, trauma number and hospital identifying number be kept at each site. The log will facilitate the confirmation of patient information if the need arises
- ***It is also strongly suggested that trauma numbers not be reused***

PTOS PATIENT

Identifies those patients within each facility that meet the criteria established by the PA Trauma Systems Foundation for inclusion in the PA Trauma Outcomes Study (PTOS)

Is the patient a PTOS patient?

- 1 = Yes
- 2 = No

ZIP CODE OF RESIDENCE

Is the 5 digit or 9 digit zip code of the patient's ***primary residence***.

- Enter '88888' as the zip code of residence for any patient who resides in another country.

RACE

The patient's race. Record the appropriate response:

- 1 = White
 - 2 = Black
 - 3 = (No longer used – formerly Hispanic)
 - 4 = Asian
 - 5 = Other (i.e. American Indian, Alaskan Native, Asian/Pacific Islander)
 - U = Unknown
- In the case of a patient with multiple racial ancestry, race shall be designated as that which the patient (or next of kin) stated it to be. **If Hispanic (which is considered a**

national origin, not a race) is given as a response, enter unknown, unless the person states that they are white, black, etc.

ETHNICITY

The patient's ethnicity. Directly correlates with NTDB.

- **1 = Hispanic or Latino**
- **2 = Not Hispanic or Latino**

SEX

The patient's sex

- **1 = Male**
- **2 = Female**

DATE OF BIRTH

The patient's date of birth. Collected as MM/DD/YYYY. *Example:* August 1, 1942 is entered as 08/01/1942.

AGE

The patient's age at the time of injury (best approximation)

The units used to document the patient's age (Days, Months, Years)

- 1 = Years
- 2 = Months (< 1 year)
- 3 = Days (< 1 month)
- 4 = Estimated in years
- If the patient is less than 1 year old, record age in months; if less than 1 month old, record age in days. **Example:** 008 in 1 = 8 years old
 - 008 in 2 = 8 months old
 - 008 in 3 = 8 days old
- Estimated in years is only to be used for patients whose age cannot be determined. Ex.:
 - Patient who comes into the ED and dies who has no identification and the physician notes "estimated age of patient is _____."
- Age can be calculated in exact months and days up to the age of 2 for the pediatric patient population

EXTERNAL CAUSE OF MORBIDITY (ICD-10-CM)/ PRIMARY CAUSE OF INJURY E-CODE (ICD-9)

External Cause of Morbidity (ICD-10)/ E-code (ICD-9) used to describe the mechanism (or external factor) that caused the injury event

Select the External Cause of Morbidity (ICD-10)/ E-Code (ICD-9) appropriate for this patient's cause of injury/accident. **Refer to ICD-10-CM/ ICD-9-CM Vol. I for specific codes.**

Be sure to refer to the definitions and examples related to accidents (ICD-10-CM /ICD-9-CM Vol. I) and specific exclusions (located at the beginning of each category heading) when selecting the appropriate External Cause of Morbidity (ICD-10) code/E-Code (ICD-9).

Example:

A patient who was driving a car that slammed into a guard rail is coded (ICD-10-CM code) V47.52__ __ __/ICD-9 code E 8 1 5 . 0 (, or a patient who was a passenger in a motor vehicle that went into a yard and hit a house is coded to ICD-10-CM code V47.12/ ICD-9 code E 8 1 6 . 1 ().

When coding in ICD-10-CM, where a placeholder exists, the 'X' must be used in order for the code to be considered valid. For example, assault by handgun (category X93) needs to be taken to the 7th character by utilizing X placeholders in the 4th, 5th and 6th characters. The appropriate 7th character must then be added. (Valid code would be X93XXXA, Assault by handgun discharge, initial encounter)

The following ~~E-Code~~ External Cause of Morbidity codes were not listed in ICD-9-CM, Volume I. They were developed by PTSF for use in PTOS only. Equivalent categories have been added in ICD-10-CM and are listed below:

- **ICD-9 - E830.7-E838.7** - jet ski (use 4th digit of "7" with codes 830-838); ICD-10-CM includes various jet ski related external cause codes (consult categories V91, V93)
- **ICD-9 - E886.2** - in-line skates/roller skates - striking object (ICD-10-CM V00.112 __)

PRIMARY CAUSE OF INJURY- External Cause of Morbidity (ICD-10-CM)/(E-CODE SPECIFY (ICD-9))

Fill in specific description of injury mechanism

Ex. "Patient t-boned on passenger side by tractor trailer going 55 mph. Patient ejected from car."

DETAILS OF CAUSE OF INJURY UNDER "SPECIFY" SHOULD BE AS SPECIFIC AS POSSIBLE. EXTERNAL CAUSE OF MORBIDITY CODES ARE CHECKED, AND IF INFORMATION IS NOT SPECIFIC FOR THE CODE ASSIGNED, THE INSTITUTION WILL RECEIVE A REQUEST FOR CLARIFICATION FROM THE FOUNDATION. BE SURE TO SPECIFY DRIVER, PASSENGER, ETC., FOR MOTOR VEHICLE ACCIDENTS. BE SURE TO SPECIFY ACCIDENT, ASSAULT, UNKNOWN CIRCUMSTANCES FOR STABBING, GUNSHOT, AND FALLS.

SECONDARY CAUSE OF INJURY- External Cause of Morbidity (ICD-10-CM)/(E-CODE (ICD-9))

Additional External Cause of Morbidity (ICD-10-CM) code used to describe, for example, a mass casualty event, or other external cause of injury

HEIGHT OF FALL

Record the distance the patient fell in feet

- **0 = Fall on same level**
- **1 = Less than or equal to (<=) 1 foot**
- **2 = 2 to 5 feet**
- **3 = 6 to 10 feet**
- **4 = 11 to 20 feet**
- **5 = 21 to 30 feet**
- **6 = Greater than (>) 30 feet**
- **I = Inappropriate - The patient did not fall**
- **U = Unknown – No distance can be estimated**

If the patient fell from a standing position on the same level record “0” (Fall on same level). If the patient fell from a chair record the height of the chair as the height of the fall.

The following definitions should be used when determining the height of a fall when the patient has fallen down steps - 1 step = 1 foot, 1 flight of steps = 10 feet

These are approximate heights. If more specific documentation is available regarding height, use the more specific documentation.

The following distance should be used when determining the height of a fall when the patient has fallen from a bicycle, toilet, chair, bed or other furniture, or from the bed of pickup truck - 2 to 5 feet (option 2)

This is an approximate height. If more specific documentation is available regarding the height, use the more specific documentation.

Bicyclists struck by a motor vehicle are considered thrown and should not have a height of fall associated with this mechanism. See below.

For a patient who has been thrown, (i.e. a pedestrian struck by a car, a bicyclist struck by motor vehicle, a motorcyclist thrown from his motorcycle), record a distance, if known, in the *Cause of Injury Specify* field and record an “I” for inappropriate in the *Height of Fall* field. A distance thrown is not the same as a height of fall. Be careful not to get confused by patients who are thrown off of buildings or out windows. In those scenarios, a height of fall would be appropriate.

PLACE OF INJURY OF THE EXTERNAL CAUSE (Y92)(ICD-10)/(PLACE OF INJURY E-CODE (E849.X)(ICD-9)

An External Cause Code is used to describe the place/site/location of the injury event
 Relevant ICD-10-CM code values for injury locations – **see Appendix 5 for both ICD-10 and ICD-9 location definitions.**

- **Y92.0 – Non-institutional (private) residence**
- **Y92.1 – Institutional (nonprivate) residence**
- **Y92.2 – School, other institution, public admin area**
- **Y92.3 – Sports/athletics area**
- **Y92.4 – Street, highway, other paved roadway**
- **Y92.5 – Trade/service area**

- **Y92.6** – *Industrial/construction area*
- **Y92.7** – *Farm*
- **Y92.8** – *Other*

Please note that Y92._ (ICD-9 E849.X) refers to the *place of injury*. If a logger is injured in the woods, the place of injury is coded to External Cause code Y92.8, not Y92.5 (ICD-9 E-code -E849.8 (other specified places) not ICD-9 - E849.3) (industrial place and premises)). Please refer to the includes and excludes notes under each place of injury.

The number of place of occurrence codes (Y92.0-Y92.9) have increased exponentially in ICD-10-CM. There is increased specificity throughout the section. Please consult your ICD-10-CM book.

PLACE OF INJURY EXTERNAL CAUSE CODE- ICD-10-CM/ E-CODE (ICD-9) SPECIFY

Specify the location where the injury occurred

Do not include home addresses for those patients injured at home

Example : Patient fell in church:

ICD-10-CM Code – Y92.22 – Place of occurrence – Religious institution

ICD-9 Code - E849.6; Specify *Church*

ACTIVITY E-CODE

(OPTIONAL ELEMENT FOR ALL TRAUMA CENTERS)

Used to indicate the activity that caused or contributed to an injury or other health condition

INJURY DATE

The date the injury occurred. Collected as MM/DD/YYYY

INJURY TIME

The time the injury occurred. ***Note: If the only documentation that appears on the patient run sheet is a data field listing the “approximate” time the injury occurred, this may be utilized to record the injury time. The NTDB also allows estimates of time of injury. “Estimates of time of injury should be based upon report by patient, witness, family, or health care provider.”***

- Collected as HH:MM, should be collected as military time. See Appendix 1 for a Time Conversion table for converting to military time.
- Record the time of injury determined by prehospital personnel, police, report from the referring hospital, or as documented by Emergency Department personnel. The time of 00:00 can be entered as a valid time. This time is considered the beginning of a new day.
- If the time of injury recorded on the prehospital record or Emergency Department record is invalid, the time prehospital care personnel were notified of the injury may be used if it is known that there was not a substantial delay between the time of injury and the notification.

COUNTY OF INJURY (STATE IF NOT PA)

The county of Pennsylvania in which the injury event took place
Indicate the county or state (if not in PA) in which the injury took place using the 2 digit codes provided.

01 - 67 = *See Appendix 4 - County Codes*

68 = Delaware	69 = Maryland
70 = New Jersey	71 = New York
72 = Ohio	73 = West Virginia
74 = Other state (specify)	75 = Virginia
79 = Other country (specify)	

COUNTY OF INJURY (STATE IF NOT PA) IF OTHER

If 74 or 79 is selected as the county of injury from the list above, please specify the state or country that the patient was injured in

PROTECTIVE DEVICES

Protective devices (safety equipment) in use or worn by the patient at the time of the injury

- **0 = None**
- **1 = Seatbelt (lap, shoulder, combination)**
- **2 = Car Seat**
- **3 = Airbag (deployed)**
- **4 = Helmet**
- **5 = Seatbelt & Airbag (deployed)**
- **6 = Sports Equipment** (pads, chest protectors, shin guards, mouth piece, etc.)
- **7 = Industrial Equipment** (fire suit, hard hat, goggles, steel-tip boots, bullet-proof vest, etc.)
- **8 = Booster Seat** (A booster seat differs from a car seat in that a car seat is a restraint with a harness - infant seat, convertible, combination seat but must have a harness. A booster seat has no harness and the patient is restrained by a seatbelt.) It can be assumed, unless otherwise documented, that the patient was wearing their seatbelt if they were in a booster seat. A booster seat is only considered a protective device if it is used in conjunction with a seatbelt. Therefore, if the documentation states "booster seat" and there is no documentation regarding the seatbelt, an "8" should be recorded. However, if the documentation shows the patient was in a booster seat but not wearing a seatbelt, the choice of "0" (none) should be used.
- **I = Inappropriate** (i.e. a pedestrian struck by a car would not utilize protective devices)
- **U = Unknown** - an injured person involved in an activity where a protective device may or may not have been used, and there is no documentation in the medical record to state that a device was or was not used. (i.e. a 20 year old involved in a bicycle accident may or may not have used a helmet)

Additional Information

- Record up to three injury prevention devices used in sports, industry, non-motorized and motorized vehicles.
- Include protective devices used at home.

- If more than one device is used, record each corresponding number.
- Each number may be selected only once.
- Record “1” for inappropriate.
- Use “5” (seatbelt & airbag) as a priority instead of using both “1” (seatbelt) and “3” (airbag).
- If the first response is “0” “1” or “U” do not enter anything for the second and third entry.

PRIMARY - TYPE OF INJURY

Record the force causing the injury. **Note:** If patient sustained more than one category of injury and a secondary injury will be recorded, please record the **more severe injury** as the primary injury in this data field.

- **1 = Blunt**
 - **2 = Penetrating**
 - **3 = Burn**
 - **4 = Skin Disease**
- **Blunt** – Injury resulting from diffuse blunt trauma is recorded as blunt, e.g. crush, acceleration/ deceleration.
 - **Penetrating Injury** – Injury resulting from tissue penetration or perforation by an object, e.g., bullet, knife, glass shards, chain saw, lawnmower, dog bite.
 - **Burn** – Injury resulting from extreme exposure to thermal, electrical or chemical energy, e.g., fire, steam, frostbite, acid, or electrical current.
 - **Skin Disease** – Used for dermatologic disorders not related to thermal injury. Toxic epidermal necrolysis, Stevens-Johnson syndrome, acute porphyria, psoriasis, and other disorders would be examples. These are not burns, but are often treated in burn centers.
 - An open wound may result from blunt trauma. Example: MVC – open fracture. Be sure to document the force of the injury and not the type of injury. If there are two causes of injury, choose the mechanism of injury which caused the more severe injury. Example: patient was assaulted with fists (blunt) and stabbed (penetrating) resulting in a concussion and laceration of the lungs. Record as penetrating.

SECONDARY -TYPE OF INJURY

Record the force (if a different field value) causing the patient’s additional (secondary) injury or injuries. Element colored **blue** indicating element downloaded to State, **but is an optional field**. Field values are the same as for primary type of injury.

TYPE OF BURN INJURY

(REQ FOR BURN PTS AT BURN CTRS)

Record the appropriate four (4) digit number – **see Appendix 6**

- This element will be auto-skipped if the response to “Type of Injury” is a “1” or a “2”.
- ***Again, this element is only required to be completed for burn patients at accredited burn centers.***

PRE-EXISTING CONDITIONS

Pre-existing co-morbid factors present before patient arrival at the ED/hospital
See Appendix 12

- A positive toxicology screen and/or positive ETOH result on admission does not automatically qualify the patient for the pre-existing condition of Drug Abuse or Dependency (N.01) or Chronic Ongoing Alcohol Abuse (N.02).

SECTION II: PREHOSPITAL DATA

SECTION II: PREHOSPITAL DATA

Please refer to **Appendix 7 for various pre-hospital scenarios. These scenarios provide guidance for answering element questions in the following section. Prehospital scenarios can be complicated. The examples provided are guidelines and may not cover all scenarios. Please contact the PTSF for specific questions

WAS PATIENT EXTRICATED?

Extrication is defined as any action that disentangles or frees from entrapment or delays in transport.

NOTE: This element is not restricted to MVA's. (Ex. trapped under roof or paperwork to get a patient out of prison for treatment.) The primary intent of this element is to give a reason for delays in transport. However, a delay in transport does not necessarily have to occur in order for there to be an extrication and have a response of "1" (yes).

- **1 = Yes**
- **2 = No**

WERE SCENE PROVIDER AND TRANSPORT PROVIDER THE SAME?

How many providers were at the scene (Provider = provider of care)

1 = Yes, one provider. Record all pre-hospital provider data in the scene section.

For scene data, the earliest available documented ground EMS provider information should be recorded in the registry.

2 = No, multiple providers. Record the earliest available documented ground EMS Provider information data in the scene section. Record data for the Transporting provider in the transport section

For example: A BLS or ALS ambulance is providing care at the scene and a helicopter arrives, either at scene or by rendezvous, and transports the patient to the hospital.

3 = No documentation of any applicable prehospital information or provider.

This choice is to be used when there is no documentation at all regarding Prehospital care including not knowing the provider

ARE ANY SCENE PROVIDER DATA AVAILABLE?

Documentation in the medical record of pre-hospital provider(s)

See Appendix 7 for Examples

1 = Yes, data is available.

2 = No provider data is available.

Additional Information

- Use option #1 if scene provider data is available, even if it is just the type of scene provider (i.e. ambulance). Record first provider data in scene section.
- This question will automatically skip if the response to "Were scene provider and transport provider the same?" is a "1" (yes).

PROVIDER – SCENE AND/OR TRANSPORT

Identifies the method used to transport the patient to the trauma center submitting data and the origin of that transport, e.g., accident scene, rendezvous or transferring hospital.

- **1 = Ambulance**
- **2 = Helicopter**
- **3 = Ambulance/Helicopter rendezvous** (This means that the ambulance has left the scene to go meet the helicopter at a remote landing zone. Therefore, the ambulance has physically moved the patient some distance to meet the helicopter and then the helicopter continues transport to the hospital.)
- **4 = Police**
- **5 = Fire Rescue**
- **6 = Private Vehicle** (personal car, tax, bus)
- **7 = Walk-In** (this does not include patients who walk into the ED after being brought to the ED by private vehicle, etc.)
- **9 = Quick Response Service (QRS)** (A QRS uses EMS providers to respond to calls for EMS and provide EMS to patients before an ambulance arrives.) If an ambulance or helicopter responds to the location of the QRS then use the ambulance or helicopter appropriate menu options.
- **U = Unknown** (if mode of transport is not indicated)

DATES AND TIMES – SCENE AND/OR TRANSPORT

Record the following dates and times for the provider(s).

Dispatch: The earliest date and time the provider (ambulance or Helicopter) was contacted.

Arrive at Scene: The earliest date and time the provider **ARRIVED** at the **scene**. (Do not confuse the arrival time to the patient with the arrival time at the scene)

Leave Scene: The date and time the provider **DEPARTED** from the **scene**. (Do not confuse the depart time from the patient with the depart time from the scene.) The transport provider's leave scene time should not be used as the scene section leave time if the scene provider's leave scene time is not documented.

Additional Information

- Collected as MM/DD/YYYY
- Collected as HH:MM
- HH:MM should be collected as military time
-

AMBULANCE SCENE TIME (auto calculation)

AMBULANCE CODE – SCENE AND/OR TRANSPORT

The ambulance code is also known as the Affiliate Number. The Affiliate Number is a five-digit number.

- The ambulance list in Collector is editable and under each individual facility's control. Feel free to update/edit/customize list as needed.
- If the Affiliate Number is unknown enter "U"s.

- Reference the DOH Ambulance Listing supplied by the PTSF. If unable to find a specific affiliate number, please contact the PTSF.
- If interested in capturing “out-of-state” ambulance providers, please create user-defined fields for tracking purposes. Continue to record “out-of-state” ambulances in the pre-hospital and inter-hospital transport sections of Collector™ by utilizing the county code (Appendix 4) or state code followed by “8”s.

AMBULANCE UNIT NUMBER – SCENE AND/OR TRANSPORT

The ambulance unit number is a two or three digit number identifying a specific vehicle within the emergency service agency

- Element colored **blue** indicating element downloaded to State, *but is an optional field*

WAS PATIENT CARE RECORD (PCR) AVAILABLE? – SCENE AND/OR TRANSPORT (FLTR 2)

Is the prehospital Patient Care Record (PCR) available?

- **1 = Yes**
- **2 = No**
- If the response to this data element is 2 (no), the Patient Care Record Number will be skipped.

The ‘EMS Transfer of Care’ form can be used to abstract data **if trip sheet is unavailable** at time of abstraction.

The Transfer of Care Form DOES NOT count as a PCR. ‘Is the prehospital Patient Care Record (PCR) in the patient medical record?’ should be answered NO (2) if you only have the transfer of care form.

PATIENT CARE RECORD NUMBER – SCENE AND/OR TRANSPORT

Record the three to thirty-two digit pre-hospital Patient Care Record (PCR) number as applicable.

LIFE SUPPORT – HIGHEST LEVEL OF PROVIDER (SCENE AND/OR TRANSPORT)

Record the medical care and management for illness or injury. **Highest level of skill** of the provider at the scene of injury/accident and enroute to the first hospital/trauma center.

Record the medical care and management of illness or injury; highest level of skill of the provider at the scene of injury/accident and enroute to the hospital/trauma center. The Department of Health ambulance list (Tab 10) may be used to determine the level of skill of the provider. However, if a provider is licensed as BLS and ALS then the documentation in the medical record must be used to determine the level.

1 = Basic/Professional - The prehospital emergency medical care management of illness or injury performed by specially trained and certified or licensed personnel, i.e. EMT. (Automatic External Defibrillator [AED] is considered BLS)

2 = Advanced - The prehospital emergency medical care of serious illness or injury by appropriately trained health professionals and/or certified EMT paramedics who administered any one or combination of the following: drugs, cardiac monitor, defibrillation, intravenous fluids, intubation, or any other invasive procedures as noted in Act 45.

3 = Basic/Non-professional - Any prehospital basic life support/first aid techniques rendered by any non-professional person, i.e. family members/friends, police.

4 = None - (i.e. patient refused care or transport.)

LIFE SUPPORT – HIGHEST LEVEL OF CARE (SCENE AND/OR TRANSPORT)

Record the medical care and management of illness or injury; highest level of **actual care provided** at scene of injury/accident and enroute to the first hospital/trauma center.

1 = Basic/Professional - The prehospital emergency medical care management of illness or injury performed by specially trained and certified or licensed personnel, i.e. EMT. (Automatic External Defibrillator [AED] is considered BLS).

2 = Advanced - The prehospital emergency medical care of serious illness or injury by appropriately trained health professionals and/or certified EMT paramedics who administered any one or combination of the following: drugs, cardiac monitor, defibrillation, intravenous fluids, intubation, or any other invasive procedures as noted in Act 45.

3 = Basic/Non-professional - Any prehospital basic life support/first aid techniques rendered by any non-professional person, i.e. family members/friends, police.

4 = None - (i.e. patient refused care or transport.)

- If the provider is ALS, but there is no Patient Care Record, record “unknown” for the care provided.

WAS A COMPLETE SET OF VITAL SIGNS (INCLUDING GCS) TAKEN PRIOR TO THE PATIENT LEAVING THE SCENE OF INJURY?

Documentation available in the medical record that a set of vital signs were taken and documented prior to the patient leaving the scene of injury

- **1 = Yes**
- **2 = No**
- **3 = No prehospital vital signs documented**
- In order to record yes (1) the initial (***first documented***) of each vital sign must be documented prior to the patient leaving the scene of injury.
- If the earliest documented vital signs are documented at the same time as the leave scene of injury time the response should be no (2).
- If the response is “3” (no prehospital vital signs documented) the scene vital signs section will be automatically skipped.
- This element will be skipped if the response to the scene provider is 4 (police), 6 (private vehicle) or 7 (walk-in).

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (PARALYZING DRUGS)
(Removed for 2017)

Was the patient chemically paralyzed at the time the first set of vital signs was taken?

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- **1 = Yes**
- **If yes, specify drug(s) _____**
- **2 = No**
- **U = Unknown**

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrrium, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan.

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (PULSE RATE/MINUTE)

Pulse rate for one minute.

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- No pulse, enter 000
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (UNASSISTED RESPIRATORY RATE/MINUTE)

Number of respirations by the patient in 15 seconds, multiplied by four.

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- Record actual (unassisted) patient rate only in this space
- Do not use bagged or controlled rates
- If patient is bagged or on ventilator, this assessment requires that the patient’s respiratory rate be obtained while not using those aids
- If patient’s actual rate cannot be obtained, record controlled rate below where requested, and fill these spaces with “U”s
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (SYSTOLIC BLOOD PRESSURE)

Systolic cuff pressure in either arm by auscultation or palpation.

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (GCS-EYE OPENING)

Assessment of the stimulus required to induce eye opening.

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- **4 = Spontaneous** – At this point, with no further stimulation, patient has eyes open.
 - **3 = To Voice** – If a patient’s eyes are unopened, a request to “open your eyes” should be spoken, and if necessary, shouted. If the eyes are then opened, the action is considered a response to voice stimulation.
 - **2 = To Pain** – If verbal stimulation does not elicit eye opening, the standard painful stimulus is applied (firm pressure to the nailbed or sternum for 5 – 10 seconds). If eyes open, it is considered a response to pain.
 - **1 = None** – No eye opening, despite pain stimulus.
-
- If eyes are closed due to swelling from facial injuries, assessment should be attempted.
 - Document patient’s response appropriately: include comments when patient’s ability is hindered by swelling.
 - Documentation of “paralyzed” is equivalent to 1.
 - Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
 - If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
 - DO NOT record all “U”s if only one variable is missing.
 - Record the appropriate components and enter the total score, if available.
 - Do not derive these variables from record entries.
 - The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (GCS-VERBAL RESPONSE)

Assessment of the stimulus for verbal response or written response if verbal response is impaired by intubation or tracheostomy.

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- **5 = Oriented** – After the patient is aroused, he is asked who he is, where he is, and what the year and month are. If accurate answers are obtained to all questions, the patient is recorded as oriented.

- **4 = Confused** – Although the patient is unable to give the correct answers to previous questions, he is capable of producing phrases, sentences and even conversational exchanges.
- **3 = Inappropriate words** – The patient speaks or exclaims only a word or two (often curses). Such a response is usually obtained only by physical stimulation rather than a verbal stimulus, although occasionally a patient will shout obscenities or call relatives' names for no apparent reason.
- **2 = Incomprehensible sounds** – The patient's response consists of groans, moans, or indistinct mumbling and does not contain any intelligible words.
- **1 = No verbal response** – Prolonged and, if necessary, repeated stimulation does not produce any phonation.
- Documentation of "paralyzed" is equivalent to 1
- Documentation of "alert and oriented x 3" is **not** equivalent to a GCS of 15
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available
- DO NOT record all "U"s if only one variable is missing
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (GCS-MOTOR RESPONSE)

Assessment of the stimulus necessary to elicit motor response.

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a "leave scene" time.

- **6 = Obeys Command** – This requires an ability to comprehend instruction, usually given in some form of verbal command, but sometimes by gestures and writing. The patient is required to perform the specific movements requested. The command is given to hold up two fingers (if physically feasible); the patient should respond appropriately. If the patient is unable to move, i.e., due to paralysis, appropriate response can be evaluated by command to blink the eyes.
- **5 = Localizes pain** – If the patient does not obey commands, a painful stimulus is applied, e.g., firm pressure to the nailbed or sternum for five seconds. Patient reaches to and/or tries to remove source of pain.

- **4 = Withdraws** – After painful stimulation all of the following occur: Elbow, flexes, rapid movement, no muscle stiffness, arm is drawn away from the trunk.
- **3 = Flexion response** – After painful stimulation all of the following occur: Elbow flexes, slow movement, accompanied by stiffness, forearm and hand held against the body, limbs assume hemiplegic position.
- **2= Extension response** – After painful stimulation all of the following occur: Legs and arms extend, accompanied by stiffness, internal rotation of shoulder and forearm.
- **1 = No motor response.**

Additional Information

- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

PREHOSPITAL VITAL SIGNS - GCS QUALIFIERS – Matches NTDB Initial ED/Hospital GCS

Assessment Qualifiers

1 = Patient chemically sedated or paralyzed

2 = Obstruction to the patient’s eye

3 = Patient intubated

4 = Valid GCS – Patient was not sedated, not intubated, and did not have obstruction to eye

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrrium, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan

Additional Information

Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.).

If an intubated patient has recently received an agent that results in neuromuscular blockade such that a motor or eye response is not possible, then the patient should be considered to have an exam that is not reflective of their neurologic status and the chemical sedation modifier should be selected.

Neuromuscular blockade is typically induced following the administration of agent like succinylcholine, mivacurium, rocuronium, (cis)atracurium, vecuronium, or pancuronium. While these are the most common agents, please review what might be typically used in your center so it can be identified in the medical record.

Each of these agents has a slightly different duration of action, so their effect on the GCS depends on when they were given. For example, succinylcholine’s effects last for only 5-10 minutes.

Please note that first recorded/hospital vitals do not need to be from the same assessment.

Check all that apply.

NTDB element added in 2017

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT (INTUBATED W/ ARTIFICIAL AIRWAY)

- **1 = Patient has an artificial airway** (nasotracheal, endotracheal, EOA, cricothyroidotomy, needle or surgical) **King, LMA, Combi-tube)**
- **2 = Patient does not have an artificial airway**

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- This item applies to all means of artificial airway, not just mechanical ventilation
- Record “1” if the patient was intubated at the time the clinical data elements (Pulse, Respiratory Rate, Systolic Blood Pressure, and GCS) were evaluated
- The patient does not have to be intubated and placed on a ventilator for a yes response.
- Record “2” if the patient was not intubated, or was intubated after the initial assessment

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT - IS PATIENT’S RESPIRATORY RATE CONTROLLED? (BAGGING OR VENTILATOR)

1 = Yes

2 = No

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- If the actual respiratory rate is not recorded, then the controlled rate must be recorded

PREHOSPITAL VITAL SIGNS – SCENE AND/OR TRANSPORT-CONTROLLED RESPIRATORY RATE

Scene – Initial assessment (first documented value for vital sign) by EMS. The initial assessment is the earliest documented vital signs by either the scene or transport provider. The initial assessment must be documented on the patient care record.

Transport – Initial assessment (first documented value for vital sign) by EMS during transport to hospital. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave scene” time.

- The controlled rate is never **00**

REFERRING FACILITY - IS THIS A TRANSFER PATIENT?

Hospital from which the patient was referred/transferred to your facility

- **1 = Yes**
- **2 = No**

Additional Information

- A case is considered a referral when the patient is sent for continued treatment of an injury to your trauma center from another acute care facility with the capability to admit patients
- A patient sent to your trauma center from a private doctor’s office, Urgent Care Center, stand-alone ambulatory surgery center, or satellite Emergency Department is not a referral
- A patient discharged from an OSH and then brought to your facility by private vehicle should NOT be considered a transfer patient. Treat as any other patient arriving from home, scene, PCP office, etc.

REFERRING FACILITY – IS THERE DATA/INFORMATION AVAILABLE FROM OUTSIDE FACILITY?

- 1 = Yes
- 2 = No
- / - Patient came directly from scene; no outside facility

Additional Information

- If the response to this element is 2 (No) the referring facility section will automatically skip
- Element colored **yellow** indicating element downloaded to State

REFERRING FACILITY - DATE AND TIME OF ADMISSION AT REFERRING FACILITY

Enter the date and time the patient arrived at the referring institution

- Collected as MM/DD/YYYY
- Collected as HH:MM
- HH:MM should be collected as military time

REFERRING FACILITY - DATE AND TIME OF DISCHARGE FROM REFERRING FACILITY

Enter the latest documented date and time the patient departed the referring facility

- Collected as MM/DD/YYYY
- Collected as HH:MM
- HH:MM should be collected as military time
- The interhospital transport provider's leave facility time may be used as the latest documented date and time the patient departed the referring facility

REFERRING FACILITY LENGTH OF STAY (Auto Calculation)

The total number of days the patient was hospitalized at the referring facility

Additional Information

- This element is ***automatically calculated*** by subtracting the date of admission to the ED from the date of discharge from the hospital when the patient is admitted and discharged within the same month

REFERRING FACILITY - DIAGNOSTIC INTERVENTIONS AT REFERRING FACILITY

ICD-10-PCS procedure codes of diagnostic interventions performed at the referring Facility. (ICD-9 codes in parentheses for reference)

- **None – n/a**
- Record up to twelve (12) ICD-10-CM procedure codes from the list below.
- It is only necessary to enter a code once
- You may record any additional procedure codes as desired and as space allows

Record the interventions ***made at the referring facility***.

None – n/a

Angiography

NEC – see B20, B21 (88.40)

Aorta (arch) (ascending) (descending) – upper arteries, see B30, B31; lower arteries, see B40, B41 (88.41)

Basilar - B30, B31 (88.41)

Brachial – B30N___, B31N___ (88.49)

Carotid (internal) – see B30, B31 (88.41)

- Celiac – see B40, B41 (88.47)
- Cerebral (posterior circulation) –see B30, B31 (88.41)
- Coronary NEC – B20__ZZ (88.57)
- *Double Catheter Technique (Judkins) (Ricketts and Abrams) – B20__ZZ (88.56)
- *Single Catheter Technique (Sones) –see B20, B21 (88.55)
 - Eye (fluorescein) – B30N__ZZ (95.12)
 - Femoral – see B40, B41 (88.48)
 - Head and Neck – see B30, B31 (88.41)
 - Heart – see B20, B21, B50 (88.50)
 - Intra-Abdominal NEC – see B40, B41 (88.47)
 - Intracranial – see B30, B31 (88.41)
 - Intrathoracic Vessels NEC – see B30, B31 (88.44)
 - Lower Extremity NEC – see B40, B41 (88.48)
 - Neck - see B30, B31 (88.41)
 - Placenta –B40C__ZZ (88.46)
 - Pulmonary – see B30, B31 (88.43)
 - Renal – see B40, B41 (88.45)
 - Specified Artery NEC – see B30, B31 (88.49)
 - Superior Mesenteric Artery – see B40, B41 (88.47)
 - Transfemoral – see B40, B41 (88.48)
 - Upper Extremity NEC – see B30, B31 (88.49)
 - Vertebral – see B30, B31 (88.41)

Bronchoscopy

- NEC - 33.23
- Fiberoptic – OBJ0__ZZ (33.22)
- Through Tracheostomy – OBJ08ZZ (33.21)
- With Brush Biopsy – OBB__ZX (33.24)
- With Lung Biopsy – see OB9__ZX, OBB__ZX (33.27)

CAT Scan

- Abdomen – BW20__ (88.01)
- Bone, Skeletal, CT nfs – see BQ2, BR2, BP2 (88.38)
- Brain B02- Head –BW2 (87.03)
- Kidney – BT2__ (87.71)
- Thorax – BP2, B22, BW2 (87.41)
- Mineral Density Scan of Bone, Skeletal - 88.98
- Other Tomography of Head – BW29__ (87.04) (CTA Head and/or Neck)
- Other Tomography Thorax – BW03ZZZ (87.42) (CTA Thorax)

Diagnostic Laparoscopy – OWJ__4ZZ (54.21)

Diagnostic Peritoneal Lavage (DPL) – 3E1M38Z (54.25)

Exploratory Laparotomy – ODJ__ZZ (54.11)

MRI

- Abdomen, MRI nfs –BW30__ (88.97)
- Bladder (urinary) – BT3__Z (88.95)
- Bone Marrow Blood Supply – BL3__Z (88.94)
- Brain (brain stem) –B030__ (88.91)
- Chest (hilar) (mediastinal) – BW33Y_Z (88.92)
- Extremity (upper) BP3F__ (88.94)____
(lower) BQ3F__ (88.94)
- Eye Orbit – B83__ (88.97)
- Face – BW3__ (88.97)

Head NEC – BW38____ (88.97)
 Magnetic Resonance Angiography (MRA, any site) – 88.97
 Musculoskeletal –BL3____Z (88.94)
 Myocardium –BW3, B23 (88.92)
 Neck – BW3F____ (88.97)
 Prostate – BV33____ (88.95)
 Specified Site NEC – see B83, BF3, BH3, BT3, BW3 (88.97)
 Spinal Canal (cord) (spine) – BR3____ (88.93)

X-Ray Other and Unspecified – BW0_ZZZ (88.39) (use for any x-ray, i.e. chest, leg, arm)

Ultrasound

Abdomen – BW4_ZZZ (88.76)
 Aortic Arch – B34____ (88.73)
 Biliary Tract – BF4____ (88.74)
 Breast – BH4____ (88.73)
 Deep Vein Thrombosis – B34, B44, B54 (88.77)
 Digestive System – BD4ZZZ (88.74)
 Eye – B84_ZZZ (95.13)
 FAST – BW4_ZZZ **AND** B24____ (88.79)
 Head and Neck – BH4CZZZ (88.71)
 Heart – B24____ (88.72)
 Intestine – BD4_ZZZ (88.74)
 Lung – BB4_ZZZ (88.73)
 Midline Shift, Brain B040ZZZ (88.71)
 Multiple Sites –see BU4, BV4, BW4 (88.79)
 Peripheral Vascular System – B54____ (88.77)
 Retroperitoneum – BW40ZZZ (88.76)
 Thorax NEC – BH4BZZZ (88.73)
 Total Body – BW4 (88.79)
 Urinary System –BT4_ZZZ (88.75)
 Uterus – BU46_ZZ (88.79)
 Gravid – BY4_ZZZ (88.78)

If inappropriate, leave blank.

REFERRING FACILITY - THERAPEUTIC INTERVENTIONS AT REFERRING FACILITY

ICD-10-PCS procedure codes of therapeutic interventions performed at the referring facility

- None – n/a

Additional Information

- Record up to twelve (12) ICD-10-PCS procedure codes from the list below.
- Therapeutic procedures on the list found below performed by EMS while at the referring facility should be recorded in this section as well
- You may record any additional procedure codes as desired and as space allows
- Procedure codes below with an * next to them are for burn patients only

None – n/a

Abdominal Artery Embolization - O4L____(38.86)

Abdominal Vein Embolization – O6L____ (38.87)

Central Lines

- Systemic Arterial – 4A13XB1 (89.61)
- Central Venous Pressure -4A14XB1 (89.62)
- Pulmonary Artery Pressure – 4A133_3 (89.63)
- Swan Ganz – 02H____ (89.64)

Central Venous Catheterization – see 05H (lower), 06H (upper) (38.93) (*Peripheral IVs must not be recorded*)

Chest tube(s) – 0W9__0Z (34.04)

CPR – 5A12012 (99.60)

***Escharotomy** – 0H8____ (86.09)

***Fasciotomy** – see 0J8, 0JD (83.14)

Intubation -0BH1_EZ (96.04)

Other Embolizations

Other surgical occlusion of vessels (clamping, division, ligation, occlusion) – see 02L, 03L, 04L (38.8 [0-9])

Endovascular occlusion of head and neck vessels (coil embolization) – 03L (39.72)

Other endovascular repair (of aneurysm) of other vessels (coil embolization) – see 02L, 03L, 04L, 05L, 06L (39.79)

Transcatheter embolization for gastric or duodenal bleeding –04L23DZ (44.44)

Surgery - Specify ICD-10-PCS Procedure Codes

REFERRING FACILITY - REFERRAL FROM FACILITY NUMBER

A six-digit number assigned to each institution by the Pennsylvania Trauma Systems Foundation from which the patient was referred

- **Reference Facility Lists**
- A referral facility number should be entered any time the patient is a transfer.
- Numbers have been added to the list for institutions in Pennsylvania’s neighboring states. (Delaware, Maryland, New Jersey, Ohio, West Virginia and New York)
For institutions beyond the neighboring states use the number “74” followed by all “8”s
- The Collector™ software will skip this element if it is not a transfer patient

REFERRING FACILITY – UNRESOLVED OCCURRENCES

Any medical complication that occurred during the patient’s stay at the referring hospital

- **see Appendix 9**
- Record up to 5 occurrences
- All occurrences (diagnosis and/or symptom descriptive) must be documented in the patient record by a physician and confirmed by the definition of the specific occurrence
- Suspected exacerbation of a pre-morbid condition should not be coded as an occurrence unless specified by a physician
- Only the initial incidence of the occurrence should be recorded in the registry for those cases in which the same occurrence is sustained by the patient more than once during the hospitalization
- Record all appropriate occurrences

REFERRING FACILITY - IS REFERRAL FACILITY CLINICAL DATA AVAILABLE?

If any clinical data (***For this element Clinical Data is only considered, Pulse Rate/Minute, Unassisted Respiratory Rate/Minute, Systolic Blood Pressure, Eye Opening, Verbal Response, and Motor Response***) are available for the patient from the referring facility

- 1 = Yes
- 2 = No

Additional Information

- If the response is “2” (NO) Collector will skip the referral facility clinical data screen.

REFERRING FACILITY (PARALYZING DRUGS) – REMOVED FOR 2017

Was patient chemically paralyzed at the referring facility at the time the first set of vital signs were taken?

1 = Yes

If yes, specify drug(s) _____

2 = No

U = Unknown

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrrium, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan.

REFERRING FACILITY (PULSE RATE/MINUTE)

Pulse rate for one minute at referring hospital. Record first available value at referring facility.

- No pulse, enter 000.
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest.

REFERRING FACILITY (UNASSISTED RESPIRATORY RATE/MINUTE)

Number of respirations by the patient in 15 seconds, multiplied by four at referring hospital. Record first available value at referring facility.

- Record actual (unassisted) patient rate only in this space. Do not use bagged or controlled rates.
- If patient is bagged or on ventilator, this assessment requires that the patient’s respiratory rate be obtained while not using those aids.

- If patient's actual rate cannot be obtained, record controlled rate below where requested, and fill these spaces with "U"s.
- Documentation of "asystole", "ventricular tachycardia" (VT), "pulseless electrical activity" (PEA), and "ventricular fibrillation" (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest.

REFERRING FACILITY (SYSTOLIC BLOOD PRESSURE)

Systolic cuff pressure in either arm by auscultation or palpation at referring hospital. Record first available value at referring facility.

- Documentation of "asystole", "ventricular tachycardia" (VT), "pulseless electrical activity" (PEA), and "ventricular fibrillation" (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest.

REFERRING FACILITY (GCS-EYE OPENING)

Assessment of the stimulus required to induce eye opening. Record first available value at referring hospital.

- **4 = Spontaneous** – At this point, with no further stimulation, patient has eyes open.
- **3 = To Voice** – If a patient's eyes are unopened, a request to "open your eyes" should be spoken, and if necessary, shouted. If the eyes are then opened, the action is considered a response to voice stimulation.
- **2 = To Pain** – If verbal stimulation does not elicit eye opening, the standard painful stimulus is applied (firm pressure to the nailbed or sternum for 5 – 10 seconds). If eyes open, it is considered a response to pain.
- **1 = None** – No eye opening, despite pain stimulus.

Additional Information

- If eyes are closed due to swelling from facial injuries, assessment should be attempted.
- Document patient's response appropriately: include comments when patient's ability is hindered by swelling.
- Documentation of "paralyzed" is equivalent to 1.
- Documentation of "alert and oriented x 3" is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all "U"s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

REFERRAL FACILITY (GCS-VERBAL RESPONSE)

Assessment of the stimulus required for verbal response or written response if verbal response is impaired by intubation or tracheostomy at referring hospital. Record first available value at referring facility.

- **5 = Oriented** – After the patient is aroused, he is asked who he is, where he is, and what the year and month are. If accurate answers are obtained to all questions, the patient is recorded as oriented.
- **4 = Confused** – Although the patient is unable to give the correct answers to previous questions, he is capable of producing phrases, sentences and even conversational exchanges.
- **3 = Inappropriate words** – The patient speaks or exclaims only a word or two (often curses). Such a response is usually obtained only by physical stimulation rather than a verbal stimulus, although occasionally a patient will shout obscenities or call relatives' names for no apparent reason.
- **2 = Incomprehensible sounds** – The patient's response consists of groans, moans, or indistinct mumbling and does not contain any intelligible words.
- **1 = No verbal response** – Prolonged and, if necessary, repeated stimulation does not produce any phonation.

Additional Information

- Documentation of "paralyzed" is equivalent to 1.
- Documentation of "alert and oriented x 3" is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all "U"s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

REFERRING FACILITY (GCS-MOTOR RESPONSE)

Assessment of the stimulus necessary to elicit motor response at referring hospital.
Record first available value at referring facility.

- **6 = Obeys Command** – This requires an ability to comprehend instruction, usually given in some form of verbal command, but sometimes by gestures and writing. The patient is required to perform the specific movements requested. The command is given to hold up two fingers (if physically feasible); the patient should respond appropriately. If the patient is unable to move, i.e., due to paralysis, appropriate response can be evaluated by command to blink the eyes.
- **5 = Localizes pain** – If the patient does not obey commands, a painful stimulus is applied, e.g., firm pressure to the nailbed or sternum for five seconds. Patient reaches to and/or tries to remove source of pain.
- **4 = Withdraws** – After painful stimulation all of the following occur: Elbow, flexes, rapid movement, no muscle stiffness, arm is drawn away from the trunk.
- **3 = Flexion response** – After painful stimulation all of the following occur: Elbow flexes, slow movement, accompanied by stiffness, forearm and hand held against the body, limbs assume hemiplegic position.
- **2 = Extension response** – After painful stimulation all of the following occur: Legs and arms extend, accompanied by stiffness, internal rotation of shoulder and forearm.

- **1 = No motor response.**

Additional Information

- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

REFERRING FACILITY - GCS QUALIFIERS - Matches NTDB Initial ED/Hospital GCS

Assessment Qualifiers

1 = Patient chemically sedated or paralyzed

2 = Obstruction to the patient’s eye

3 = Patient intubated

4 = Valid GCS – Patient was not sedated, not intubated, and did not have obstruction to eye

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurium, tracrium, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan

Additional Information

Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.).

If an intubated patient has recently received an agent that results in neuromuscular blockade such that a motor or eye response is not possible, then the patient should be considered to have an exam that is not reflective of their neurologic status and the chemical sedation modifier should be selected.

Neuromuscular blockade is typically induced following the administration of agent like succinylcholine, mivacurium, rocuronium, (cis)atracurium, vecuronium, or pancuronium. While these are the most common agents, please review what might be typically used in your center so it can be identified in the medical record.

Each of these agents has a slightly different duration of action, so their effect on the GCS depends on when they were given. For example, succinylcholine’s effects last for only 5-10 minutes.

Please note that first recorded/hospital vitals do not need to be from the same assessment.

Check all that apply.

NTDB element added in 2017

REFERRING FACILITY - INTUBATED WITH ARTIFICIAL AIRWAY

Was the patient intubated with an artificial airway at the time the first set of vital signs were obtained at referring facility (Means of artificial airway, not just mechanical ventilation)

- **1 = Patient has an artificial airway (nasotracheal, endotracheal, EOA, cricothyroidotomy, needle, surgical, King, LMA, Combi-tube)**
- **2 = Patient does not have an artificial airway**
- This item applies to all means of artificial airway, not just mechanical ventilation.
- Record “1” if the patient was intubated at the time the clinical data elements (Pulse, Respiratory Rate, Systolic Blood Pressure, and GCS) were evaluated.
- The patient does not have to be intubated and placed on a ventilator for a yes response.
- Record “2” if the patient was not intubated, or was intubated after the initial assessment.

REFERRING FACILITY - IS PATIENT’S RESPIRATORY RATE CONTROLLED? (BAGGING OR VENTILATOR)

Is the patient’s respiratory rate being controlled at the time the first set of vital signs were obtained at referring hospital?

- **1 = Yes**
- **2 = No**
- If the actual respiratory rate is not recorded, then the controlled rate must be recorded

REFERRING FACILITY-CONTROLLED RESPIRATORY RATE

If the patient’s respiratory rate is being controlled, record the value of the controlled rate from the referring facility.

- The controlled rate is never 00

REFERRING FACILITY - TEMPERATURE

Record the patient’s **first** temperature, as recorded upon admission to the ED of the referring facility.

- **1 = Fahrenheit**
- **2 = Celsius**
- Record in Fahrenheit or Celsius.
- Initial temperature may be recorded within the first 30 minutes of arrival.
- In the case of a direct admit (patient bypasses the ED), record the patient’s first documented temperature upon arrival
- Example: If admission temperature is 98.7 measured orally, then record 098.7 in **2**
- It is recommended that each trauma center document a default route of measurement (the route most commonly used for measuring patient’s temperatures)
- Nursing staff should be educated to document the temperature route whenever a route other than the default route is used
- This element will skip if the response to “Temperature” is unknown or left blank

REFERRING FACILITY – TEMPERATURE ROUTE OF MEASUREMENT

Record the route of temperature measurement at referring hospital.

- **1 = Rectal**
- **2 = Oral**
- **3 = Axillary**
- **4 = Tympanic (ear)**
- **5 = Core (Foley, esophageal)**
- **6 = Skin (Wand run across forehead, strip applied to skin)**

Additional Information

- Example: If admission temperature is 98.7 measured orally, then record **098.7** in **2**

REFERRING FACILITY – WEIGHT AND UNIT OF MEASUREMENT

Record weight of patient at admission to the referring hospital

- **1 = Pounds**
- **2 = Kilograms**

Additional Information

- Record weight in kilograms or pounds on admission
- Please indicate which measurement is used to record the weight
- This element is required for pediatrics and burns, but optional for adults
- Example: If admission weight is 150 pounds, then: Weight **150.0** in **1**
- Example: If admission weight is 2.0 kilograms, then: Weight **002.0** in **2**

REFERRING FACILITY – ETOH/BAC (BLOOD ALCOHOL CONTENT) Deleted for 2017 – utilize NTDB Element – Referring Facility - Alcohol Screen and Referring Facility - Alcohol Screen Results

Record in Mg/dl, the alcohol level measured at referring facility

Additional Information

- ~~.1 = 100 Mg/dl~~
- ~~If the ETOH is documented as < 10 the response should be recorded as “000” (negative)~~
- ~~Example: If admission ETOH/BAC is 270% then: ETOH/BAC = 270~~
- ~~Example: If over 1,000, use 998 and note over 1,000 in the comment section. ETOH/BAC = 998~~
- ~~If ETOH is negative, use 000~~
- ~~If ETOH is not drawn, record !!!~~
- ~~Also record !!! if blood should not have been drawn~~
- ~~If the test was ordered, the blood was drawn and the value was unknown at the time of reporting, record UUU~~

REFERRING FACILITY – ALCOHOL SCREEN

A blood alcohol concentration (BAC) test was performed on the patient within 24 hours after first hospital encounter.

- 1 = Yes
- 2 = No

REFERRING FACILITY – ALCOHOL SCREEN RESULTS

First recorded blood alcohol concentration (BAC) results within 24 hours after first hospital encounter.

- Collect as X.XX standard lab value (e.g. 0.08).
- Record BAC results within 24 hours after first hospital encounter, at either your facility or the transferring facility.
- The null value "Not Applicable" is used for those patient who were not tested.
 - NTDB element added in 2017

REFERRING FACILITY – DRUG SCREEN/(CLINICIAN ADMINISTERED Y/N)

Record drugs or groups of drugs for which the patient tested positive at the referring hospital

0 = Not tested

1 = None

2 = COC (Cocaine)

3 = PCP (Phencyclidine)

4 = BZO (Benzodiazepines)

5 = BAR (Barbiturate)

7 = AMP (Amphetamine)

8 = THC (Cannabinoid)

9 = TCA (Tricyclic Antidepressant)

10 = mAMP (Methamphetamine)

11 = MDMA (Ecstasy)

12 = MTD (Methadone)

13 = OPI (Opioid)

14= OXY (Oxycodone)

15 = Other

U = Unknown

If Other, specify _____

Additional Information

- Record up to six drugs
- If the drug that was found to be positive is documented as being clinician administered either at your facility or prior to arrival at your facility record as "1" (yes) in the space within the parenthesis
- If the drug that was found to be positive is not documented as being clinician administered either at your facility or prior to arrival at your facility record a "2" (no) in the space within the parenthesis
- If a drug screen was completed as negative, record "1"

- Items 1 through 9 should be selected only once
- If the response to a drug is a “0”, “1”, or “U”, the clinician administered portion will automatically skip

INTERHOSPITAL - PROVIDER

Identifies the method used to transport the patient to the trauma center submitting data and the origin of that transport, e.g., accident scene, rendezvous or transferring hospital

- **1 = Ambulance**
- **2 = Helicopter**
- **3 = Ambulance/Helicopter rendezvous**
- **4 = Police**
- **5 = Fire Rescue**
- **6 = Private Vehicle (personal car, tax, bus)**
- **7 = Walk-In (this does not include patients who walk into the ED after being brought to the ED by private vehicle, etc.)**
- **9 = Quick Response Service (QRS)**
- **U = Unknown (if mode of transport is not indicated)**

Additional Information

- If the provider is 4 (police), 6 (private vehicle), or 7 (walk in), the scene and/or the transport section will automatically skip.
- If 9 (QRS) is chosen the cursor will automatically skip to “Were the earliest documented vital signs documented prior to the patient leaving the scene?”.
- EMS wheelchair vans should be considered a private vehicle when recording interhospital provider. Therefore, these patients should not be considered a transfer-in.

INTERHOSPITAL - DATES AND TIMES

Record the following dates and times for the provider(s).

Dispatch: The earliest date and time the provider (ambulance or helicopter) was contacted. The intent of this element is to collect the earliest time that the EMS provider received the call.

Arrive at Scene: The earliest date and time the provider ARRIVED at the referring facility. (Do not confuse the arrival time to the patient with the arrival time at the referring facility.)

Leave Scene: The date and time the provider DEPARTED from the referring facility. (Do not confuse the depart time from the bedside with the depart time from the referring facility.)

Additional Information

- Collected as MM/DD/YYYY
- Collected as HH:MM
- HH:MM should be collected as military time

INTERHOSPITAL - AMBULANCE CODE

The ambulance code is also known as the Affiliate Number

The Affiliate Number is a five-digit number

Additional Information

- reference DOH Ambulance Listing
- Enter all five digits if known
- If the Affiliate Number is unknown enter “U”s
- If the county or state of the service is known, but the identity of the service is not known, use the county code (Appendix 4) or state code followed by “8”s (i.e. 22888 for unknown service in Dauphin County).

INTERHOSPITAL - AMBULANCE UNIT NUMBER

The ambulance unit number is a two or three digit number identifying a

Specific vehicle within the emergency service agency

- Element colored **blue** indicating element downloaded to State, **but is an optional field**

Additional Information

- The ambulance unit number is typically documented at the end of or near the Affiliate Number on the prehospital patient care record
- If a unit number is three digits, enter all three digits

INTERHOSPITAL - PATIENT CARE RECORD AVAILABLE? (FILTER 2)

Is the interhospital Patient Care Record (PCR) available?

- **1 = Yes**
- **2 = No**

Additional Information

- If the response to this data element is 2 (no), the Patient Care Record Number will be skipped.

INTERHOSPITAL - PATIENT CARE RECORD NUMBER

Record the three to thirty-two digit pre-hospital Patient Care Record (PCR) number as applicable

Additional Information

- This number is also known as the Lithocode
- If no Patient Care Record number is available on computerized Patient Care Records, use the service incident number in place of the Patient Care Record number
- For other states that do not have a Patient Care Record number, use the state code (pages 5 -6) followed by “8”s (i.e. 71888888 for a New York patient care record)

INTERHOSPITAL - LIFE SUPPORT – HIGHEST LEVEL OF PROVIDER

Record the medical care and management for illness or injury. Highest level of skill of the provider at the scene of injury/accident and enroute to your hospital.

- 1 = Basic/Professional
- 2 = Advanced
- 3 = Basic/Non-Professional
- 4 = None

Additional Information

- The department of health ambulance list (Tab 10) may be used to determine the level of skill of the provider
- If the provider is ALS, but there is no Patient Care Record, record the provider as ALS

INTERHOSPITAL - LIFE SUPPORT – HIGHEST LEVEL OF CARE

Record the medical care and management of illness or injury; highest level of actual care provided at scene of injury/accident and enroute to your hospital

- 1 = Basic/Professional
- 2 = Advanced
- 3 = Basic/Non-Professional
- 4 = None

Additional Information

- If the provider is ALS, but there is no Patient Care Record, record “unknown” for the care provided
- If there is any documentation on the ED record regarding the prehospital care given (when the Patient Care Record is not on the medical record) that data may be used to determine the level of care provided
- When ALS is treating the patient and BLS only transports the patient, record the care as ALS
- If no Patient Care Record is provided and the level of care is not documented, record “unknown”

INTERHOSPITAL VITAL SIGNS -Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

INTERHOSPITAL VITAL SIGNS (PARALYZING DRUGS) – (REMOVED FOR 2017)

Interhospital – Was the patient chemically paralyzed at the time the initial set of vital signs were taken?

- 1 = Yes
- If yes, specify drug(s)
- 2 = No

- **U – Unknown**

Additional Information

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrium, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan.

INTERHOSPITAL VITAL SIGNS (PULSE RATE/MINUTE)

Interhospital – Pulse rate for one minute. Record the initial value.

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

Additional Information

- No pulse, enter 000
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

INTERHOSPITAL VITAL SIGNS – UNASSISTED RESPIRATORY RATE/MINUTE

Interhospital – Number of respirations by the patient in 15 seconds, multiplied by four. Record the initial documented value.

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

Additional Information

- Record actual (unassisted) patient rate only in this space
- Do not use bagged or controlled rates
- If patient is bagged or on ventilator, this assessment requires that the patient’s respiratory rate be obtained while not using those aids
- If patient’s actual rate cannot be obtained, record controlled rate below where requested, and fill these spaces with “U”s
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

INTERHOSPITAL VITAL SIGNS – SYSTOLIC BLOOD PRESSURE

Interhospital – Systolic cuff pressure in either arm by auscultation or palpation. Record the initial documented value.

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

Additional Information

- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

INTERHOSPITAL VITAL SIGNS – (GCS-EYE OPENING)

Interhospital – Assessment of the stimulus required to induce eye opening. Record the initial documented value.

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

- **4 = Spontaneous** – At this point, with no further stimulation, patient has eyes open.
- **3 = To Voice** – If a patient’s eyes are unopened, a request to “open your eyes” should be spoken, and if necessary, shouted. If the eyes are then opened, the action is considered a response to voice stimulation.
- **2 = To Pain** – If verbal stimulation does not elicit eye opening, the standard painful stimulus is applied (firm pressure to the nail bed or sternum for 5 – 10 seconds). If eyes open, it is considered a response to pain.
- **1 = None** – No eye opening, despite pain stimulus.

Additional Information

- If eyes are closed due to swelling from facial injuries, assessment should be attempted.
- Document patient’s response appropriately: include comments when patient’s ability is hindered by swelling.
- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

INTERHOSPITAL VITAL SIGNS – (GCS-VERBAL RESPONSE)

Interhospital – Assessment of the stimulus required for verbal response (or written response if verbal response is impaired by intubation or tracheostomy). Record the initial documented value.

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

- **5 = Oriented** – After the patient is aroused, he is asked who he is, where he is, and what the year and month area. If accurate answers are obtained to all questions, the patient is recorded as oriented.
- **4 = Confused** – Although the patient is unable to give the correct answers to previous questions, he is capable of producing phrases, sentences and even conversational exchanges.
- **3 = Inappropriate words** – The patient speaks or exclaims only a word or two (often curses). Such a response is usually obtained only by physical stimulation rather than a verbal stimulus, although occasionally a patient will shout obscenities or call relatives’ names for no apparent reason.
- **2 = Incomprehensible sounds** – The patient’s response consists of groans, moans, or indistinct mumbling and does not contain any intelligible words.
- **1 = No verbal response** – Prolonged and, if necessary, repeated stimulation does not produce any phonation.

Additional Information

- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

INTERHOSPITAL VITAL SIGNS – (GCS-MOTOR RESPONSE)

Interhospital – Assessment of the stimulus necessary to elicit motor response. Record the initial documented value.

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

- **6 = Obeys Command** – This requires an ability to comprehend instruction, usually given in some form of verbal command, but sometimes by gestures and writing. The patient is required to perform the specific movements requested. The command is given to hold up two fingers (if physically feasible); the patient should respond appropriately. If the patient is unable to move, i.e., due to paralysis, appropriate response can be evaluated by command to blink the eyes.

- **5 = Localizes pain** – If the patient does not obey commands, a painful stimulus is applied, e.g., firm pressure to the nail bed or sternum for five seconds. Patient reaches to and/or tries to remove source of pain.
- **4 = Withdraws** – After painful stimulation all of the following occur: Elbow, flexes, rapid movement, no muscle stiffness, arm is drawn away from the trunk.
- **3 = Flexion response** – After painful stimulation all of the following occur: Elbow flexes, slow movement, accompanied by stiffness, forearm and hand held against the body, limbs assume hemiplegic position.
- **2= Extension response** – After painful stimulation all of the following occur: Legs and arms extend, accompanied by stiffness, internal rotation of shoulder and forearm.
- **1 = No motor response.**

Additional Information

- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

INTERHOSPITAL VITAL SIGNS - GCS QUALIFIERS - Matches NTDB Initial ED/Hospital GCS

Assessment Qualifiers

1 = Patient chemically sedated or paralyzed

2 = Obstruction to the patient’s eye

3 = Patient intubated

4 = Valid GCS – Patient was not sedated, not intubated, and did not have obstruction to eye

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrion, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan

Additional Information

Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.).

If an intubated patient has recently received an agent that results in neuromuscular blockade such that a motor or eye response is not possible, then the patient should be considered to have

an exam that is not reflective of their neurologic status and the chemical sedation modifier should be selected.

Neuromuscular blockade is typically induced following the administration of agent like

succinylcholine, mivacurium, rocuronium, (cis)atracurium, vecuronium, or pancuronium. While these are the most common agents, please review what might be typically used in your center so it can be identified in the medical record.

Each of these agents has a slightly different duration of action, so their effect on the GCS depends on when they were given. For example, succinylcholine's effects last for only 5-10 minutes.

Please note that first recorded/hospital vitals do not need to be from the same assessment.

Check all that apply.

NTDB element added in 2017

INTERHOSPITAL VITAL SIGNS – INTUBATED WITH ARTIFICIAL AIRWAY

Interhospital – Was the patient intubated with an artificial airway at the time the vital signs were taken? (Applies to all means of artificial airway, not just mechanical ventilation.)

- **1 = Patient has an artificial airway (nasotracheal, endotracheal, EOA, cricothyroidotomy, needle, surgical, King, LMA, Combi-tube)**
- **2 = Patient does not have an artificial airway**

Additional Information

- This item applies to all means of artificial airway, not just mechanical ventilation.
- Record “1” if the patient was intubated at the time the clinical data elements (Pulse, Respiratory Rate, Systolic Blood Pressure, and GCS) were evaluated.
- The patient does not have to be intubated and placed on a ventilator for a yes response.
- Record “2” if the patient was not intubated, or was intubated after the initial assessment.

INTERHOSPITAL VITAL SIGNS – IS PATIENT’S RESPIRATORY RATE CONTROLLED? (BAGGING OR VENTILATOR)

Interhospital – Is patient’s respiratory rate being controlled at the time the initial interhospital vital signs were taken?

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

- **1 = Yes**
- **2 = No**

Additional Information

- If the actual respiratory rate is not recorded, then the controlled rate must be recorded

INTERHOSPITAL VITAL SIGNS – CONTROLLED RESPIRATORY RATE

Interhospital – If patient’s respiratory rate is being controlled, what is the value of the controlled rate?

Initial assessment by interhospital transport personnel during transport to the trauma center. During transport means the patient is physically enroute to the hospital. Therefore, initial vital signs would be at or after a “leave referring facility” time.

Additional Information

- The controlled rate is never 00

SECTION III: PROCESS OF ACUTE CARE

DATE ENTERED ED

Record the date patient entered the Emergency Department (ED)

Additional Information

- Collected as MM/DD/YYYY
- This is not the date the patient was administratively “admitted” into the ED
- If the patient was a direct admission (bypassing the ED), use the date of admission

TIME ENTERED ED

Record the military time patient entered the Emergency Department (ED)

Additional Information

- Collected as HH:MM, as military time
- Record the **EARLIEST** documented time of arrival

DATE TRANSPORTED TO POST ED DESTINATION

Record the date the patient was physically transported to the final destination from the ED

Additional Information

- Collected as MM/DD/YYYY
- If the patient was a direct admission (bypassing the ED), use the date of admission

TIME TRANSPORTED TO POST ED DESTINATION

Record the military time patient was **physically transported** from the ED to their final post ED destination

Additional Information

- Collected as HH:MM, as military time
- This should be the time the patient is actually taken to the final destination from the ED
- The nursing admission time **should not** be used as Time Transported to Post ED destination
- The physician’s admission order time **should not** be used as the patient’s Time Transported to Post ED destination
- If patient goes to x-ray, then to OR, include time in x-ray as ED time
- If the patient dies in the ED, Time Transported to Post ED destination should equal the time of death
- If the patient was direct admission, record the admission date and time for **both** Date and Time Entered ED and Date and Time Transported to Post ED destination

DATE ADMINISTRATIVELY DISCHARGED FROM ED

Record the date the patient is administratively discharged from the ED

Additional Information

- Collected as MM/DD/YYYY
- This may be the date the patient is discharged from the ED, but is not necessarily physically transported to their final post ED destination

- The physician’s admission order date may be used as the patient’s Date Administratively Discharged from the ED
- Example: The patient goes to some type of holding area or observation area before they go to a final post ED destination, but are not longer considered to be in the ED phase. This may occur if there are no ICU beds available
- If the patient was a direct admission (bypassing the ED), use the date of admission
- If the patient dies in the ED, Date Administratively Discharged from the Ed should equal date of death
- Administratively Discharged from ED date should never be after Date Transported to Post ED Destination. Record ‘Unknown’ in this instance.

TIME ADMINISTRATIVELY DISCHARGED FROM ED

Record the time the patient is administratively discharged from the ED

Additional Information

- Collected as HH:MM, as military time
- This may be the time the patient is discharged from the ED, but is not necessarily physically transported to their final post ED destination
- They physician’s admission order time may be used as the patient’s Time Administratively Discharged from the ED
- Example: The patient goes to some type of holding area or observation area before they go to a final post ED destination, but are not longer considered to be in the ED phase. This may occur if there are no ICU beds available
- If the patient was a direct admission (bypassing the ED), use the time of admission.
- If the patient dies in the ED, Time Administratively Discharged from the Ed should equal time of death
- Administratively Discharged from ED time should never be after Time Transported to Post ED Destination. Record ‘Unknown’ in this instance.

POST ED DESTINATION

Record the patient’s **final** destination from the ED

Field Values

- 1 = ICU/Critical Care Unit
- 2 = OR (including pre-op area)
- 3 = Med/Surg Unit
- 4 = Prison Ward (In-House)
- 5 = Step Down Unit/Intermediate
- 6 = Morgue (Coroner, death, DOA)
- 7 = Transfer to Other Hospital/Trauma Center
- 8 = Labor & Delivery
- 9 = Burn Unit (In-House)
- 10 = Home
- 11 = Interventional Angiography
- 12= Pediatric Unit (In-House)

Additional Information

Scenario Examples

Scenario	Post ED Destination
Hybrid OR for angiography procedure	11 – Interventional Angiography
Hybrid OR for angio, progressed to OR procedure	2 – OR
Angiography for diagnostic procedure	Part of ED phase of care

Angiography for interventional radiology procedure	11 – Interventional Angiography
X-ray to OR	2 – OR
Angio (diagnostic) to ICU	1 - ICU

- If patient was a direct admission, record patient destination.

INTERIM ED DISPOSITION-TEMPORARY LOCATION

Field Values

1 = ICU

3 = Observation/Holding

2 = Step-Down

4 = Med-Surg

Additional Information

Element colored **blue** indicating element is downloaded to the State, but is an optional element

TIME FOR REFERRAL (automatic calculation)

Elapsed time from date/time of arrival at referring facility to date/time of ED admission

- 1 = < 1 hour
- 2 = >= 1 hour and < 9 hours
- 3 = >= 9 hours and < 24 hours
- 4 = >= 24 hours

WAS OPERATING ROOM AVAILABLE WHEN PATIENT READY TO TRANSPORT FROM ED TO OR?

- This question refers to the patient leaving the Emergency Department for Transfer to the Operating Room (OR)
- 1 = **Yes** – The patient was ready to be transported to the Operating Room and the Operating Room was available to receive the patient for the surgery.
- 2 = **No** - The patient was ready to be transported to the Operating Room and the Operating suites were not available to receive the patient for surgery.
- Element colored **blue** indicating element downloaded to State, **but is an optional field**

Additional Information

- The Operating Room is the actual room where the operative procedure will take place. This will include full service sterile environment Operating Rooms. This would not include the trauma resuscitation room/area – even if it is used for emergent stabilization (operative procedures).
- Remember, this is only for those patients going to the OR from the ED.
- This question will automatically skip if the patient did not go to the OR from the ED.

WAS ATTENDING SURGEON PRESENT WHEN THE PATIENT ARRIVED IN THE OR?

- **1 = Yes**
- **2 = No**
- Element colored **blue** indicating element downloaded to State, **but is an optional field**

Additional Information

- Documentation for this includes times, signatures, nurse's notes or other documentation alerting you to the fact that the surgeon was present.
- If there are multiple surgeons there, choose the first one to arrive.
If more than one surgeon arrives at the same time, choose the surgeon who is operating on the most severe injury. If you cannot determine this, consult with your Trauma Program Manager or Director.
- This question will automatically skip if the patient did not go to the OR from the ED.

IF NO, SPECIFY ARRIVAL TIME

If the response to the prior question is 2 (No), specify the time that the attending surgeon arrived in the OR

- Element colored **blue** indicating element downloaded to State, *but is an optional field*

Additional Information

- Collected as HH:MM, as military time
- This question will automatically skip if the response to the above question is yes, or if the patient did not go to the OR from the ED

ATTENDING SURGEON SPECIALTY

Enter the specialty of the attending surgeon who was present in the OR

01 = Trauma/General Surgery

08 = Otorhinolaryngologic Surgery

02 = Neurosurgery

09 = Pediatric Surgery

03 = Orthopaedic Surgery

10 = Plastic Surgery

04 = Cardiac Surgery

11 = Thoracic Surgery

05 = Obstetric/Gynecologic Surgery

12 = Urologic Surgery

06 = Ophthalmic Surgery

13 = Burn Surgery

07 = Oral/Maxillofacial Surgery

77 = Other

Additional Information

- This question will automatically skip if the patient did not go to the OR from the ED
- Element colored **blue** indicating element downloaded to State, *but is an optional field*

WAS THERE DOCUMENTATION THAT THE ATTENDING ANESTHESIOLOGIST WAS IMMEDIATELY PRESENT IN THE OR?

- **1 = Yes**
- **2 = No**
- Element colored **blue** indicating element downloaded to State, *but is an optional field*

Additional Information

- This question will automatically skip if the patient did not go to the OR from the ED

IF NO, SPECIFY ARRIVAL TIME

If the response to the previous question is 2 (No), specify the time that the anesthesiologist arrived in the OR

- Element colored **blue** indicating element downloaded to State, *but is an optional field*

Additional Information

- Collected as HH:MM, as military time
- This question will automatically skip if the response to the above question is yes, or if the patient did not go to the OR from the ED

ADMITTING SERVICE

Record the appropriate admitting service

- **0 = Not Admitted (transferred out or died in ED)**
- **1 = Trauma Service (General Surgery)**
- **2 = Neurosurgery Service**
- **3 = Orthopedic Service**
- **4 = Thoracic Surgery Service**
- **5 = Other, Surgical**
- **6 = Other, Non-Surgical**
- **7 = Oromaxillofacial Service (Dental, ENT, Oral)**
- **8 = Obstetrics/Gynecology Service**
- **9 = Burn Service**

Additional Information

- **NOTE: For abstraction purposes, once the patient leaves the ED they are to be considered admitted. Additionally, if the patient expires in the Operating Room (OR), the specialty admitting the patient to the OR from the ED is to be recorded as the Admitting Service.**
- **Other, Surgical** - including cardiothoracic, vascular, plastics, ophthalmology, urology, OME's.
- **Other, Non-Surgical** – including family practice, pediatrics, cardiology, general medicine, endocrinology, rheumatology, neurology.
- If 5 (other, surgical) was selected from the admitting service list, specify the name of the surgical service.
- If 6 (other, non-surgical) was selected from the admitting service list, specify the name of the non-surgical service.

DID PATIENT RECEIVE A CT SCAN OF THE HEAD DURING THE RESUSCITATIVE PHASE? (FLTR 3)

Did the patient receive a CT of the **head** during the resuscitative phase

- **1 = Yes**
- **2 = No**

Additional Information

- The resuscitative phase is the time between ED arrival and Time Transported to Post ED Destination
- If a CT scan of the **head** is done at the referring facility, **record “yes”**

- This question **must be answered in all cases**
- The computer will match with GCS < 14 to identify applicable cases for review

DID PATIENT REQUIRE AN INITIAL LAPAROTOMY/LAPAROSCOPY WHICH IS NOT PERFORMED WITHIN 2 HOURS OF ARRIVAL AT YOUR FACILITY? (FLTR 9)

Patients requiring initial laparotomy/diagnostic laparoscopy, which is not performed within 2 hours of arrival at **YOUR** facility

- 1 = **Yes** – The patient required an initial laparotomy/laparoscopy and had the procedure performed greater than 2 hours from ED admission
- 2 = **No** – The patient required a laparotomy/laparoscopy and had the procedure performed within 2 hours of ED arrival
- 3 = **The patient did not require a laparotomy/laparoscopy**

Additional Information

- The 2 hours should be calculated from ED arrival time to the actual cut time of the procedure

WAS TRAUMA ALERT CALLED?

Was a trauma alert called on the patient

- 1 = **Yes – A Trauma Alert was called**
- 2 = **No – A Trauma Alert was not called**
- 3 = **Trauma Consult - A Trauma Consult was called**

Additional Information

- If Trauma Consult is chosen the date and time the trauma alert was called will automatically skip and the response to “Initial Level of Alert” will default to option 4 (Trauma Consult)
- This question will automatically skip if the patient was a direct admission

DATE AND TIME INITIAL TRAUMA ALERT CALLED

Enter the date and time the initial trauma alert was called

Additional Information

- Collected as MM/DD/YYYY
- Collected as HH:MM, as military time
- This is the date and time the initial call is put out for the trauma team to assemble in the resuscitation area
- This element will be skipped if the response to “Was Trauma Alert Called?” is a 2 (No) or a 3 (Trauma Consult)
- This question will automatically skip if the patient was a direct admission

INITIAL LEVEL OF ALERT

Identify the initial level of alert that was called for the trauma patient

- 1 = **Highest Level**
- 2 = **Second Level**

- **3 = Lowest Level**
- **4 = Trauma Consult**

Additional Information

- This question will automatically skip if the patient was a direct admission or if the response to “Was Trauma Alert Called?” is a 2 (No)

LEVEL OF ALERT - SPECIFY

Specify the name of the initial level of alert that was called

Additional Information

- Example: If the highest level of alert at your institution is called Code Red, then record “Code Red” in the specify area.
- This question will automatically skip if the patient was a direct admission or if the response to “Was Trauma Alert Called?” is a 2 (No)

WAS INITIAL LEVEL OF ALERT CHANGED?

Enter “Upgraded” if the initial trauma alert was upgraded to a higher level.
Enter “Downgraded” if the initial trauma alert was downgraded to a lower level. Enter “No Change” if the initial trauma alert was not changed.

- **1 = Upgraded**
- **2 = Downgraded**
- **3 = No Change**

Additional Information

- Example for Upgraded: Second level upgraded to highest level
- Example for Downgraded: Highest level downgraded to second level
- This element will be skipped if the response to “Was Trauma Alert Called?” is a 2 (No)
- This question will automatically skip if the patient was a direct admission

DATE AND TIME ALERT CALLED

Enter the date and time the upgraded or downgraded trauma alert was called.

Additional Information

- Collected as MM/DD/YYYY
- Collected as HH:MM as military time
- This is the date and time the upgraded or downgraded call is put out for the trauma team to assemble in the resuscitation area
- This element will be skipped in the response to “Was Trauma Alert Called?” is a 2 (No).
- This element will be skipped if the patient was a direct admission
- This element will be skipped if the response to “Was Initial Level of Alert Changed?” is a 3 (No Change)

LEVEL OF ALERT

Identify the upgraded or downgraded level of alert that was called for the

trauma patient

- **1 = Highest Level**
- **2 = Second Level**
- **3 = Lowest Level**
- **4 = Trauma Consult**

Additional Information

- This element will be skipped if the response to “Was Trauma Alert Called?” is a 2 (No)
- This element will be skipped if the patient was a direct admission
- This element will be skipped if the response to “Was Initial Level of Alert Changed?” is a 3 (No Change)

LEVEL OF ALERT - SPECIFY

Specify the name of the upgraded or downgraded level of alert that was called

Additional Information

- Example: If the highest level of alert at your institution is called Code Red, then record “Code Red” in the specify area
- This element will be skipped if the response to “Was Trauma Alert Called?” is a 2 (No).
- This element will be skipped if the patient was a direct admission
- This element will be skipped if the response to “Was Initial Level of Alert Changed?” is a 3 (No Change)

DATE AND TIME CALLED

REQUIRED FOR ALL TRAUMA CENTERS TO COMPLY WITH NEW ORANGE BOOK STANDARDS (OPTIONAL FOR ALL TRAUMA CTRS)

This element pertains to the date and time that the specialty was called to respond to the ED, regardless of whether a trauma alert was called or not called.

Additional Information

- This element pertains to each of the specialties found on the Process of Acute Care – Response Times screen. It refers to the date and time that the specialty was called to respond to the ED, regardless of whether a trauma alert was called or not called.
- If the specialty was not called at all, respond with “I”s.
- If the time that the specialty was called is not documented, then the response should be “U”s.
- For those physicians required by policy to respond to trauma alerts, the trauma alert called time may be used as the specialty’s time called.
- This question will automatically skip if the patient was a direct admission.

PROVIDER ARRIVAL DATE AND TIME

- **Answer the following questions, regardless of whether a trauma alert was called.**

- Enter the arrival date and time of the first responder for each specialist (regardless of whether the responder is an attending physician or a resident).
- **If some or all of the specialists did not respond to the emergency department to see the patient, enter “I”s.**
- **All of the specialist’s response times will automatically skip if the patient was a direct admission.**
- Collected as MM/DD/YYYY
- Collected as HH:MM, HH:MM should be collected as military time
- Once the patient is triaged and taken to a treatment room, there must be a timed note by the ED physician

EMERGENCY PHYSICIAN ARRIVAL DATE AND TIME

Enter the date and time the patient was seen by the emergency physician

EMERGENCY MEDICINE RESIDENT ARRIVAL DATE, TIME AND PGY LEVEL

Enter the date and time of arrival of the emergency medicine resident, in addition to the PGY level of the resident

- PGY Level – 1 – 9, F = Fellow, U = Not Documented

ATTENDING TRAUMA SURGEON ARRIVAL DATE AND TIME

Enter the date and time the attending trauma surgeon arrived in the emergency department/ resuscitation area

SENIOR TRAUMA RESIDENT ARRIVAL DATE, TIME AND PGY LEVEL

Enter the post graduate year (or F for fellow) of the senior trauma resident and the date and time this resident arrived in the emergency department/resuscitation area

- **PGY Level – 1 – 9, F = Fellow, U = Not Documented**
- A senior trauma resident is considered a PGY 4 or higher only

JUNIOR TRAUMA RESIDENT ARRIVAL DATE, TIME AND PGY LEVEL

Enter the date and time the junior trauma resident arrived in the emergency department/resuscitation area, in addition to the PGY level of the resident

- **PGY Level – 1 – 9, F = Fellow, U = Not Documented**
- This element may be completed if the junior trauma resident responding to the ED was a PGY 3 or less

NEUROSURGEON ARRIVAL DATE AND TIME

Enter the date and time the neurosurgeon arrived in the emergency department/resuscitation area

NEUROSURGICAL RESIDENT ARRIVAL DATE, TIME, AND PGY LEVEL

Enter the date and time the neurosurgical resident arrived in the emergency department/ resuscitation area, in addition to the PGY level of the resident

- **PGY Level – 1 – 9, F = Fellow, U = Not Documented**

ORTHOPAEDIC SURGEON ARRIVAL DATE AND TIME

Enter the date and time the orthopaedic surgeon arrived in the emergency department/resuscitation area

ORTHOPAEDIC RESIDENT ARRIVAL DATE, TIME, AND PGY LEVEL

Enter the date and time the orthopaedic resident arrived in the emergency department/resuscitation area, in addition to the PGY level

- **PGY Level – 1 – 9, F = Fellow, U = Not Documented**

ANESTHESIOLOGIST ARRIVAL DATE AND TIME

Enter the date and time the anesthesiologist arrived in the emergency department/resuscitation area

ANESTHESIOLOGIST RESIDENT ARRIVAL DATE, TIME, AND PGY LEVEL

Enter the date and time anesthesiology resident arrived in the emergency department/resuscitation area, in addition to the PGY level of the resident

- **PGY Level – 1 – 9, F = Fellow, U = Not Documented**

ADMITTING ATTENDING TRAUMA SURGEON

Enter the date and time the ADMITTING attending trauma surgeon arrived in the emergency department/resuscitation area

- Element colored **white** indicating element **NOT** downloaded to State

CRNA DATE AND TIME OF ARRIVAL

Enter the date and time the CRNA arrived in the emergency department/resuscitation area

OTHERS CALLED TO ED ARRIVAL DATE, TIME, AND PGY LEVEL

Enter the date and time any advanced practitioner was called and arrived in the emergency department/resuscitation area.

- **PGY Level – 1 – 9, F = Fellow, U = Not Documented**

Additional Information

- Advanced practitioner options will be included on a popup menu.
- PGY field is enabled if resident specialty is selected.
- If the advanced practitioner is called but did not respond to the ED, enter Called Date/Time and enter I's for Arrived Date/Time. Check the 'Copy to Consults' checkbox and enter the Arrived Date/Time within the Consults tab.

PATIENT MONITORING DURING RADIOLOGY STUDIES

1 = Yes – an RN or a CRNA was present with the patient during radiological study. (The presence of the RN or CRNA, patient vital signs, care rendered must be documented).

2 = No – an RN or a CRNA did not accompany the patient during the studies.

3 = No radiological studies were performed on the patient during the resuscitative phase (the resuscitative phase is the time between ED arrival and Time Transported to Post ED destination).

Additional Information

- Radiology studies refer to radiology studies, other than CT's performed at your facility during the resuscitative phase.
- If the radiology studies are done via a portable x-ray in the trauma bay, then the response should be "1" (yes).
- This question will automatically skip if the patient was a direct admit.

WAS ANY CT SCAN PERFORMED AT THIS HOSPITAL DURING RESUSCITATIVE PHASE

If any CT was performed during the initial resuscitative phase of care, (the resuscitative phase of care is the time between ED arrival and Time Transported to Post ED Destination).

- **1 = Yes**
- **2 = No**

Additional Information

- If the response to this data element is no, the CT questions that follow will be skipped
- This question will automatically skip if the patient was a direct admission
- **Note:** *New trauma centers are encouraged to utilize the following CT elements*

24 HOUR IN-HOUSE COVERAGE

(OPTIONAL FOR ALL TRAUMA CTRS)

- **1 = Yes**
- **2 = No**

Additional Information

- **Note:** *New trauma centers are encouraged to utilize this CT data element*
- The response of "yes" or "no" should be based on the day of the week
- This element will not skip if the patient is a direct admission
- If the response to this question is "yes" then "CT Study Ordered" and "CT Tech Response/Arrival Time" will automatically skip

CT STUDY ORDERED

(OPTIONAL ELEMENT FOR ALL TRAUMA CENTERS)

Enter the time the CT study was ordered

Additional Information

- **Note:** *New trauma centers are encouraged to utilize this CT data element*
- Collected as HH:MM, as military time
- This question will automatically skip if the patient was a direct admission

CT TECH RESPONSE/ARRIVAL TIME

(OPTIONAL ELEMENT FOR ALL TRAUMA CENTERS)

Enter the date and time the CT Tech arrived during the resuscitative phase. (The resuscitative phase is the time between ED arrival and Time Transported to Post ED Destination).

Additional Information

- **Note:** *New trauma centers are encouraged to utilize this CT data element.*
- Collected as HH:MM, as military time
- The patient's arrival time to CT should not be used as the CT Tech's response time
- This question will automatically skip if the patient was a direct admission

PATIENT MONITORING DURING CT STUDIES

Was the patient monitored during CT studies during the resuscitative phase (the resuscitative phase is the time between ED arrival and Time Transported to Post ED Destination)

- **1 = Yes**
- **2 = No**

Additional Information

- For an answer of "yes", an RN or Nurse Anesthetist must accompany the patient, with documentation of care and vital signs
- This question will automatically skip if the patient was a direct admission

UNITS OF BLOOD HUNG

Record the number of units of packed cells or whole blood hung while the patient was in the ED, not the number of units used by the patient

Additional Information

- Record zeros if no units of packed cells or whole blood was hung while the patient was in the ED
- This question will automatically skip if the patient was a direct admission

SECTION IV: CLINICAL DATA

TOTAL PREHOSPITAL FLUIDS ADMINISTERED

Record the amount of fluids (i.e. crystalloid solutions) infused during prehospital treatment

- **1 = None Infused**
- **2 = < 500 ml infused (i.e. KVO, TKO)**
- **3 = 500-2000 ml infused**
- **4 = > 2000 ml infused**
- **5 = IV fluids infused, amount unknown**

Additional Information

- Include fluids infused at referring facilities and any given during interhospital transport in the total

TOTAL PREHOSPITAL UNITS OF BLOOD HUNG

Record the number of units of packed cells or whole blood hung during the pre-hospital treatment

Additional Information

- Include packed cells or whole blood hung at referring facilities and any hung during inter-hospital transport in the total

The following section on the *Revised Trauma Score* is for the Trauma Nurse Coordinator and all other personnel **assessing** and **recording** the Revised Trauma Score. The Trauma Registrar and any other person filling out the data collection form should **transcribe** the Revised Trauma Score values **exactly** as they have been recorded on the ED flow sheet. If any value has not been recorded on the ED flowsheet, fill that space with "U"s.

If values cannot be assessed, do not attempt to retrospectively "guess" the values. YOU MAY ABSTRACT Revised Trauma Score variables taken at different times at your facility only. (For example, if BP and unassisted respiratory rate are documented at 10:00 and the GCS and pulse are documented at 10:02, the registrar should abstract all four values despite the fact they are not documented at the same time). Put a "U" in each space provided for any **unknown** values.

If the patient is a direct admit, bypassing the ED, then record the **initial** assessment upon admission to the hospital.

~~ON ADMISSION (PARALYZING DRUGS) (REMOVED FOR 2017)~~

~~On admission at your facility — was the patient chemically paralyzed at the time the first set of vital signs was taken?~~

- ~~• **1 = Yes**~~
- ~~• **If yes, specify drug(s)**~~
- ~~• **2 = No**~~
- ~~• **U = Unknown**~~

Additional Information

Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrion, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan.

ON ADMISSION (PULSE RATE/MINUTE)

- First recorded pulse in the ED/hospital within 30 minutes or less of ED/hospital arrival
- Pulse rate for one minute

Additional Information

- Measurement recorded must be without the assistance of CPR or any type of mechanical chest compression device. For those patients who are receiving CPR or any type of mechanical chest compressions, report the value obtained while compressions are paused.
- No pulse, enter 000
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown

ON ADMISSION - UNASSISTED RESPIRATORY RATE/MINUTE

Number of respirations by the patient in 15 seconds, multiplied by four, taken within 30 minutes or less of ED/hospital arrival.

Additional Information

- **Record actual (unassisted)** patient rate only in this space
- Do not use bagged or controlled rates
- If patient is bagged or on ventilator, this assessment requires that the patient’s respiratory rate be obtained while not using those aids
- If patient’s actual rate cannot be obtained, record controlled rate below where requested, and fill these spaces with “U”s
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest

ON ADMISSION - SYSTOLIC BLOOD PRESSURE

Systolic cuff pressure in either arm by auscultation or palpation, taken within 30 minutes or less of ED/hospital arrival.

Additional Information

- Measurement recorded must be without the assistance of CPR or any type of mechanical chest compression device. For those patients who are receiving CPR or any type of mechanical chest compressions, report the value obtained while compressions are paused.
- Documentation of “asystole”, “ventricular tachycardia” (VT), “pulseless electrical activity” (PEA), and “ventricular fibrillation” (VF) is equivalent to 000. This is in accordance with the ACLS definition of pulseless arrest
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown

ON ADMISSION - (GCS-EYE OPENING)

Assessment of the stimulus required to induce eye opening, assessed within 30 minutes or less of ED/hospital arrival

- **4 = Spontaneous** – At this point, with no further stimulation, patient has eyes open
- **3 = To Voice** – If a patient’s eyes are unopened, a request to “open your eyes” should be spoken, and if necessary, shouted. If the eyes are then opened, the action is considered a response to voice stimulation
- **2 = To Pain** – If verbal stimulation is unsuccessful in eliciting eye opening, the standard painful stimulus is applied. The standard painful stimulus is firm pressure to the nailbed or sternum for 5 seconds
- **1 = None** – No eye opening

Additional Information

- If eyes are closed due to swelling from facial injuries, assessment should be attempted.
- Document patient’s response appropriately: include comments when patient’s ability is hindered by swelling.
- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

ON ADMISSION (GCS-VERBAL RESPONSE)

Assessment of the stimulus required for verbal response (or written response if verbal response is impaired by intubation or tracheostomy), assessed within 30 minutes or less of ED/hospital arrival.

- **5 = Oriented** – After the patient is aroused, he is asked who he is, where he is, and what the year and month are. If accurate answers are obtained to all questions, the patient is recorded as oriented.
- **4 = Confused** – Although the patient is unable to give the correct answers to previous questions, he is capable of producing phrases, sentences and even conversational exchanges.
- **3 = Inappropriate words** – The patient speaks or exclaims only a word or two (often curses). Such a response is usually obtained only by physical stimulation rather than a verbal stimulus, although occasionally a patient will shout obscenities or call relatives’ names for no apparent reason.
- **2 = Incomprehensible sounds** – The patient’s response consists of groans, moans, or indistinct mumbling and does not contain any intelligible words.

- **1 = No verbal response** – Prolonged and, if necessary, repeated stimulation does not produce any phonation.

Additional Information

- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.
- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

ON ADMISSION (GCS-MOTOR RESPONSE)

Assessment of the stimulus necessary to elicit motor response, assessed within 30 minutes or less of ED/hospital arrival.

- **6 = Obeys Command** – This requires an ability to comprehend instruction, usually given in some form of verbal command, but sometimes by gestures and writing. The patient is required to perform the specific movements requested. The command is given to hold up two fingers (if physically feasible); the patient should respond appropriately. (1986- If the patient is unable to move, i.e., due to paralysis, appropriate response can be evaluated by command to blink the eyes.
- **5 = Localizes pain** – If the patient does not obey commands, a painful stimulus is applied, e.g., firm pressure to the nailbed or sternum for five seconds. Patient reaches to and/or tries to remove source of pain.
- **4 = Withdraws** – After painful stimulation all of the following occur: Elbow, flexes, rapid movement, no muscle stiffness, arm is drawn away from the trunk.
- **3 = Flexion response** – After painful stimulation all of the following occur: Elbow flexes, slow movement, accompanied by stiffness, forearm and hand held against the body, limbs assume hemiplegic position.
- **2= Extension response** – After painful stimulation all of the following occur: Legs and arms extend, accompanied by stiffness, internal rotation of shoulder and forearm.
- **1 = No motor response.**

Additional Information

- Documentation of “paralyzed” is equivalent to 1.
- Documentation of “alert and oriented x 3” is **not** equivalent to a GCS of 15.
- If an incomplete GCS is recorded on the ED flowsheet, record as many of the GCS items as are available.
- DO NOT record all “U”s if only one variable is missing.
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown
- Record the appropriate components and enter the total score, if available.
- Do not derive these variables from record entries.

- The only exception is when a GCS of 3 [1,1,1] or 15 [4,5,6] is recorded in the medical record.

ON ADMISSION - GCS QUALIFIERS - Matches NTDB Initial ED/Hospital GCS Assessment Qualifiers

1 = Patient chemically sedated or paralyzed

2 = Obstruction to the patient's eye

3 = Patient intubated

4 = Valid GCS – Patient was not sedated, not intubated, and did not have obstruction to eye

- Examples of paralytic drugs include: succinylcholine, anectine, vecuronium, norcuron, pancuronium, pavulon, atracurion, tracrion, rocuronium, zemuron, metocurine, metubine, gallamine, flaxedil, mivacurium, mivacron, doxacurium, nuromax, pipecuronium, arduan

Additional Information

Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.).

If an intubated patient has recently received an agent that results in neuromuscular blockade such that a motor or eye response is not possible, then the patient should be considered to have an exam that is not reflective of their neurologic status and the chemical sedation modifier should be selected.

Neuromuscular blockade is typically induced following the administration of agent like succinylcholine, mivacurium, rocuronium, (cis)atracurium, vecuronium, or pancuronium. While these are the most common agents, please review what might be typically used in your center so it can be identified in the medical record.

Each of these agents has a slightly different duration of action, so their effect on the GCS depends on when they were given. For example, succinylcholine's effects last for only 5-10 minutes.

Please note that first recorded/hospital vitals do not need to be from the same assessment.

Check all that apply.

NTDB element added in 2017

ON ADMISSION - PUPILLARY RESPONSE

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

- 1 = Both reactive
- 2 = One reactive
- 3 = Neither reactive

Additional Information

- Collect on patients with at least one injury in AIS head region
 - NTDB element added in 2016
-

ON ADMISSION INTUBATED WITH ARTIFICIAL AIRWAY

Applies to all means of artificial airway, not just mechanical ventilation, within 30 minutes or less of ED/hospital arrival

- **1 = Patient has an artificial airway (nasotracheal, endotracheal, EOA, cricothyroidotomy, needle, surgical, King, LMA or combi-tube).**
- **2 = Patient does not have an artificial airway.**

Additional Information

- This item applies to all means of artificial airway, not just mechanical ventilation.
- Record “1” if the patient was intubated at the time the clinical data elements (Pulse, Respiratory Rate, Systolic Blood Pressure, and GCS) were evaluated.
- The patient does not have to be intubated and placed on a ventilator for a yes response.
- Record “2” if the patient was not intubated, or was intubated after the initial assessment.

ON ADMISSION - IS PATIENT’S RESPIRATORY RATE CONTROLLED? (BAGGING OR VENTILATOR)

On admission at your facility – is the patient’s respiratory rate being controlled?

1 = Yes

2 = No

Additional Information

- If the actual respiratory rate is not recorded, then the controlled rate must be recorded.

ON ADMISSION CONTROLLED RESPIRATORY RATE

If the patient’s respiratory rate is being controlled what is the value of the controlled rate? Must be documented within 30 minutes or less of ED/hospital arrival.

Additional Information

- If the response to the previous question is yes, record the controlled rate
- The controlled rate is never **00**
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown

ON ADMISSION - TEMPERATURE

First recorded temperature upon admission to the ED/hospital within 30 minutes or less of ED/hospital arrival

- **1 = Fahrenheit**
- **2 = Celsius**

Additional Information

- Record in Fahrenheit or Celsius.
- If not documented within 30 minutes or less of ED/hospital arrival, enter ‘U’ for unknown
- In the case of a direct admit (patient bypasses the ED), record the patient’s first documented temperature upon arrival.
- Example: If admission temperature is 98.7 measured orally, then record **098.7** in **2**.
- This element will skip if the response to “Temperature” is unknown or left blank.

ON ADMISSION – TEMPERATURE ROUTE OF MEASUREMENT

Record the route of measurement

- **1 = Rectal**
- **2 = Oral**
- **3 = Axillary**
- **4 = Tympanic (ear)**
- **5 = Core (Foley, esophageal)**
- **6 = Skin (Wand run across forehead, strip applied to skin)**

Additional Information

- Example: If admission temperature is 98.7 measured orally, then record **098.7** in **2**.
- This element will skip if the response to “Temperature” is unknown or left blank.

ON ADMISSION – WEIGHT AND UNIT OF MEASUREMENT

Record weight of patient of admission

- **1 = Pounds**
- **2 = Kilograms**

Additional Information

- Record weight in kilograms or pounds on admission.
- Please indicate which measurement is used to record the weight.
- This element is required for pediatrics and burns, but optional for adults.
- Example: If admission weight is 150 pounds, then: Weight **150.0** in **1**.
- Example: If admission weight is 2.0 kilograms, then: Weight **002.0** in **2**.
- “Unit of Measurement” will skip if the response to “Weight” is unknown or left blank.

BMI (Body Mass Index)

(Auto Calculation)

- Utilizes NTDB Initial ED/Hospital height and PTOS Weight elements to calculate BMI

~~ON ADMISSION – ETOH/BAC (BLOOD ALCOHOL CONTENT) Deleted for 2017 – utilize NTDB Element – On Admission - Alcohol Screen and On Admission - Alcohol Screen Results~~

~~Record in **Mg/dl**, the alcohol level measured **at your facility**~~

~~**ETOH and drug screen must be drawn within 24 hours of ED admission in order for the value to be captured in the registry.**~~

~~**Additional Information**~~

- ~~• **.1 = 100 Mg/dl**~~
- ~~• If the ETOH is documented as < 10 the response should be recorded as “000” (negative).~~
- ~~• Example: If admission ETOH/BAC is 270% then: ETOH/BAC = **270**.~~
- ~~• Example: If over 1,000, use 998 and note over 1,000 in the comment section. ETOH/BAC = **998**.~~
- ~~• If ETOH is negative, use **000**, If ETOH is not drawn, record **III**.~~

- ~~Also record III if blood should not have been drawn.~~
- ~~If the test was ordered, the blood was drawn and the value was unknown at the time of reporting, record UUU.~~
- ~~Recording of ETOH results from an autopsy report is intended for patients who die in the ED or shortly thereafter.~~

ON ADMISSION – ALCOHOL SCREEN

A blood alcohol concentration (BAC) test was performed on the patient within 24 hours after first hospital encounter.

1 = Yes

2 = No

ON ADMISSION – ALCOHOL SCREEN RESULTS

First recorded blood alcohol concentration (BAC) results within 24 hours after first hospital encounter.

- Collect as X.XX standard lab value (e.g. 0.08).
- Record BAC results within 24 hours after first hospital encounter, at either your facility or the transferring facility.
- The null value "Not Applicable" is used for those patient who were not tested.

ON ADMISSION – DRUG SCREEN/(CLINICIAN ADMINISTERED Y/N)

Record drugs or groups of drugs for which the patient tested positive
ETOH and drug screen must be drawn within 24 hours of ED admission in order for the value to be captured in the registry.

0 = Not tested

1 = None

2 = COC (Cocaine)

3 = PCP (Phencyclidine)

4 = BZO (Benzodiazepines)

5 = BAR (Barbiturate)

7 = AMP (Amphetamine)

8 = THC (Cannabinoid)

9 = TCA (Tricyclic Antidepressant)

10 = mAMP (Methamphetamine)

11 = MDMA (Ecstasy)

12 = MTD (Methadone)

13 = OPI (Opioid)

14= OXY (Oxycodone)

15 = Other

U = Unknown

If other, specify _____

Additional Information

- Record up to six drugs.
- If the drug that was found to be positive is documented as being clinician administered either at your facility or prior to arrival at your facility record as “1” (yes) in the space within the parenthesis.
- If the drug that was found to be positive is not documented as being clinician administered either at your facility or prior to arrival at your facility record a “2” (no) in the space within the parenthesis.
- If a drug screen was completed as negative, record “1”.
- Items 1 through 9 should be selected only once.
- If the response to a drug is a “0”, “1”, or “U”, the clinician administered portion will automatically skip.
- Recording of Drug Screen results from an autopsy report is intended for patients who die in the ED or shortly thereafter.

WAS THE FIRST SET OF VITAL SIGNS (PULSE, RR, SYSTOLIC BP, AND GCS) TAKEN WITHIN THE FIRST 10 MINUTES OR LESS OF PATIENT’S ARRIVAL TO ED?

- **1 = Yes**
- **2 = No**

Additional Information

- If the initial value for pulse, respiratory rate, systolic BP and GCS were documented within 10 minutes or less of the patient’s arrival to the ED then the response should be 1 (yes).
- If any of the initial values for pulse, respiratory rate, systolic BP and GCs were documented greater than 10 minutes after the patient’s arrival to the ED then the response should be 2 (no).

WHEN WAS THE INITIAL NUTRITION ASSESSMENT PERFORMED?

(REQ FOR BURN PTS AT BURN CTRS)

Record the appropriate response as to when the initial nutrition assessment was performed

- **0 = Not Done**
- **1 = Within 24 hours**
- **2 = 25-48 hours**
- **3 = 49-72 hours**
- **4 = Over 72 hours**

Additional Information

- This is the initial consultation by the nutritionist or appropriate nursing staff.
- This question will skip if the patient died in the ED, or was transferred out of the ED.
- The response to this question must be based on the time the patient was admitted to the ED.

WHEN WAS NUTRITION INITIALLY STARTED?

(REQ FOR BURN PTS AT BURN CTRS)

Record the date and time in which nutrition was initially started

- **0 = Not Done**
- **1 = Within 24 hours**
- **2 = 25-48 hours**
- **3 = 49-72 hours**
- **4 = Over 72 hours**

Additional Information

- The software will automatically calculate and show the range of time as noted above.
- If no date and time are available, but the range in which the nutrition was started is known, record the range from the menu above.
- This element is to be completed when the nutrition started, not when the order was written.
- Use of vitamins and minerals as nutrition are excluded.
- This question will be skipped if the patient died during the ED phase.
- This question will be skipped if the patient was transferred out of the ED.
- This question will be skipped if the previous nutrition question was answered with a response of "0" or "1".

TYPE OF NUTRITION

(REQ FOR BURN PTS AT BURN CTRS)

Record the initial type of nutrition the patient was receiving

- **1 = Oral**
- **2 = Enteral**
- **3 = Parenteral**

Additional Information

- Record up to 3 types.
- This question will be skipped if the patient died during the ED phase.
- This question will be skipped if the patient was transferred out of the ED.
- This question will be skipped if the previous nutrition question was answered with a response of "0" or "1".

The **following element and audit filters (4, 5 and 6)** will automatically skip if the patient is a direct admit and bypasses the ED. As noted in the Process of Acute Care section, "if patient was a direct admission, record the admission date and time for **both** Date and Time Entered ED and Date and Time Transported to Post ED Destination." If the Date and Time Entered ED and Date and Time Transported to Post ED Destination are different you will be required to answer the following elements.

To respond to Audit Filters 4, 5 and 6 when the Time Transported to Post ED Destination is unknown, the response may be determined based on when the patient is documented as being at their final destination from the ED. For example, if the last set of vital signs on the flowsheet are documented at

12:10 and the nursing documentation shows that the patient has arrived to the floor at 12:30 then it can be determined that the patient left the ED between 12:10 and 12:30 and because that time is less than 60 minutes the audit filter can be answered appropriately. Had that time been greater than 60 minutes, the audit filters could still be answered appropriately.

DATE AND TIME OF ‘ORDER TO CHANGE VITAL SIGNS’ TO GREATER THAN ONE HOUR

Record the date and time of the physician’s order to change the vital signs to greater than one hour

Additional Information

- Collected as MM/DD/YYYY, Collected as HH:MM, as military time
- After completion of a diagnostic workup and determination of a clinical care plan, a physician can indicate the frequency of vital signs and neurological checks by a time and written physician order in the medical record
- Example: Q 4-hour vital signs and neurological checks while the patient is waiting to be transported to a med/surg unit. If the frequency of the patient’s vital signs is not changed to greater than one hour, the response should be “1”s
- This element only applies to the patient’s stay prior to their final post ED destination

IS THERE SEQUENTIAL NEUROLOGICAL DOCUMENTATION ON ED RECORD OF TRAUMA PATIENT WITH DIAGNOSIS OF SKULL FRACTURE, INTRA-CRANIAL INJURY, OR SPINAL CORD INJURY? (FLTR 4)

(Optional Audit Filter)

- **1 = Yes**
- **2 = No**
- **3 = Head or spinal cord injury not present**

Additional Information

- An example of an intracranial injury is a concussion. ICD-10_CM codes include category S06 (S06.0 – S06.9). (The ICD-9-CM codes for intracranial injuries, which queue for this filter, are 850.xx, 851.xx, 852.xx, 853.xx, and 854.xx.)
- Sequential neurological documentation is defined as **at least hourly** documentation of Glasgow Coma Score, pupil size and reactivity, and motor power of each of the four extremities. Motor power of the extremities requires documentation of the patient’s ability to move extremities symmetrically and with equal strength. **All three variables must be documented for a Yes response.** If the patient is chemically paralyzed a pupil size and reactivity must still be documented in addition to documentation of “paralyzed” because the pupils are not affected by paralytic drugs.
- Hourly neurological documentation is expected during the entire emergency department/resuscitative phase (the resuscitative phase is the time between ED arrival and Time Transported to Post ED Destination) unless there is a written physician order in the medical record changing the neurological documentation to greater than 1 hour. If there is a physician order changing the neurological documentation to greater than 1 hour, then

sequential neurological documentation will be based on that order. (For example, every 2 hours or every 4 hours.) The time of next neurological documentation following the physician order will be based on the time of the last documented neurological checks.

- Ex. if the physician order changing neurological documentation to every 2 hours is written at 14:00 and the last neurological checks were documented at 13:30, then another set of neurological checks must be documented by 15:30 for a yes response.

IS THERE HOURLY DOCUMENTATION BEGINNING WITH ED ARRIVAL? (FILTER 5)

(Optional Audit Filter)

- **1 = Yes**
- **2 = No**

Additional Information

- Hourly chart documentation (**every 60 minutes**) of respirations, blood pressure, and pulse must be present from time of arrival in the ED, including time spent in radiology, up to admission to the floor, step-down unit, ICU, OR, death in the ED, or transfer to another facility. Ex. if the patient arrives in the ED at 12:05 p.m. and the first blood pressure, pulse and respiratory rate are documented at 12:10 p.m., another blood pressure, pulse, and respiratory rate must be documented by 1:10 p.m. for a yes response.
- The documentation of “asystole” is equivalent to the documentation of respirations, blood pressure and pulse for the purposes of Audit Filter 5.

DID PATIENT LEAVE ED WITH A DISCHARGE GCS <=8? (FLTR 6)

- **1 = Yes**
- **2 = No**
- **3 = Patient died in the ED**
- **U = No discharge GCS is documented**

Additional Information

- For a “Yes” or “No” response, a final GCS (≤ 8) must be documented within one hour (60 minutes) of Time Transported to Post ED Destination, unless there is a written physician order changing the neurological documentation to greater than 1 hour.
- The time of the discharge GCS documentation will be based on the physician order. Ex. if the physician order changing neurological documentation was for every 2 hours, then a discharge GCS must be documented within 2 hours of Time Transported to Post ED Destination for a “Yes” or “No” response.

IF YES, DID PATIENT LEAVE WITH DEFINITIVE AIRWAY?

- **1 = Yes**
- **2 = No**

Additional Information

- This question must be answered only if the response to the question above is “1” (yes)

SECTION V: OUTCOME DATA

DISCHARGE STATUS (FLTR 21)

Record the status of the patient upon discharge from the hospital submitting this data

- **6 = Patient was discharged alive**
- **7 = Patient died**

Additional Information

- Should have no unknowns

DATE OF DEATH/DISCHARGE/TRANSFER

Record the date (month/day/year) the patient expired, was discharged alive, or was transferred

Additional Information

- Collected as MM/DD/YYYY

TIME OF DEATH/TRANSFER

Record the time patient expired or was transferred to another acute care facility (trauma center, burn center, other)

Additional Information

- Collected as HH:MM, as military time
- This should be the actual time the patient was pronounced or declared brain dead and not necessarily the time the death note was recorded in the medical record

TOTAL DAYS IN ICU

The total number of days at any time during the hospitalization in the ICU

Additional Information

- An ICU is defined as a unit with patient to nurse ratio not larger than 2:1
- The total number of days at any time during the hospitalization in the ICU is determined by subtracting the date of admission to the ICU from the date discharged from the ICU
- For patients admitted to the ICU, then died the same day, ICU days = 001
- No ICU days = 000
- If the item does not apply, complete with 0's not 1's
- An ICU used as a PACU should not be counted as an ICU day
- Count the patient at the highest level (ICU vs. step down) for each day
- Please reference examples provided in Appendix 14 – ICU/Stepdown Days Calculation Examples to ensure accurate calculations for both PTOS and NTDB 'Total Days in ICU' element.

TOTAL DAYS IN STEP DOWN UNIT

The total number of days at any time during the hospitalization in the step down unit

Additional Information

- A step down unit is defined as a unit with patient to nurse ratio not larger than 4:1
- Count the actual number of days the patient spent some time in the step down unit

- If the patient was transferred from the ICU to a step down unit, the day of the transfer counts as an ICU day
- Enter patients who spent some time but less than 24 hours in step down unit as one (1) day
- If the patient is transferred from a lower level of care (i.e. med/surg floor) to the step down unit, the day counts as a step down day
- No step down unit days = 000
- If the item does not apply, complete with 0's not 1's
- Please see Appendix 14 for examples
-
- Please reference examples provided in Appendix 14 – ICU/Stepdown Days Calculation Examples to ensure accurate calculations for both PTOS and NTDB 'Total Days in Step Down Unit' element.

TOTAL HOSPITAL DAYS (AUTO CALCULATION)

The total number of days the patient was hospitalized at your institution

Additional Information

- This element is ***automatically calculated*** by subtracting the date of admission to the ED from the date of discharge from the hospital when the patient is admitted and discharged within the same month
- Patient admitted as an inpatient and discharged the same day, total hospital days equal one 001
- Patients admitted one day and discharged the next have one total hospital day 001
- Patients transferred to another trauma center or facility from the ED have one total hospital day 001
- Patients who die in the Emergency Department total hospital days is zero 000

TOTAL VENTILATOR DAYS

The total number of days the patient was mechanically ventilated

Additional Information

- Only record the total number of days that the patient was mechanically ventilated during the inpatient stay
- If the patient was mechanically ventilated only for surgery, this does not count as a ventilator day
- Determine the total number of days the patient was mechanically ventilated by finding the difference between the starting and ending day
- If on for a portion of a day, record one day
- Record 000 if the patient was not on a vent at all
- BiPAP (bilevel positive airway pressure) days do not count as ventilator days
- If the patient was placed on a ventilator multiple times during the hospitalization, record the total number of days that the patient was on the ventilator during the entire hospital stay

DISCHARGE DESTINATION

The destination of the patient on formal discharge

1 = Home	2 = Other Hospital
4 = Rehabilitation Center	5 = Skilled Nursing Facility
6 = Burn Center	7 = Psychiatric Facility
8 = Legal Authority	9 = Drug or Alcohol Rehab
10 = Other Supervised Residential Facility	11 = AMA
12 = Homeless	13 = Transitional Care Unit
14 = Pennsylvania Trauma Center	15 = Out of State Trauma Center
16 = Long Term Care Acute Care Center	17 = Hospice
18 = Foster Care	

Additional Information

- See Appendix 8 for more information on Discharge Destination choices
- The discharge destination comment field may be used to further describe the patient's destination
- This element will be skipped if the patient died
- If a burn patient is discharged or transferred to a burn center that is also a trauma center the "Discharge Destination" should be "6" for burn center
-

DISCHARGE TO FACILITY NUMBER

Six-digit number assigned to each institution by the Pennsylvania Trauma Systems Foundation

- Refer to the appropriate facility list located at ptsf.org to determine the facility number:
 - Acute Care Hospitals (includes discharge destination 2 - other hospital; discharge destination 14 thru 16 - trauma centers, LTACs and; discharge destination 6 - burn center from the Discharge Destination list above)
 - Skilled Nursing Facilities (includes discharge destination 5 - skilled nursing facility from the Discharge Destination list above)
 - Personal Care Home (includes discharge destination 10 - other supervised residential facility from the Discharge Destination list above)
 - Rehabilitation Facilities (includes discharge destination 4 - rehabilitation center from the Discharge Destination list above)
 - Psychiatric Facilities (includes discharge destination 7 - psychiatric facility from the Discharge Destination list above)

Additional Information

- If the patient is discharged from your facility's acute care unit to your facility's rehab unit or psych unit, record the discharge facility number for your institution
- If the discharge facility is not listed, contact the Foundation for the appropriate code
- Numbers have been added to the list for out-of-state institutions such as: New York, New Jersey, Ohio, Delaware, Virginia, West Virginia, and Maryland

- For institutions beyond the neighboring states use the numbers “74” followed by all “8”s
- This question will automatically skip if the response to “Discharge Destination” is a 1,8,9,11 or 12

OCCURRENCES

An occurrence is defined as an unexpected event directly affecting patient care

See Appendix 9

Additional Information

- Record up to 10 occurrences.
- These are complications that arise after admission to the trauma center; if no complications, enter 01 in the first slot and leave the other slots blank
- All occurrences (diagnosis and/or symptom descriptive must be documented in the patient record by a physician and confirmed by the definition of the specific occurrence.
- Suspected exacerbation of a premorbid condition should not be coded as an occurrence unless specified by a physician. Registry staff is encouraged to consult your Trauma Director or Program Manager for guidance.
- Only the initial incidence of the occurrence should be recorded in the registry for those cases in which the same occurrence is sustained by the patient more than once during the hospitalization.
- Record all appropriate occurrences.
- Record the date and location of the initial diagnosis of the occurrence. If the response is “01” (none) the Date and Location elements will be automatically skipped. For location, choose from the list below:
 - 1 = ED
 - 2 = OR
 - 3 = ICU
 - 4 = Med/Surg floor
 - 5 = Step-down Unit (Step-down from ICU)
 - 6 = Radiology
 - 7 = Nuclear Medicine
 - 8 = Burn Unit
 - 9 = PMR (Physical Medical Rehabilitation)
 - 10 = Minor Surgery Unit
 - 13 = PACU (Post Anesthesia Recovery Unit)
 - 14 = Postmortem
 - 15 = EMS Provider (optional)
 - 16 = Referring Facility (optional)
 - 17 = Special Procedure Unit
 - 18 = Angiography

WERE THERE MORE THAN 10 OCCURRENCES?

- 1 = Yes
- 2 = No

DID PATIENT HAVE DISCHARGE DIAGNOSIS OF CERVICAL SPINE FRACTURE, SUBLUXATION OR NEURO DEFICIT NOT ADDRESSED ON ADMISSION? (FLTR 20)

- 1 = Yes
- 2 = No

Additional Information

- A positive discharge diagnosis requires, for this filter, that there be diagnostic evidence of injury
- All internal injuries (fractures and organ injuries) must be confirmed by x-ray, CT, MRI/NMR, ultrasound, surgery, or autopsy
- “Not Addressed on Admission” means that it was not picked up on in the Emergency Department/Resuscitative Phase of Care (The Resuscitative phase is the time between ED arrival and Time Transported to Post ED Destination)

SOURCE OF FINAL ANATOMICAL DIAGNOSES – RETIRED FOR 2017

~~For each source which contributed to the final anatomical diagnoses obtained for each patient; which confirmed or ruled out a trauma diagnosis~~

~~see Appendix 10~~

- ~~• 1 = Yes~~
- ~~• 2 = No~~

Additional Information

- ~~• Each source should be completed for all patients: Autopsy, CT, Surgery, MRI~~
- ~~• Enter “1” for each source which contributed to the final anatomical diagnoses obtained for each patient~~
- ~~• Enter “2” if the source did not contribute to the final diagnoses.~~
- ~~• Respond to all four sources as applicable~~
- ~~• Do not record any item as “U”~~
- ~~• For patients who did not die, the autopsy field will be skipped~~
- ~~• Contribution to the final anatomical diagnoses includes those sources which confirmed or ruled out a trauma diagnosis~~
- ~~• Example: An ultrasound of the peripheral vascular system to rule out Deep Vein Thrombosis is not counted, since DVT is not a traumatic injury)~~
- ~~• If not available within six weeks, submit data with all available information within the six week time frame~~
- ~~• You may resubmit data with autopsy results within six months of the patient’s death.~~
- ~~• Sources can be from the referring facility~~
- ~~• CT scans from previous visits to your facility can be considered a source of diagnoses if used by your facility during the current visit~~

FUNCTIONAL STATUS AT DISCHARGE

- Each item should be assessed as close to discharge as possible, but not earlier than 48 hours prior to discharge
- Each item must be complete

- THIS INFORMATION MUST BE DOCUMENTED BY A MEMBER OF THE PATIENT CARE TEAM (PHYSIATRIST, NURSE, THERAPIST) AND IS TO BE ABSTRACTED FROM THE MEDICAL RECORD. THE PATIENT'S FUNCTIONAL STATUS **IS NOT** TO BE INFERRED FROM THE DAILY PHYSICIAN AND NURSES NOTES
- The documented functional status of the patient should reflect the actual status of the patient leaving the acute care setting. If the patient has a functional disability unrelated to the recent trauma, the condition should be taken into account when a functional measure is made
- Pediatric patients greater than two years of age should be assessed in a manner appropriate to the expected abilities of normal development for the patient's age
- These fields will be automatically completed with zeros if the response to "Age" is one in "Years" (1) or if the response to "Age" is in "Months" (2) or in "Days" (3). This is because zero should always be the response if the patient is less than 2 years (24 months) old
- These fields will be automatically skipped if the response to "Post ED Destination" is a "7" (transfer out) or "10" (home), or if the patient died (Discharge Status = 7)
- Patients who leave the facility AMA, the appropriate response for each FIM element would be an I for inappropriate

FUNCTIONAL STATUS AT DISCHARGE - FEEDING

- 4 = **Complete Independence**: Eats from dish and drinks from a cup presented in customary manner on table or tray, opens cartons, pours liquids, cuts meat, and butters bread.
- 3 = **Independent with Device**: Requires assistance in preparation, e.g., opening cartons, pouring liquids, cutting meat, OR requires an adaptive or assistive device, e.g., straw, spork, rocking knife, BUT is able to manage meal without assistance, e.g., brings food to mouth, chews, and swallows.
- 2 = **Modified Dependence**: Is able to take food and drink by mouth but requires supervision or minimal to moderate physical assistance during drinking or eating. Patient does not rely on other means of alimentation, such as parenteral or gastrostomy feedings.
- 1 = **Complete Dependence**: Requires maximal or total assistance to take meals by mouth, OR does not take food by mouth and must rely on other means of alimentation, such as parenteral or gastrostomy feedings.
- 0 = **Pediatric**: less than 2 years (24 months) of age **only**.

FUNCTIONAL STATUS AT DISCHARGE - LOCOMOTION

- 4 = **Complete Independence**: **Walks** a minimum of 150 feet without assistive devices. Does not use a wheelchair.
- 3 = **Independence with Device**: **Walks** a minimum of 150 feet, but with a brace (orthosis) or prosthesis on leg, adaptive shoes, cane, crutches, or walkerette. **If not walking**, operates a manual or electric wheelchair independently for a minimum of 150 feet, turns around, maneuvers the chair to a table, bed or toilet, maneuvers on rugs and over door sills.
- 2 = **Modified Dependence**: **If walking**, requires supervision or minimum to moderate physical assistance to go 150 feet, OR walks independently only a short distance (minimum of 50 feet). **If not walking**, operates a manual or electric wheelchair independently for short distances (a minimum of 50 feet).
- 1 = **Complete Dependence**: Requires maximal or total assistance to walk 150 feet, OR does not walk or operate a manual or electric wheelchair independently for 50 feet. Includes patients restricted to bed with no locomotive abilities.
- 0 = **Pediatric**: Less than 2 years (24 months) of age **only**.

FUNCTIONAL STATUS AT DISCHARGE - EXPRESSION

- 4 = **Complete Independence**: Expresses complex ideas intelligibly and fluently, verbally or non-verbally, including signing and writing.
- 3 = **Independence with Device**: Expresses complex ideas with mild difficulty, but communicates basic needs and wants without difficulty, may require an augmentative communication device or system.
- 2 = **Modified Dependence**: Expresses thoughts in a telegraphic or confused pattern, or requires prompts, cues or assistance of another person.
- 1 = **Complete Dependence**: Does not express basic needs and wants consistently, even with an augmentative communication device or system, despite prompting.
- 0 = **Pediatric**: Less than 2 years (24 months) of age *only*.

FUNCTIONAL STATUS AT DISCHARGE – TRANSFER MOBILITY

- 4 = **Complete Independence**: *If walking*, approaches, sits, and gets up to a standing position from a chair or bed. Performs transfer safely. *If in a wheelchair*, approaches a bed or chair, locks brakes, lifts foot rests, and performs either a standing pivot or sliding transfer and returns. Performs transfer safely.
- 3 = **Independence with Device**: Uses adaptive or assistive device such as a sliding board, a lift, grab bars, special seat, brace, or crutch. Performs transfer safely.
- 2 = **Modified Dependence**: Requires assistance in set up, or adaptive or assistive device, OR requires supervision of minimal to moderate physical assistance to perform transfer safely.
- 1 = **Complete Dependence**: Requires maximal to total assistance to perform transfer.
- 0 = **Pediatric**: Less than 2 years (24 months) of age *only*.

FUNCTIONAL STATUS AT DISCHARGE – SOCIAL INTERACTION

Includes skills related to participation with others in therapeutic and social situations
Represents how one deals with one's own needs *together* with the needs of others

- 4 = **Complete Independence**: Interacts appropriately with staff, other patients, and family members, e.g., controls temper and is aware that words and actions have impact on others.
- 3 = **Independence with Device**: Interacts appropriately with staff, other patients, and family members in structured situations and environments, may take more than a reasonable time to adjust in a social situation.
- 2 = **Modified Dependence**: Requires some supervision (monitoring, cueing, coaxing) under stressful or unfamiliar situations.
- 1 = **Complete Dependence**: Interacts appropriately less than 25% of the time or not at all, may need restraint.
- 0 = **Pediatric**: Less than 2 years (24 months) of age *only*.

ORGANS DONATED

Identify the specific organs donated

0 = None

1 = Heart

2 = Liver

3 = Kidney

7 = Skin

8 = Bone

9 = Soft Tissue (ligaments, tendons, etc.)

10 = Heart Valves

- 4 = Cornea (eye)
- 5 = Pancreas
- 6 = Lungs
- 11 = Blood Vessels
- 12 = Spleen

Additional Information

- You can record up to 10 organs in the spaces provided

DISCHARGE WEIGHT AND UNIT OF MEASUREMENT

(REQ FOR BURN PTS AT BURN CTRS)

Record the patient's weight at discharge and the unit of measurement

- 1 = Pounds
- 2 = Kilograms

BURN PATIENT FOLLOW-UP

(REQ FOR BURN PTS AT BURN CTRS)

Where was the follow-up care scheduled? Record the place in which the burn patient will receive follow-up care

- 1 = None
- 2 = Burn outpatient services, specify _____
- 3 = Other burn service, specify _____
- 4 = Other, specify _____

WAS BURN PATIENT READMITTED DUE TO DEVELOPMENT OF AN OCCURRENCE?

(REQ FOR BURN PTS AT BURN CTRS)

Was the burn patient readmitted to your facility due to development of an occurrence

- 1 = Yes
- 2 = No

Additional Information

- If yes, record the reason(s) for readmission:
 - 1 = Pain Management Requiring Narcotics (IM or IV)
 - 2 = Wound Infection Requiring IV Antibiotics (e.g. Cellulitis)
 - 3 = Grafting Procedures (with Integra or Autograft)
 - 4 = Temporary Wound Covering Procedure (e.g. Biobrane)
 - Update the initial record submitted to the Foundation for the patient's traumatic injury, by entering the information above. The record will then be sent as a re-transfer.

BURN WOUND MANAGEMENT

(REQ FOR BURN PTS AT BURN CTRS)

Record all type(s) of wound management, applied to any site throughout the hospital stay

- 00 = No dressings or creams applied
- 01 = Acticoat
- 02 = Allograft (cadaver)
- 03 = Amniotic membrane
- 04 = Autograft
- 05 = Betadine (e.g. Providone-iodine)

- 06 = Cultured epithelial cells
- 07 = Elase (Fibrinolysin/Desoxyribonuclease)
- 08 = Integra
- 09 = Mafenide Acetate cream
- 10 = Mafenide Acetate solution (e.g. Sulfamylon)
- 11 = Non-adherent wound veil (e.g. Exudry, N-terface)
- 12 = Santyl (Collagenase, Biozyme-c)
- 13 = Santyl and Polysporin (Collagenase & Polysporin)
- 14 = Silver Nitrate
- 15 = Silver Sulfadiazine (e.g. Silvadene, Flamazine)
- 16 = Synthetic film (e.g. OpSite, Bioclusive, Tegaderm)
- 17 = Synthetic gels (e.g. Omiderm, Deliperm, Duoderm)
- 18 = Synthetic laminates (e.g. Biobrane, Epigard, Transcyt)
- 19 = Travase (Sutilains)
- 20 = Triple antibiotic cream/ointment (e.g. Nystatin + 1% Hydrocortisone + Bactriban)
- 21 = Xenograft
- 22 = Other, specify _____

Additional Information

- Record all type(s) of wound management, applied to *any site* throughout the hospital stay. (i.e. if Silvadene is initially applied to a burn wound, and the dressing is changed to Sulfamylon several days later, record both Silvadene and Sulfamylon.)

AUTOPSY REQUESTED – REMOVED FOR 2017

Documentation available in the medical record that an autopsy report was requested to be completed on the expired patient

• ~~1 = Yes~~

• ~~2 = No~~

Additional Information

- ~~Enter yes if there is documentation in the medical record that an autopsy was requested.~~
- ~~Use “yes” even when the autopsy was requested but declined by the coroner/medical examiner~~

AUTOPSY RESULTS AVAILABLE

Autopsy results are available for review and documentation

• 1 = Yes

• 2 = No

• 3 = Declined by Coroner/ME

Additional Information

- Enter yes if the autopsy report/results are available
- Enter yes if the case was presented by the **coroner /medical examiner** in review
- They do not need to be filed in the medical record
- **Use “3” if declined by the coroner**

CONSULTS

Specialties that are consulted on the trauma patient during their hospital stay

0 = None	
1 = Trauma	17 = Internal Medicine
2 = Neurosurgery	18 = Nephrology
3 = Orthopaedics	19 = Neurology
4 = Thoracic Surgery	20 = Nutrition
5 = Vascular Surgery	21 = Occupational Therapy
6 = Pediatrics	
46 = Pediatrician	22 = Ophthalmology
7 = Oromaxillo Facial Service	23 = Oral Surgery
8 = OB/GYN	24 = Physiatry
9 = Burn Services	25 = Physical Therapy
10 = Cardiology	26 = Plastic Surgery
11 = Cardiothoracic Surgery	27 = Psychiatry
12 = Drug/Alcohol Counselor	28 = Pulmonary
13 = ENT	29 = Social Services
14 = Family Medicine	30 = Speech Therapy
15 = General Surgery	31 = Urology
16 = Infectious Disease	32 = Case Management
99 = Other	33 = Palliative Medicine
	34 = Pastoral Care
	35 = Geriatrics/Gerontology

If 99 (Other), specify the specialty.

•

Additional Information

- This field should never be blank. If no consults performed, enter '0' (none).
- Trauma centers that are also burn centers must record all consults performed on a burn patient.
- For all other patients, treated at all trauma centers (which includes those trauma centers that are also burn centers), only Speech Therapy, Occupational Therapy, Physical Therapy, and Physiatry consults are to be recorded.
- Enter the date of the initial evaluation of Physical Therapy, Occupational Therapy, Speech Therapy, and Physiatry.
- If there are several consults performed by the same specialty, record only the initial consult on the patient by that specialty.
- Record up to 15 consults.
- Provider specific information (i.e. identification numbers) will not download to the Foundation.
- Choose provider specialties from the list above.
- The Consults screen has been expanded to include advanced practitioner specialties.
- Click the 'Copy from ED Response' button to copy Specialty, Called Date/Time, and PGY from entries on the ED Response tab.

ABUSE - WAS THE PATIENT BEING EVALUATED FOR ABUSE?

Workup for physical or sexual abuse of patient at your facility due to presenting injury event.

- **1 = Yes**
- **2 = No**

Additional Information

- Information may be obtained from a social work consult, internal abuse, abuse consult team, specific tests (such as a skeletal survey), or consults to diagnose physical abuse (such as ophthalmology to rule-out retinal hemorrhages. Abuse was reported to civil authorities.
- If response to this question is 2 (No), all other questions in this section will be auto-skipped
- Exclude those patients that have a history of ~~child~~ abuse for several years – needs to be presenting incident

ABUSE - WAS A REPORT OF SUSPECTED ABUSE MADE TO CIVIL AUTHORITIES?

- **1 = Yes**
- **2 = No**
 - If Yes, record method of reporting abuse:
Phone or written report to civil authorities of suspected abuse of patient due to injury event
 - **1 = Phone**
 - **2 = Written**

Additional Information

- Phone would include reports to abuse hotlines; Example: ChildLine in PA, PA elder abuse hotline through Dept. of Aging. Check if it is documented that a report was made for this episode in your institution or made prior to patient presenting to your hospital.
- Written would include written reports filed with Child Protection Agencies; Example: CY47 forms submitted in PA; Geriatric Abuse Agencies, Example: PA Dept. of Aging, Area Agencies on Aging, PA Coalition Against Domestic Violence (PCADV). Check if it is documented that a report was made for this episode in your institution or made prior to patient presenting to your hospital.
- Both selections of phone and written may be documented for the data element
- Exclude those patients that have a history of ~~child~~ abuse for several years – needs to be presenting incident

ABUSE – WAS THERE A POLICE INVESTIGATION INITIATED BECAUSE OF THIS EPISODE?

Documentation of an initiated police investigation of suspected abuse of patient due to injury event

- **1 = Yes**
- **2 = No**

Additional Information

- State yes if documented in the medical record
- Exclude those patients that have a history of ~~child~~ abuse for several years – needs to be presenting incident

ABUSE – WAS PATIENT DISCHARGED TO A DIFFERENT CAREGIVER THAN WHEN THEY WERE ADMITTED?

Patient discharged to a different caregiver than when they were admitted to your facility

- **1 = Yes**
- **2 = No**

Additional Information

- If response is 2 (No) next question will be auto-skipped
- Exclude those patients that have a history of ~~child~~ abuse for several years – needs to be presenting incident

ABUSE – WAS PATIENT DISCHARGED TO A DIFFERENT CAREGIVER THAN WHEN THEY WERE ADMITTED? IF YES.....

Response to patient discharged to a different caregiver than when they were admitted is a value of (1) for yes

- **1 = Other parent**-If patient was cared for by the mother but discharged to a divorced Father or step-parent or vice versa
- **2 = Other relative and who**_____ - Would include grandparents, aunts, uncles or other relatives (son, daughter, niece, nephew) of the family
- **3 = Other and who**_____ - Select this if patient ~~child~~ is sent home with a friend, Godmother or other unusual circumstances
- **4 = Foster Care, Nursing Care, Home Health Care**-Foster Care is defined as care of children on a full-time, temporary basis by persons other than their own parents. Such children are usually wards of the state. They may be placed by a state-approved agency in group homes, institutions (such as residential treatment centers), or with families who receive some payment toward care. The child's parents may retain their parental rights, and the child may ultimately return home.

Additional Information

- If response to above question is 2 (No) this question will be auto-skipped
- Exclude those patients that have a history of ~~child~~ abuse for several years – needs to be presenting incident

SECTION VI: FINAL ANATOMICAL DIAGNOSES

FINAL ANATOMICAL DIAGNOSES

List of injuries diagnosed by physician examination and/or documented on x-ray, CT, MRI/NMR, ultrasound, operative and autopsy reports

See Appendix 10

Additional Information

- Injury description must follow TRICODE guidelines
- Injuries at referring facilities can be included in diagnoses, do not precede these injuries with an @
- Injuries should be recorded only when the diagnosis is certain
- A maximum of 27 ICD-10-CM/ICD-9-CM codes may be recorded

EXTENT OF BODY SURFACE INVOLVED T31-T32 (ICD-10-CM) /E948 (ICD-9)(REQ FOR BURN PTS AT BURN CTRS)

The ICD-10-CM categories T31-T32/ ICD-9-CM category of 948 classifies burns by extent of body surface involved and by the extent of 3rd degree burn

Additional Information

- Review the ICD-10-CM /ICD-9-CM coding book
- Use “I”s if the inhalation injury is the only burn related injury

INITIAL CARBOXYHEMOGLOBIN

(REQ FOR BURN PTS AT BURN CTRS)

Record the highest carboxyhemoglobin taken from a **burn patient**

Additional Information

- Record the highest carboxyhemoglobin taken from a **burn patient**
- If the patient is a referral, and documentation is available from the referring facility, record the highest level obtained at the referring facility in lieu of the highest recorded at your facility

PAO2

(REQ FOR BURN PTS AT BURN CTRS)

Record the value as recorded on the first arterial blood gas obtained

Additional Information

- Record the value as recorded on the first arterial blood gas obtained
- If PaO₂ is not drawn, record “I”s. If the test was ordered and the value was not documented at the time of reporting, record “U”s
- This element will be skipped if the response to “Type of Injury” is a “1” or a “2”

FIO2

(REQ FOR BURN PTS AT BURN CTRS)

Record the value as recorded on the first arterial blood gas obtained

Additional Information

- Record the value as recorded on the first arterial blood gas obtained.
- If FIO₂ is not drawn, record “I”s. If the test was ordered and the value was not documented at the time of reporting, record “U”s.
- This element will be skipped if the response to “Type of Injury” is a “1” or a “2”.

[P/F RATIO] (AUTO CALCULATION)

(REQ FOR BURN PTS AT BURN CTRS)

The P/F ratio is PaO₂ divided by FIO₂

Additional Information

- The P/F ratio is PaO₂ divided by FIO₂

WAS A BRONCHOSCOPY PERFORMED

(REQ FOR BURN PTS AT BURN CTRS)

- **1 = Yes**
- **2 = No**

Additional Information

- This element will be skipped if the response to “Type of Injury” is a “1” or a “2”.
- If yes, record the appropriate response to the sub-questions below
 - Was there upper airway edema?
 - 1 = Yes
 - 2 = No
 - Was there soot below the cords?
 - 1 = Yes
 - 2 = No
 - Was there erythema?
 - 1 = Yes
 - 2 = No

LUND AND BROWDER CHART

(REQ FOR BURN PTS AT BURN CTRS)

Additional Information

- This element will be skipped if the response to “Type of Injury” is a “1” or a “2”
- If there is no documentation of a burn in a particular body area enter “0”s
- If the percentage of 2nd or 3rd degree area burned in a particular body area is unknown then record with “U”s
- Totals will automatically be filled in if every field contains a numerical value. If one of the fields contains “U”s then the total must be entered manually
- Leave no fields blank
- See **Glossary C** (Tab 4) for the Max percentage values of the specific areas by age

Area	Max	%2nd	%3rd	Total	ICD Codes	
					%2nd	%3rd
Head	[]	_____	_____	[]	[]	[]
Neck	[]	_____	_____	[]	[]	[]
Ant. Trunk	[]	_____	_____	[]	[]	[]
Post. Trunk	[]	_____	_____	[]	[]	[]
R. Buttock	[]	_____	_____	[]	[]	[]
L. Buttock	[]	_____	_____	[]	[]	[]
Genitalia	[]	_____	_____	[]	[]	[]
R.U. Arm	[]	_____	_____	[]	[]	[]
L.U. Arm	[]	_____	_____	[]	[]	[]
R.L. Arm	[]	_____	_____	[]	[]	[]
L.L. Arm	[]	_____	_____	[]	[]	[]
R. Hand	[]	_____	_____	[]	[]	[]
L. Hand	[]	_____	_____	[]	[]	[]
R. Thigh	[]	_____	_____	[]	[]	[]
L. Thigh	[]	_____	_____	[]	[]	[]
R. Leg	[]	_____	_____	[]	[]	[]
L. Leg	[]	_____	_____	[]	[]	[]
R. Foot	[]	_____	_____	[]	[]	[]
L. Foot	[]	_____	_____	[]	[]	[]
Total		_____	_____	_____	[]	
		2nd	3rd	2nd+3rd		

[Burn P(s) _____] [Alternate Burn P(s) _____]

Alternate Burn P(s) is a calculation developed by O'Keefe et al in 2001

SECTION VII: PROCEDURE CODES

PROCEDURE CODES

Record both operative and non-operative procedures performed in your facility in the combined procedure code section. Record the location in which these procedures are performed as well as the date and time

Operative Events – To determine what operative procedures were done, the date and time; used in site survey process; used in research; used in filter calculations; can be used to determine use of internal resources by the trauma center

Non-Operative Events – To determine what procedures are being performed for patient care; used in survey process and research; used in filter calculations; can be used internally for PI

Field Values – See Appendix 11

1 = ED (procedures listed under Appendix 11 must be recorded in the procedure section for this phase of care)

2 = OR

3 = ICU

4 = Med/surg floor

5 = Step-down Unit (Step-down from ICU)

6 = Radiology

7 = Nuclear Medicine

8 = Burn Unit

9 = PMR (Physical Medical Rehabilitation)

10 = Minor Surgery Unit

13 = PACU (Post Anesthesia Recovery Unit)

14 = Postmortem

15 = EMS (optional)

16 = Referring Facility (optional)

17 = Special Procedure Unit

18 = Angiography

19 = Pediatric Unit (in-house)

Additional Information

- A. The definition of surgery is “a procedure to control hemorrhage, repair the injury, and/or restore the anatomy its normal function”. This definition does include sutures because they are a repair of injury. However, this definition does not include casts, splints or traction. Maintenance or support procedures are excluded. Sutures used to close an operative approach are not required to be recorded. Record only initial procedures

Report operative or invasive procedures performed in your facility. Record the ICD-10-PCS procedure code for the operative or invasive procedure performed, the operation number (to distinguish between procedures performed during different operative events, **(each procedure done during the same operative event should have the same operation number)**), the date it was performed, the time it was performed (incision time) and the location in which the procedure was performed. Entering the physician service that performed the procedure and physician identification

number is optional. Physician identification numbers will not be transferred to the Foundation. Follow established ICD-10-PCS coding guidelines for sequencing procedures.

- B. Record procedures from Appendix 11, **regardless of the location in the hospital** during the patient's hospital stay. Record the ICD-10-PCS procedure code, and the location in your facility in which the procedure was performed. **Record the date that the procedure was first performed, and time (military) when the procedures from the list in Appendix 11 are performed and the service performing the procedure is required for ED procedures only.** You may include any additional procedures not on the list, if you so choose.

Registrars are no longer required to capture a craniotomy code if the craniotomy is done as an operative approach. There is a separate question pertaining to craniotomy on a following page.

- C. Postmortem (14) should be used for diagnostic procedures only, including postmortem x-rays, CT scans, skeletal surveys, and ophthalmologic exams. No organ removal procedures should be captured.
- Note – these procedures are not part of the Appendix 11 procedures and therefore are not required to be captured.
- D. If no procedures performed during acute care phase, please select 'n/a' from procedure code drop-down

WERE THERE MORE THAN 84 PROCEDURES?

- 1 = Yes
- 2 = No

Additional Information

- You will only be able to access this question if the entire procedure section is full.

DID PATIENT SUSTAIN A GUNSHOT WOUND TO THE ABDOMEN AND RECEIVE NON-OPERATIVE MANAGEMENT? (FLTR 8)

Any patient sustaining a gunshot to the abdomen which is managed non-operatively. The entrance wound does not necessarily need to be in the abdomen. If the bullet or bullet fragments end up in the abdomen then the patient is considered to have a GSW to the abdomen for this element

- 1 = yes
- 2 = no
- 3 = patient did not have a gunshot wound to the abdomen

Additional Information

- If the patient dies before receiving an operative procedure for the GSW to the abdomen then the patient has received non-operative management and the response should be "1" (yes)

WAS UNPLANNED REINTUBATION REQUIRED WITHIN 48 HOURS OF EXTUBATION? (FLTR 18)

- 1 = yes
- 2 = no
- 3 = patient not intubated, or only intubated for surgical procedure

Additional Information

- If the patient was intubated for a surgical procedure, was extubated and required intubation within 48 hours during the hospital stay, count as a reintubation
- If the patient dies, is transferred out or discharged from the hospital while intubated, and they were not previously reintubated within 48 hours, use "2" (No)
- This needs a response whether extubation was too soon by the physician or if self-extubated by patient
- This also includes failed extubation and misadventures
- Anything inserted into the pharynx is considered an intubation, therefore a Combi-tube, Laryngeal Mask Airway, and King airway are considered intubation
- Do not include airways which were changed due to air leaks or if nasal airways were appropriately changed to oral airways
- If the patient is intubated greater than 6 hours post operatively then the response should be either yes or no depending whether or not the patient was reintubated within 48 hours.
- If the patient was intubated for less than 6 hours post operatively and the patient was not reintubated within 48 hours of extubation the response should be "3" (patient not intubated, or only intubated for surgical procedure)
- Patients who are reintubated via an emergent tracheotomy should be responded to as "yes". Patients who initially have a tracheostomy are taken off the ventilator and then put back on the ventilator via the tracheostomy are not considered reintubated

FILTER 10 (AUTO CALCULATION)

Additional Information

- Patients with epidural or subdural brain hematoma receiving craniotomy greater than 4 hours after arrival at ED, excluding those performed for intracranial pressure (ICP) monitoring
- This filter is automatically calculated, and refers to *initial* treatment

DID PATIENT HAVE A CRANIOTOMY FOR TRAUMA (EXCLUDING VENTRICULOSTOMY AND ICP)?

The surgery must be performed for traumatic injury only

- **1 = Yes**
- **2 = No (craniotomy performed, but not performed for traumatic injury)**
- **3 = No craniotomy performed (i.e. Inappropriate)**

Additional Information

- A burr hole should be considered a ventriculostomy, not a craniotomy, therefore answer 'No' to 'Did pt. have a craniotomy for trauma?'

WAS MASS TRANSFUSION PROTOCOL INITIATED?

- **1 = Yes**
- **2 = No**

MIDLINE SHIFT

>5mm shift of the brain past its center line within 24 hours after time of injury

1 = Yes

2 = No

Additional Information

- Collect on patients with at least one injury in AIS head region

DID PATIENT HAVE AN ABDOMINAL, INTRATHORACIC, VASCULAR, OR CRANIAL SURGERY? (FLTR 13)

The surgery must be performed for traumatic injury only

- **1 = Yes**
- **2 = No**

Additional Information

If yes, record the appropriate response to the sub-questions below:

- For the sub-questions, enter “3” for any of the surgeries that the patient did not have performed
- (Ex.: If the patient only had cranial surgery performed, enter “1” for cranial surgery and “3” for abdominal, intrathoracic and vascular surgery)
- An exploratory laparotomy/laparoscopy is considered abdominal surgery
- Open cardiac massage should not be considered intrathoracic surgery for the purpose of this audit filter
- ICP insertion or ventriculostomy should not be considered cranial surgery for the purpose of this audit filter
- Repair of a depressed skull fracture should be considered cranial surgery for the purpose of this audit filter

WAS INITIAL ABDOMINAL SURGERY PERFORMED > 24 HOURS?

(REQ FOR ALL TRAUMA CTRS)

- **1 = Yes**
- **2 = No**
- **3 = Surgery not required**

WAS INITIAL INTRATHORACIC SURGERY PERFORMED > 24 HOURS?

(REQ FOR ALL TRAUMA CTRS)

- **1 = Yes**
- **2 = No**
- **3 = Surgery not required**

WAS INITIAL VASCULAR SURGERY PERFORMED > 24 HOURS?

(REQ FOR ALL TRAUMA CTRS)

- **1 = Yes**
- **2 = No**
- **3 = Surgery not required**

WAS INITIAL CRANIAL SURGERY PERFORMED > 24 HOURS?

(REQ FOR ALL TRAUMA CTRS)

- 1 = Yes
- 2 = No
- 3 = Surgery not required

WAS INITIAL ABDOMINAL SURGERY PERFORMED <=24 HOURS?

(OPTIONAL FOR ALL TRAUMA CTRS)

- 1 = Yes
- 2 = No
- 3 = Surgery not required

Additional Information

- Element colored **blue** indicating element is downloaded to the State, but is an optional element

WAS INITIAL INTRATHORACIC SURGERY PERFORMED <= 24 HOURS?

(OPTIONAL FOR ALL TRAUMA CTRS)

- 1 = Yes
- 2 = No
- 3 = Surgery not required

Additional Information

- Element colored **blue** indicating element downloaded to State but is an optional element

WAS INITIAL VASCULAR SURGERY PERFORMED <=24 HOURS?

(OPTIONAL FOR ALL TRAUMA CTRS)

- 1 = Yes
- 2 = No
- 3 = Surgery not required

Additional Information

- Element colored **blue** indicating element downloaded to State but is an optional element

WAS INITIAL CRANIAL SURGERY PERFORMED <=24 HOURS?

(OPTIONAL FOR ALL TRAUMA CTRS)

- 1 = Yes
- 2 = No
- 3 = Surgery not required

Additional Information

- Element colored **blue** indicating element downloaded to State but is an optional element

IF PATIENT HAD ONE OR MORE OF THE FOLLOWING CONDITIONS, DID HE/SHE UNDERGO A PROCEDURE FOR THE CONDITION?

(OPTIONAL FOR ALL TRAUMA CTRS)

Tension Pneumothorax; Pericardial Tamponade; Epidural or Subdural Hemorrhage; Hemothoraces; Hemoperitoneum; Ruptured Aorta

- 1 = Yes
- 2 = No
- I = Not applicable

Additional Information

- Answer I's for all conditions that do not apply; will not transfer to POPIMS
- Answer with a 1 (Yes) or 2 (No) for those conditions that do apply
- Responses are not downloaded to the Central Site
- Element colored **white** indicating element **NOT** downloaded to State

DID PATIENT SUSTAIN A STAB WOUND TO THE ABDOMEN AND RECEIVE NON-OPERATIVE MANAGEMENT?

(OPTIONAL FOR ALL TRAUMA CTRS)

- 1 = Yes
- 2 = No
- I = Not applicable

SECTION VIII: PAYOR CLASS

PAYOR CLASS

Record the payor class for

- a. Primary _____ Comments _____
b. Secondary _____ Comments _____

Primary Payor Class – To determine source of payment; used for trauma center’s internal review; used at PTSF to determine expense to trauma center

Secondary Payor Class – To determine source of payment for trauma center’s internal review; used at PTSF to determine expense to trauma center

Field Values

The categories are based on HC4 standard categories:

- 01 = Medicare Indemnity:** All care rendered and patient revenue received from the Medicare Program. Ex. Medicare
- 02 = Medicare Managed Care:** All care rendered and patient revenue received on behalf of Medicare managed care participants when reimbursements are administered by a commercial managed care organization. Ex. GHP Gold, Keystone Senior Blue, Sterling
- 03 = Medicaid Indemnity:** All care rendered and patient revenue received from the Medicaid Program. Ex. Medicaid
- 04 = Medicaid Managed Care:** All care rendered and patient revenue received on behalf of Medicaid managed care participants when reimbursements are administered by a commercial managed care organization. Ex. Gateway
- 05 = Commercial Insurer Indemnity:** All care reimbursed by all indemnity (fee-for – service) health insurance plans including Blue Cross and Keystone. Ex. Blue Cross, Blue Shield, Aetna
- 06 = Commercial Insurer Managed Care:** All care reimbursed by all managed care plans including hospital/health care system plans and Blue Cross and Keystone. Managed care includes licensed HMO, PPO and POS plans that either require some form of preauthorization or limits care to in-network providers. Ex. Geisinger Health Plan, BC Keystone, HealthAmerica
- 07 = Other Third-party:** All other care reimbursed by third-party payors other than health insurance companies and managed care organizations, such as direct payments by employers or associations, auto insurance, workers compensation, and government programs (other than Medicare and Medicaid) Ex. CHAMPUS, Worker’s Comp, Black Lung, Auto
- 08 = Self Pay:** All care where no third-party payor has been identified and bills for service have been rendered to the patient.

SECTION XI: RECEIVING FACILITY DX

RECEIVING FACILITY INJURY NARRATIVE

List of injuries diagnosed by referring facility.

Additional Information

- Required for level 4 centers, optional for level 1-3 centers
- Setup option for level 1-3 centers to enable/disable Rec Fac Dx tab
- Will skip if d/c destination is not a burn center (6) or trauma center (14,15)

RECEIVING FACILITY ISS

ISS Score calculated by receiving facility.

Additional Information

- Required for level 4 centers, optional for level 1-3 centers
- Setup option for level 1-3 centers to enable/disable Rec Fac Dx tab
- Will skip if d/c destination is not a burn center (6) or trauma center (14,15)

SECTION X: DATA COMPLETION

DATA COMPLETION

Is the data entry completed?

- **1 = yes**
- **2 = no**

Additional Information

This is an optional element

- Element colored **blue** indicating element downloaded to State

APPENDICES

APPENDIX 1: TIME CONVERSION TABLE

1 AM	0100	1 PM	1300
2 AM	0200	2 PM	1400
3 AM	0300	3 PM	1500
4 AM	0400	4 PM	1600
5 AM	0500	5 PM	1700
6 AM	0600	6 PM	1800
7 AM	0700	7 PM	1900
8 AM	0800	8 PM	2000
9 AM	0900	9 PM	2100
10 AM	1000	10 PM	2200
11 AM	1100	11 PM	2300
12 Noon	1200	12 Midnight	0000*

*For COLLECTOR purposes, 12 Midnight must be entered 00:00, not 24:00.

Example: If the patient was injured at 9:23 PM, the Injury Time entered would be 21:23. If the patient was injured at 12:30 AM, the time entered would be 00:30.

APPENDIX 2: CALCULATIONS

To calculate Fahrenheit to Celsius, use the following equation:

$$\frac{^{\circ}\text{F} - 32}{1.8} = ^{\circ}\text{C}$$

To calculate Celsius to Fahrenheit:

$$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$$

To calculate RTS, three weighted values are used: Glasgow Coma Scale (GCS) = .9368, Systolic Blood Pressure (SBP) = .7326 and Respiratory Rate (RR) = .2908.

<u>GCS</u>	<u>SBP</u>	<u>RR</u>	<u>Coded Value</u>
13-15	> 89	10-29	4
9-12	76-89	> 29	3
6-8	50-75	6-9	2
4-5	1-49	1-5	1
3	0	0	0

Coded values are defined and used to calculate RTS.

Using the following example, calculate RTS.

	<u>Raw Value</u>	<u>Coded Value</u>
GCS	8	2
SBP	120	4
RR	30	3

$$\text{RTS} = (2)(.9368) + (4)(.7326) + (3)(.2908)$$

$$\text{RTS} = 5.6764$$

Calculating the Injury Severity Score (ISS)

The ISS is the sum of the squares of the highest AIS code in each of the three most severely injured ISS body regions. The six body regions of injuries used in the ISS are:

1. Head or neck
2. Face
3. Chest
4. Abdominal or pelvic contents
5. Extremities or pelvic girdle
6. External

Example:

ISS Body Region	Injury	AIS Code	Highest AIS	AIS ²
Head/Neck	Cerebral Concussion Complete transection internal carotid artery	140602.3 320212.4	4	16
Face	Ear laceration	210600.1	1	
Chest	Fx L ribs (3,4)	450220.2	2	
Abdomen	Retroperitoneal hematoma	543800.3	3	9
Extremities	Fx femur	851800.3	3	9
External	Multiple Abrasions	910200.1	1	

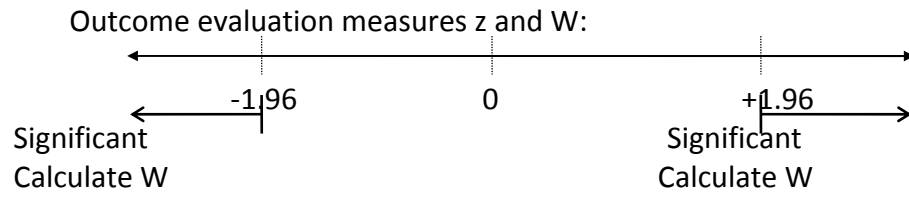
ISS = 34

TRISS

TRISS – combines RTS, ISS, patient age and type of injury (blunt or penetrating) to calculate P(s). A P(s) > 0.5 for non-survivors and a P(s) < 0.5 for survivors are statistically “unexpected outcomes”.

z and W Statistics

z measures the statistical significance of differences between the actual number of survivors among a set of patients and the number expected from outcome norms. When considering survival, a z score ≤ -1.96 would indicate that the hospital has statistically significantly less survivors than expected norms. A z $\geq +1.96$ is a desired result that indicates the hospital has statistically significantly more survivors than expected norms.



A positive or negative w is the number of survivors more or less respectively than would be expected from the outcome norms per 100 patients treated.

APPENDIX 3: LUND & BROWDER CHART

<i>Adult</i>	<i>Birth to 1 yr</i>	<i>1-4 years</i>	<i>5-9 years</i>	<i>10-14 years</i>	<i>15 years</i>	<i>Adult</i>	<i>2 degree</i>	<i>3degree</i>	<i>Total</i>
Head	19	17	13	11	9	7	_____	_____	_____
Neck	2	2	2	2	2	2	_____	_____	_____
Ant. Trunk	13	13	13	13	13	13	_____	_____	_____
Post. Trunk	13	13	13	13	13	13	_____	_____	_____
R. Buttock	2.5	2.5	2.5	2.5	2.5	2.5	_____	_____	_____
L. Buttock	2.5	2.5	2.5	2.5	2.5	2.5	_____	_____	_____
Genitalia	1	1	1	1	1	1	_____	_____	_____
R.U. Arm	4	4	4	4	4	4	_____	_____	_____
L.U. Arm	4	4	4	4	4	4	_____	_____	_____
R.L. Arm	3	3	3	3	3	3	_____	_____	_____
L.L. Arm	3	3	3	3	3	3	_____	_____	_____
R. Hand	2.5	2.5	2.5	2.5	2.5	2.5	_____	_____	_____
L. Hand	2.5	2.5	2.5	2.5	2.5	2.5	_____	_____	_____
R. Thigh	5.5	6.5	8	8.5	9	9.5	_____	_____	_____
L. Thigh	5.5	6.5	8	8.5	9	9.5	_____	_____	_____
R. Leg	5	5	5.5	6	6.5	7	_____	_____	_____
L. Leg	5	5	5.5	6	6.5	7	_____	_____	_____
R. Foot	3.5	3.5	3.5	3.5	3.5	3.5	_____	_____	_____
L. Foot	3.5	3.5	3.5	3.5	3.5	3.5	_____	_____	_____
				TOTAL			_____	_____	_____

APPENDIX 4: COUNTY CODES

01	Adams	35	Lackawanna
02	Allegheny	36	Lancaster
03	Armstrong	37	Lawrence
04	Beaver	38	Lebanon
05	Bedford	39	Lehigh
06	Berks	40	Luzerne
07	Blair	41	Lycoming
08	Bradford	42	McKean
09	Bucks	43	Mercer
10	Butler	44	Mifflin
11	Cambria	45	Monroe
12	Cameron	46	Montgomery
13	Carbon	47	Montour
14	Centre	48	Northampton
15	Chester	49	Northumberland
16	Clarion	50	Perry
17	Clearfield	51	Philadelphia
18	Clinton	52	Pike
19	Columbia	53	Potter
20	Crawford	54	Schuylkill
21	Cumberland	55	Snyder
22	Dauphin	56	Somerset
23	Delaware	57	Sullivan
24	Elk	58	Susquehanna
25	Erie	59	Tioga
26	Fayette	60	Union
27	Forest	61	Venango
28	Franklin	62	Warren
29	Fulton	63	Washington
30	Greene	64	Wayne
31	Huntingdon	65	Westmoreland
32	Indiana	66	Wyoming
33	Jefferson	67	York
34	Juniata		

Neighboring State Codes

68 = Delaware
69 = Maryland
70 = New Jersey

71 = New York
72 = Ohio
73 = West Virginia

74 = Other State
75 = Virginia
79 = Other Country

APPENDIX 5: (ICD-10-CM) PLACE OF OCCURRENCE OF THE EXTERNAL CAUSE

Y92.0 – *Non-institutional (private) residence*

Includes: Single-family house, mobile home, apartment, boarding-house

Y92.1 – *Institutional (nonprivate) residence*

Includes: Children’s home/orphanage, nursing home, military base, prison, reform school, school dormitory

Y92.2 – *School, other institution, public admin area*

Includes: School (private, public, state), religious institution, hospital, public admin. Building, cultural building, movie house/cinema

Y92.3 – *Sports/athletics area*

Includes: Basketball/squash/tennis court, baseball/football/soccer field, skating rink, swimming pool (public)

Y92.4 – *Street, highway, other paved roadway*

Includes: Street, highway, interstate, parkway, state road, local residential/business street, exit/entrance ramp, sidewalk, parking lot, bike path

Y92.5 – *Trade/service area*

Includes: Bank, restaurant/café, supermarket/store/market, shop, airport, bus station, railway station, highway rest stop, gas station, ambulatory health (amb. Surgery center, physician office, urgent care center), office building, casino, garage (commercial), hotel, radio/tv station, shopping mall, warehouse

Y92.6 – *Industrial/construction area*

Includes: Building under construction, dock/shipyard, factory/industrial yard, mine/pit, oil rig

Y92.7 – *Farm*

Includes: Barn, chicken coop, farm field, orchard

Y92.8 – *Other*

Includes: Transport vehicle (excludes transport accidents V00-V99) – car, bus, truck, airplane, boat, train, subway

Wilderness area – desert, forest, swamp, mountain, marsh, prairie

Recreation area – public park, amusement park, beach/seashore, campsite, zoo

Military training ground, railroad track, slaughter house, derelict house

APPENDIX 5: (ICD-9)PLACE OF INJURY E849 CODE DESCRIPTIONS

E849.0 - Home

includes: apartment, boarding house, farm house, home premises, house (residential), non-institutional place of residence, private driveway, garage, garden, home, or walk, swimming pool in private house or garden, yard of home

excludes: home under construction but not yet occupied (E849.3), institutional place of residence (E849.7)

E849.1 - Farms

includes: farm buildings and farm land under cultivation

excludes: farm house and home premises of farm (E849.0)

E849.2 - Mine and quarry

includes: gravel pit, sand pit, tunnel under construction

E849.3 - Industrial place and premises

includes: building under construction, dockyard, dry dock, factory building or premises, garage (place of work), industrial yard, loading platform (factory) (store), plant (industrial), railway yard, shop (place of work), warehouse, workhouse

E849.4 - Place for recreation and sport

includes: amusement park, baseball field, basketball court, beach resort, cricket ground, fives court, football field, golf course, gymnasium, hockey field, holiday camp, ice palace, lake resort, mountain resort, playground (including school playground), public park, race course, resort NOS, riding school, rifle range, seashore resort, skating rink, sports ground, sports palace, stadium, swimming pool (public), tennis court, vacation resort

excludes: that in private house or garden (E849.0)

E849.5 - Street and highway

E849.6 - Public building

includes: building (including adjacent grounds) used by the general public or by a particular group of the public, such as: airport, bank, café, casino, church, cinema, clubhouse, courthouse, dance hall, garage building (for car storage), hotel, market (grocery or other commodity), movie house, music hall, nightclub, office, office building, opera house, post office, public hall, radio broadcasting station, restaurant, school (state) (public) (private), shop (commercial), station (bus) (railway), store, theater

excludes: home garage (E849.0), industrial building or workplace (E849.3)

E849.7 - Residential institution

includes: children's home, dormitory, hospital, jail, old people's home, orphanage, prison, reform school

E849.8 - Other specified places

includes: beach NOS, canal, caravan site NOS, derelict house, desert, forest, harbor, hill, lake NOS, mountain, parking dock, place, pond or pool (natural), prairie, public place NOS, railway line, reservoir, river, sea, seashore NOS, stream, swamp, trailer court, woods

E849.9 - Unspecified place

APPENDIX 6: TYPE OF BURN INJURY:

(Only required for burn patients at burn centers)

- **Chemical:** used for burns caused by contact with caustic chemicals, which are not on fire (gasoline, for example, is highly flammable, but contact with liquid gasoline would be recorded here). Other common chemical injuries would include contact with acids (hydrochloric, hydrofluoric, sulfuric, muriatic, etc.) alkalis (sodium hydroxide, lye, cement, oven cleaner), or petroleum compounds (gasoline, kerosene).
 - **1000, Acids:** includes contact with any acid, including hydrochloric, sulfuric, hydrofluoric, muriatic, glass etching compounds, radiator cleaners, etc.
 - **1001, Alkali:** this includes contact with any alkaline compound: sodium hydroxide, lye, oven cleaner, drain cleaner, soda ash, concrete, cement, etc.
 - **1002, Petroleum Products/hydrocarbons:** this includes gasoline, kerosene, benzene, etc. Remember that FIRE resulting from these compounds should be listed as a different category.
 - **1098, Chemical - Other:** this is used to list chemical contact injury of a type other than which is listed here.
 - **1099, Chemical - Unknown:** this is used to list chemical contact injury of an unknown type.
- **Contact Burn**
 - **1100, Contact with hot object:** used for contact burns in which the object was a solid, not on fire (use fire/flame) and not chemical. Examples might include hot exhaust pipes, wood-burning stovetops, walking on hot asphalt, falling into coals, etc.
 - **1101, Hot tar and other non-water liquids:** this includes tar, other liquids not used in the home, or in cooking.
 - **1102, Hot liquid/food related to cooking:** this includes hot food, or hot grease. Tap water is excluded, as is commercial hot water/steam.
- **Electricity:** used for disorders caused by contact with electrical current. Electrical flash burns, in which the patient contact electrical current, should be listed under fire/flame injuries. High voltage industrial injuries, lightning injuries, and children who bite electrical cords are recorded here.
 - **1200, Domestic Wiring/Appliance:** this includes injury from sources of (usually) low-voltage current encountered in the home, or in light injury. This would include flash burns that occur while wiring, electrocutions, burns of the oral commissure in children who bite electrical cords, etc.
 - **1201, Electric power plants and lines:** this denotes high voltage (>1,000 volts) current injuries from main transmission lines and power plants.
 - **1202, Industrial Wiring and machinery:** this denotes work-related accidents involving high-voltage or low-voltage industrial equipment.
 - **1203, Lightning:** burned from a lightning strike.
 - **1298, Other:** this includes other sources of electrical injury which are known but not included here.
 - **1299, Unknown:** this is used for injuries presumed to be of an electrical origin, the source of which is unknown.
- **Fire/flame:** used for any injury that is the result of fire/flame. This includes patients who catch on fire, but also includes flash fires, explosions, house fires, proximity to extreme heat from fires, and inhalation injury from smoke.

- **1300, Burning Bedclothes:** there is a special E-code for patients who are burned when their bedclothes catch on fire. This does not include patients burned in major house fires (those are conflagrations); rather it is meant to include patients burned while smoking in bed, and similar accidents.
- **1301, Conflagration:** (includes burning from conflagration) used for all burn-related injuries which occur as a result of conflagration. Conflagration is an uncontrolled fire, as opposed to a small controlled fire. Examples of conflagrations include house fires, autos that burst into flame, airplane crashes, etc.
- **1303, Controlled/Localized Fire:** denotes an injury that occurs from contact with a fire that is controlled or localized. For example, burning your hand with a candle or cigarette or falling into a campfire. While it is probably true that any fire that burns you is out of control, this choice is used to denote small fires that remain in one place and are easily controlled. The distinction between these fires and 'conflagrations' is arbitrary, but should be made if possible.
- **1304, Explosion from conflagration:** used for patients burned in explosions from uncontrolled fires. Examples may include explosion of a burning propane tank, explosion of a grain elevator, etc.
- **1305, Explosion of Fireworks/gunpowder:** used for patients injured with explosives (as opposed to flammable substances like gasoline). Fireworks, black powder, dynamite, and other explosives apply here. Conflagrations from explosives should be listed as such.
- **1306, Explosive Gas:** used for patients injured in natural gas explosions, and other ignitions of gas, which are NOT considered conflagrations.
- **1307, Fumes from PVC and other material:** If a patient has only an inhalation injury, and the combustible material was PVC or other plastic, use this choice. Example, burning upholstery.
- **1308, Ignition of clothing:** used for injuries in which ignition of clothing defines the mechanism of injury as well as the extent of the fire. A patient whose clothing catches fire in a factory explosion should not be listed here. This category would include patients who play with lighters or matches, patients who catch fire while cooking, etc.
- **1309, Ignition of a highly flammable material:** used for patients burned from the sudden ignition of gasoline or other substances. Examples include: playing with gasoline and matches, priming a carburetor with gasoline, throwing gasoline on a barbeque, etc. Remember that you are specifying how the patient was injured, not how the fire started. Also, this choice should indicate a controlled fire, not a conflagration.
- **1310, Injury from other smoke/fumes (no burn):** this denotes inhalation injury without cutaneous burns. If a patient is burned in a house fire and suffers burns and inhalation injury, you should use 'burning from conflagration' instead. Inhalation injury from steam or from chemicals in the absence of smoke, are excluded.
- **1397, Conflagration - Other/Unspecified:** used for any burn from fire or flame not otherwise classified.
- **1398, Conflagration - Other/specified:** used for unknown or unspecified conflagration related injuries or injuries which are not included in the choices.
- **1399, Conflagration - Unknown:** used only if the burn is known to be caused by fire or flame, but the circumstances are unknown.
- **Radiation:** used for burn caused by radiation from the sun, or radioactive substances. Sunburns are the most common type of injury; thermonuclear military devices would be another example, as would be radiation for malignancy or other disorder.
 - **1400, Lasers:** this includes medical and industrial lasers.
 - **1401, Radioactive isotopes:** this would include isotopes used in laboratory work.

- **1402, Visible and ultraviolet sources:** this includes sunburns, arc welders, suntan lamps, etc.
- **1403, X-rays and other ionizing sources:** this would include radiation therapy, thermonuclear devices, etc.
- **1498, Radiation - Other:** this includes other known sources of radiation.
- **1499, Radiation - Unknown:** this includes unknown sources thought to be ionizing radiation
- **Scald:** used for all scald injuries including: 1) immersion-water (bathtub accidents, children immersed in sinks or basins of water, people who fall into boiling water or thermal pools, etc.; 2) spilling hot water while cooking; 3) automotive radiators; 4) accidents involving industrial steam.
 - **1500, Coffee or tea:** scalded by coffee or tea.
 - **1502, Steam:** this includes inhalation injury from steam.
 - **1503, Tap water:** this includes immersion scalds (bathtubs or sinks) and tap water spills).
 - **1596, Other hot water related to cooking:** this includes hot water used for cooking.
 - **1597, Scald - Other hot water:** this includes hot water used in industry, geothermal water, automobile radiators and other non-domestic water sources.
 - **1598, Scald - Other:** this includes other sources of scalds not listed here.
 - **1599, Scald - Unknown:** this is used to denote a scald injury the source of which is unknown.
- **Skin Disease:** used for dermatologic disorders not related to thermal injury. Toxic epidermal necrolysis, Stevens-Johnson syndrome, acute porphyria, psoriasis, and other disorders would be examples. These are not burns, but are often treated in burn centers.
 - **1600, Toxic Epidermal Necrolysis:** this disorder, also known as erythema multiform or Stevens-Johnson syndrome, is a blistering disorder caused (usually) by exposure to drugs. Antibiotics and anticonvulsants are most common. These disorders are often treated in burn centers.
 - **1698, Skin Disease - Other:** this includes other skin disorders treated in the burn center. This would include the staphylococcal scaled skin syndrome (a disorder that presents somewhat like TEN), mycosis fungoides, pemphigus, lupus, and others.
 - **1699, Skin Disease – Unknown**
- **9998, Other Non-burn:** used for patients treated in burn centers for other conditions: frostbite, soft tissue infection and other such cases would be coded here.
- **9999, Unknown Burn Etiology:** used only for injuries in which the etiology is unknown.

APPENDIX 7: PREHOSPITAL EXAMPLES

1. A BLS and an ALS are both providers at the scene, with BLS arriving first and ALS arriving second. ALS rides in back of BLS truck and continues care during transport. Both the BLS and ALS patient care records are available in the medical record.

The response to “Were scene provider and transport provider the same?” would be no. The response to “Are any scene provider data available?” would be yes. The BLS information would be placed in the scene section because they have the earliest available documented ground EMS information. The ALS transport information would be placed in the transport section. There should be no combining of provider data. The vital signs recorded in the scene section will be from whichever patient care record has the earliest documented vital signs. The vital signs recorded in the transport section will be the initial vital signs documented during transport. Refer to the definitions of Scene and Transport in the Clinical Data section.

The Highest Level of Provider and Highest Level of Care may be ALS for both the scene and transport section.

2. The ALS patient care record that is available in the medical record states that another unit was already at scene when they arrived, but you have no patient care record for that original unit.

The response to “Were scene provider and transport provider the same?” would be yes. The ALS information would be placed in the scene section because they have the earliest available documented ground EMS information. Any BLS information off of the ALS patient care record, which typically only constitutes the ambulance name or number, would not be used. The vital signs recorded in the scene section will be from the ALS patient care record.

The Highest Level of Provider and Highest Level of Care will most likely be ALS.

3. There are no patient care records available in the medical record, but the medical record documentation shows that the patient was brought by ambulance; the ambulance name is sometimes included.

The response to “Were scene provider and transport provider the same?” would be yes. Any information that can be obtained from the medical record should be placed in the scene section. “U”s should be used for any unknown data. The vital signs in the scene section will be blank because the response to “Were the earliest documented vital signs documented prior to the patient leaving the scene of injury?” will be a “3” (no prehospital vital signs documented).

The Highest Level of Provider and Highest Level of Care will be based on the medical record documentation

4. There are no patient care records available, but the medical record documentation shows that the patient was brought by helicopter; the helicopter name is sometimes included. There is no documentation of any other providers. More typical of a transfer-in patient.

The response to “Were scene provider and transport provider the same?” would be no. The response to “Are any scene provider data available?” would be no. Any information that can be obtained from the medical record should be placed in the transport section. The vital signs in the scene section will be blank because the response to “Were the earliest documented vital signs documented prior to the patient leaving the scene of injury?” will be a “3” (no prehospital vital signs documented).

The Highest Level of Provider and Highest Level of Care will most likely be ALS.

Prehospital scenarios can be complicated. The examples provided are guidelines and may not cover all scenarios. Please contact the PTSF for specific questions.

Prehospital Scene Vital Signs Examples

1. BLS arrives first ALS arrives second. BLS patient care record is not available. The ALS patient care record is available. ALS arrived at 12:00 and departed the scene of injury to rendezvous with a helicopter at 12:10. ALS has documentation of vital signs at 12:11. The helicopter patient care record is available. The helicopter departed at 12:20 and has vital signs documented at 12:22 during transport.

SECTION II PREHOSPITAL DATA - Scene	
Paralyzing Drugs (If yes, specify)	2 <input type="text"/>
Pulse Rate/min.	155
Unassisted Respiratory Rate/min	20
Systolic Blood Pressure	72
Eye Opening, Verbal & Motor Response	4 4 5 GCS 13
Intubated with Artificial Airway	2 [RTS] 6.37
Is patient's respiratory rate controlled?	2
Controlled Rate	<input type="checkbox"/>

SECTION II PREHOSPITAL DATA - Transport	
Paralyzing Drugs (If yes, specify)	2 <input type="text"/>
Pulse Rate/min.	170
Unassisted Respiratory Rate/min	18
Systolic Blood Pressure	80
Eye Opening, Verbal & Motor Response	4 5 3 GCS 15
Intubated with Artificial Airway	2 [RTS] 7.10
Is patient's respiratory rate controlled?	2
Controlled Rate	<input type="checkbox"/>

The 12:11 vital signs may now be used because they are the earliest documented vital signs. Transport vital signs are those initially assessed during transport.

2. ALS arrives at scene of injury. The ALS patient care record is not available. A helicopter patient care record is available. The helicopter patient care record shows that the ambulance arrived at the remote landing zone at 10:00. The helicopter patient care record has vital signs documented at 10:12, 10:15 and 10:18. The helicopters depart time was 10:16.

SECTION II PREHOSPITAL DATA - Scene

Paralyzing Drugs (If yes, specify) 2

Pulse Rate/min. 80

Unassisted Respiratory Rate/min 12

Systolic Blood Pressure 60

Eye Opening, Verbal & Motor Response 3 4 3 GCS 10

Intubated with Artificial Airway 2 [RTS] 5.43

Is patient's respiratory rate controlled? 2

Controlled Rate

SECTION II PREHOSPITAL DATA - Transport

Paralyzing Drugs (If yes, specify)	2	<input type="text"/>			
Pulse Rate/min.	90				
Unassisted Respiratory Rate/min	22				
Systolic Blood Pressure	70				
Eye Opening, Verbal & Motor Response	3	5	4	GCS	12
Intubated with Artificial Airway	2			[RTS]	5.43
Is patient's respiratory rate controlled?	2				
Controlled Rate	<input type="checkbox"/>				

The 10:12 vital signs from the helicopter may now be used because they are the earliest documented vital signs. Transport vital signs stay the same from 10:18.

APPENDIX 8: DISCHARGE DESTINATION

- 1 = **Home** - Patient discharged to own home or to significant other's home.
- 2 = **Other Hospital** - Hospital that is **NOT** an accredited trauma center. *Record facility number from Facility Lists located at ptsf.org.*
- 3 = **The choice of 3 (trauma center) was removed effective 1/1/2006 admissions.**
- 4 = **Rehabilitation Center** - A facility which functions to return the trauma patient to his state prior to trauma or to bring him to the most functional state possible. A progressive return of the use of faculties anticipated. *Record facility number from Facility Lists located at ptsf.org.*
- 5 = **Skilled Nursing Facility** - A facility which offers long term care to patients whose functions return very slowly, very slightly, or not at all. Only long term care facilities licensed by the Pennsylvania Department of Health are recognized as skilled nursing facilities. *Record facility number from Facility Lists located at ptsf.org.* If a patient is discharged to a skilled nursing facility which is where the patient lives (their home) then the correct Discharge Destination should be "5" Skilled Nursing Facility.
- 6 = **Burn Center** - A facility with special features to provide care for burn patients. *Record facility number from Facility Lists located at ptsf.org.*
- 7 = **Psychiatric Facility** - *Record facility number from Facility Lists located at ptsf.org.*
- 8 = **Legal Authority** - (jail, youth detention)
- 9 = **Drug or Alcohol Rehab** - *If applicable, record facility number from Facility Lists located at ptsf.org.*
- 10 = **Other Supervised Residential Facility** (progressive care facility, personal care home, shelters, boarding homes, halfway house) - *For personal care homes, record the facility number from Facility Lists located at ptsf.org.*
- 11 = **AMA**
- 12 = **Homeless**
- 13 = **Transitional Care Unit** - *If applicable, record facility number from Facility Lists located at ptsf.org.*
- 14 = **Pennsylvania Trauma Center** – This is a trauma center accredited by The Pennsylvania Trauma Systems Foundation. *Record facility number from Facility Lists located at ptsf.org.*
- 15 = **Out of State Trauma Center** – This is a trauma center not located in the state of Pennsylvania. Neighboring state trauma centers are identified in *Facility Lists located at ptsf.org.* *Record facility number from Facility Lists located at ptsf.org.*
- 16 = **Long Term Acute Care Center** – These facilities are identified in *Facility Lists located at ptsf.org.* *Record facility number from Facility Lists located at ptsf.org.*
- 17 = **Hospice** – (includes palliative care which is another form of end-stage comfort care for the pt)
- 18 = **Foster Care**

APPENDIX 9: OCCURRENCES

NONE

01 = **None:** patient's hospital course has no identifiable clinical problems. When "01" is recorded the Date and Location elements will be automatically skipped.

PULMONARY

20 = **Acute Respiratory Distress Syndrome (ARDS): utilize the NTDB Complication definition for Acute Respiratory Distress Syndrome (ARDS) which states:**

Timing: Within 1 week of known clinical insult or new or worsening respiratory symptoms.

Chest imaging: Bilateral opacities – not fully explained by effusions, lobar/lung collapse, or nodules

Origin of edema: Respiratory failure not fully explained by cardiac failure or fluid overload. Need objective assessment (e.g., echocardiography) to exclude hydrostatic edema if no risk factor present

Oxygenation (at a minimum): $200 < PaO_2 / FiO_2 \leq 300$ With PEEP or CPAP ≥ 5 cmH₂O

21 = **Acute Respiratory Failure:** The need for prolonged (greater than 96 consecutive hours) ventilatory support after a period of normal non-assisted breathing (minimum of 48 hours) or reintubation.

- a. planned - do **not** report (i.e. taken to OR or treatment of inhalation injury)
- b. unplanned - report

22 = **Aspiration/Aspiration Pneumonia:** documented inhalation of gastric contents or other materials followed by clinical and new radiological findings of pneumonitis which requires treatment within 48 hours.

24 = **Fat Embolus Syndrome:** documented diagnosis by an attending physician in a patient with pelvic or extremity fractures and a decreased PO₂.

One of the following must also be present:

1. change in mental status,
2. petechial signs,
3. tachypnea,
4. fat in urine, or
5. decreased platelets.

27 = **Iatrogenic Pneumothorax:** presence of intrapleural air not present on admission radiograph, resulting from treatment or intervention.

28 = **Pulmonary Embolus (PE):** Defined as a lodging of a blood clot in a pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system. Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

100 = **Pneumonia (does not include VAP (ventilator-assisted pneumonia,** which is defined as a patient with evidence of pneumonia that develops during the hospitalization without clinical evidence of inhalation injury.

Patients with pneumonia must meet at least one of the following two criteria:

Criterion 1. Rales or dullness to percussion on physical examination of chest AND any of the following:

- a. New onset of purulent sputum or change in character of sputum
- b. Organism isolated from blood culture
- c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy

Criterion 2. Chest radiographic examination shows new or progressive infiltrate, consolidation,

Cavitation, or pleural effusion AND any of the following:

- a. New onset of purulent sputum or change in character or sputum
- b. Organism isolated from the blood
- c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy
- d. Isolation of virus or detection of viral antigen in respiratory secretions
- e. Diagnostic single antibody titer (IgM) or fourfold increase in paired serum samples (IgG) for pathogen
- f. Histopathologic evidence of pneumonia

CARDIOVASCULAR

34 = **Major Dysrhythmia:** Dysrhythmia requiring drugs or defibrillation. (not resulting in death)

Examples :

- supraventricular tachycardia
- rapid atrial fibrillation
- sustained ventricular tachycardia
- bradycardia requiring pacing

32 = **Extremity Compartment Syndrome:** utilize the NTDB Complication definition for Extremity

Compartment Syndrome, defined as a condition *not present at admission* in which there is documentation of tense muscular compartments of an extremity through clinical assessment or direct measurement of intracompartmental pressure requiring fasciotomy. Compartment syndromes usually involve the leg but can also occur in the forearm, arm, thigh, and shoulder. Record as a complication if it is originally missed, leading to late recognition, a need for late intervention, and has threatened limb viability.

33 = **Deep Vein Thrombosis (DVT):** utilize the NTDB Complication definition for Deep Vein Thrombosis,

which states: The formation, development, or existence of a blood clot or thrombus within the vascular system, which may be coupled with inflammation. This diagnosis may be confirmed by a venogram, ultrasound, or CT. The patient must be treated with anticoagulation therapy and/or placement of a vena cava filter or clipping of the vena cava.

35 = **Myocardial Infarction:** utilize the NTDB Complication definition for Myocardial Infarction, which states:

An acute myocardial infarction must be noted with documentation of any of the following:

Documentation of ECG changes indicative of acute MI (one or more of the following three):

1. ST elevation >1 mm in two or more contiguous leads
2. New left bundle branch block
3. New q-wave in two or more contiguous leads

OR

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

OR

Physician diagnosis of myocardial infarction

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

HEMATOLOGIC/COAGULOPATHY

41 = **Coagulopathy (excluding anticoagulation therapy, coumadin therapy, or underlying hematologic disorders, e.g. hemophilia):** *uncontrolled diffuse bleeding* in the presence of coagulation abnormalities, e.g., increased prothrombin time, increased partial thromboplastin time, decreased platelet count, or

disseminated intravascular coagulation (DIC) requiring treatment, i.e., transfusion of components such as platelets, clotting factors, FFP.

RENAL

50 = **Acute Kidney Injury: utilize the NTDB Complication definition for Acute Kidney Injury, which states:** acute kidney injury (AKI) (stage 3), is an abrupt (~~within 48 hours~~) reduction of kidney function defined as: increase in serum creatinine (SCr) of more than or equal to 3x baseline OR; increase in SCr to ≥ 4 mg/dl (≥ 353.3 μ mol/l) OR; patients > 18 years with a decrease in e GFR to < 35 ml/min per 1.73 m² OR; reduction in urine output of < 0.3 ml/kg/hr for ≥ 24 hrs OR; anuria for ≥ 12 hrs. OR; requiring renal replacement therapy (e.g., continuous renal replacement therapy (CRRT) or periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration). NOTE: If the patient or family refuses treatment (e.g., dialysis) the condition is still considered to be present if a combination of oliguria and creatinine are present. EXCLUDE patients with renal failure that were requiring chronic renal replacement therapy such as periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration prior to injury.

INFECTION/SEPSIS

- 70 = **Empyema:** infection documented by purulent material or positive culture from the pleural space requiring thoracostomy tube drainage.
- 76 = **Sepsis:** documented by a physician with at least two or more of the following conditions (which occur at the same time):
1. core temperature of $> 38^{\circ}$ C or $\leq 36^{\circ}$ C
 2. white blood cell count $> 12,000$ or $< 4,000$ or $> 10\%$ immature bands
 3. positive blood cultures (excluding contaminants)
 4. clinically obvious source of infection
 5. heart rate > 90 beats/min or respiratory rate > 20 breaths/min
- 78 = **Acute sinusitis:** opacification on x-ray or CT with fever and/or positive purulent drainage requiring treatment.
- 79 = **Soft Tissue Infection:** documentation by a physician of cellulitis, gas gangrene, necrotizing fasciitis, or streptococcal myositis requiring treatment.
- 99 = **Wound Infection (traumatic or incisional):** drainage of purulent material from the wound, active treatment of the wound, or administration of antibiotics for the wound.
- An abdominal abscess would not be considered a wound infection and is not applicable as an occurrence.

101 = **Urinary Tract Infection (UTI) (not present on admission, NOT including CAUTI (catheter-associated urinary tract infection):** clean voided or other catheter urine specimen with $\geq 100,000$ organisms/ml on C/S. Physician institutes appropriate therapy for a urinary tract infection

An infection is considered Present on Admission (POA) if the date of event of the NHSN site-specific infection criterion occurs during the POA time period, which is defined as the day of admission to an inpatient location (calendar day 1), the 2 days before admission, and the calendar day after admission. CDC guidelines used as reference.

AIRWAY MANAGEMENT

- 80 = **Esophageal Intubation (Inhouse Only):** endotracheal tube in esophagus and not immediately repositioned. Esophageal location determined by physical exam, x-ray, capnography or endoscopy.
- 69 = **Unrecognized Mainstem Bronchus Intubation:** any endotracheal intubation procedure resulting in definitive placement of the tube in either the right or left mainstem bronchus.
- a. recognized and treated immediately - not reportable
 - b. unrecognized on 2 successive chest x-rays - reportable

GASTROINTESTINAL

- 83 = **GI Bleeding:** blood loss from anywhere in the GI tract, grossly positive nasogastric (NG) aspirate, or grossly positive stool which requires treatment.
- 86 = **Small Bowel Obstruction (SBO): (excluding ileus)** radiographic evidence of dilated loop of bowel with multiple air-fluid levels and confirmed by a surgeon requiring treatment (surgery or NG tube).

NEUROLOGIC

- 64 = **CNS Infection:** CSF aspirate with positive culture and increased white blood cell count

PROCEDURE RELATED

- 91 = **Iatrogenic Organ, Nerve, Vessel:** perforation or injury resulting from treatment or intervention.

DECUBITUS

- 65 = **Dehiscence/Evisceration:** breakdown of fascial closure confirmed by discharge of peritoneal fluid, evisceration or palpable fascial defect. This occurrence pertains to the abdominal area only.
- 94 = **Pressure Ulcer = Decubitus ulcer:** Utilize NTDB Complication definition for Pressure Ulcer, defined as *(Consistent with the National Pressure Ulcer Advisory Panel (NPUAP) 2014. Always use the most recent definition provided by the NPUAP.)* 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. Documentation of Pressure Ulcer must be in the patient's medical record, and must have occurred during the patient's initial stay at your hospital

HYPOTHERMIA

- 46 = **Hypothermia:** (nontherapeutic) rectal or core temperature $\leq 34^{\circ}\text{C}$ or 93.2°F .

If the patient presents to the hospital with hypothermia, the hypothermia is considered a diagnosis. If the hypothermia presents during the hospital stay and is unexpected, the hypothermia is considered an occurrence.

POST-OPERATIVE HEMORRHAGE

- 47 = **Post-Operative Hemorrhage:** requiring operative intervention.

Procedures done in angio to control the hemorrhage should be considered operative interventions and the hemorrhage should be included as an occurrence.

PHARMACOLOGY

- 49 = **Adverse Drug Reaction:** As documented by a physician, plus one of the following:

1. Adversely affects patient care
2. Increases length of stay

3. Increases morbidity and mortality

BURNS

(Only required for burn patients at burn centers)

- 10 = **Burn Graft Loss (of any percentage)**: documented by a physician (includes split thickness graft and free flap loss).
- 11 = **Burn Wound Infection Post Excision**: documented diagnosis by a physician (*after* excision).
- 12 = **Burn Wound Sepsis (occurring in a burn patient; which is related to the burn)**: documented by a physician of drainage of purulent material from the wound, active treatment of the wound, or administration of antibiotics for the wound.
- 13 = **Burn Wound Cellulitis**: any documented diagnosis by a physician which includes fungal infection.
- 14 = **Delay In Burn Donor Site Healing** : documented by a physician of any healing which begins **greater than 14** days post surgical procedure.
- 15 = **Hypovolemia**: must be documented by a physician.

NTDS HOSPITAL COMPLICATIONS

~~201 = **Drug or alcohol withdrawal syndrome: RETIRE FOR 2017**—Defined as a set of symptoms that may occur when a~~

~~person who has been habitually drinking too much alcohol or habitually using certain drugs (e.g. narcotics, benzodiazepine) experiences physical symptoms upon suddenly stopping consumption. Symptoms may include: activation syndrome (i.e., tremulousness, agitation, rapid heartbeat and high blood pressure), seizures, hallucinations or delirium tremens.~~

202 = **Unplanned intubation**: Patient requires placement of an endotracheal tube and mechanical or assisted ventilation because of the onset of respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis. In patients who were intubated in the field or Emergency Department, or those intubated for surgery, unplanned intubation occurs if they require reintubation > 24 hours after extubation

203 = **Unplanned return to the OR**: Unplanned return to the operating room after initial operation management for a similar or related previous procedure. .

204 = **Unplanned return admission to ICU**: INCLUDE: 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. EXCLUDE: Patients in which ICU care was required for postoperative care of a planned surgical procedure

205 = **Stroke/CVA**: A focal or global neurological deficit of rapid onset and NOT present on admission. The patient must have at least one of the following symptoms:

1. Change in level of consciousness,
2. Hemiplegia,
3. Hemiparesis,
4. Numbness or sensory loss affecting one side of the body,
5. Dysphasia or aphasia,
6. Hemianopia,
7. Amaurosis fugax,
8. Or other neurological signs or symptoms consistent with stroke

AND

1. Duration of neurological deficit \geq 24 h

2. **OR** duration of deficit <24 h, if neuroimaging (MR, CT, or cerebral angiography) documents a new hemorrhage or infarct consistent with stroke, or therapeutic intervention(s) were performed for stroke, or the neurological deficit results in death

AND

1. No other readily identifiable non-stroke cause, e.g., progression of existing traumatic brain injury, seizure, tumor, metabolic or pharmacologic etiologies, is identified

AND

1. Diagnosis is confirmed by neurology or neurosurgical specialist or neuroimaging procedure (MR, CT, angiography) or lumbar puncture (CSF demonstrating intracranial hemorrhage that was not present on admission).

Although the neurologic deficit must not present on admission, risk factors predisposing to stroke (e.g., blunt cerebrovascular injury, dysrhythmia) may be present on admission.

206 = **Cardiac Arrest with CPR** = utilize the NTDB Complication definition for Cardiac Arrest with CPR, which states: Cardiac arrest is the sudden cessation of cardiac activity after hospital arrival. The patient becomes unresponsive with no normal breathing and no signs of circulation. If corrective measures are not taken rapidly, this condition progresses to sudden death.

INCLUDE patients who have had an episode of cardiac arrest evaluated by hospital personnel and received compressions or defibrillation or cardioversion or cardiac pacing to restore circulation.

207 = **Ventilator-Assisted Pneumonia** = utilize the NTDB Complication definition for Ventilator-Assisted Pneumonia, which states: A pneumonia where the patient is on mechanical ventilation for >2 calendar days on the date of event, with day of ventilator placement being Day 1, AND

The ventilator was in place on the date of event or the day before. If the patient is admitted or transferred into a facility on a ventilator, the day of admission is considered Day 1.

See **NTDB Data Dictionary for VAP algorithm**

208 = **Catheter Associated Urinary Tract Infection (CAUTI)** = utilize the NTDB Complication definition for Catheter Associated Urinary Tract Infection, which states: *Catheter-associated Urinary Tract Infection (Consistent with the January 2015 CDC defined CAUTI):* A UTI where an indwelling urinary catheter was in place for >2 calendar days on the date of event, with day of device placement being Day 1,

AND

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

209 = **Central line-associated bloodstream infection (CLABSI)** = utilize the NTDB Complication definition for Central line-associated bloodstream infection (CLABSI), which states: *(Consistent with the January 2014 CDC Defined CLABSI):* A laboratory-confirmed bloodstream infection (LCBI) where central line (CL) or umbilical catheter (UC) was in place for >2 calendar days on the date of event, with day of device placement being Day 1,

AND

A CL or UC was in place on the date of event or the day before. If a CL or UC was in place for >2 calendar days and then removed, the LCBI criteria must be fully met on the day of discontinuation or the next day. If the patient is admitted or transferred into a facility with a central line in place (e.g., tunneled or implanted central line), and that is the patient's only central line, day of first access as an inpatient is considered Day 1. "Access" is defined as line placement, infusion or withdrawal through the line.

210 = Alcohol Withdrawal Syndrome: utilize the NTDB Complication definition for Alcohol Withdrawal Syndrome which states - *(Consistent with the 2016 World Health Organization (WHO) definition of Alcohol Withdrawal Syndrome. Always use the most recent definition provided by the WHO.)*

Characterized by tremor, sweating, anxiety, agitation, depression, nausea, and malaise. It occurs 6-48 hours after cessation of alcohol consumption, and when uncomplicated, abates after 2-5 days. It may be complicated by grand mal seizures and may progress to delirium (known as delirium tremens). Must have occurred during the patient's initial stay at your hospital, and documentation of alcohol withdrawal must be in the patient's medical record

APPENDIX 10: FINAL ANATOMICAL DIAGNOSES

From the medical record, list only those injuries diagnosed by physician examination and/or documented on x-ray, CT, MRI/NMR, ultrasound, operative and autopsy reports. The injuries should be recorded **only** when the diagnosis is certain. Do not list “possible” diagnoses **for ISS scoring**. If you wish to capture non-trauma, **possible, or probable** diagnoses for internal use at your hospital, enter an “@” symbol at the beginning of the injury description line.

Injuries that were diagnosed at the referring facility can be included. (Do not include injuries that were diagnosed only at a facility to which the patient is transferred after being treated at your hospital.)

External injuries (lacerations, contusions, abrasions) documented by a nurse are acceptable and may be abstracted from nursing documentation.

All internal injuries (organ injuries) must be confirmed by x-ray, CT, MRI/NMR, ultrasound, surgery or autopsy. See exceptions to this statement below.

LOC must be documented by a physician or EMS. Self-reported brief LOC or reports of bystanders with no corroboration by EMS or medical personnel and no evidence of head trauma should be disregarded. Abrasions, contusions or lacerations to the scalp are coded under Whole Area and are not automatically presumed to have an associated brain injury.

Autopsy results should be used whenever available. For up to six months after discharge, PTOS data can be resubmitted when autopsy results are received.

Exceptions: In the absence of a definitive x-ray, ultrasound, CT, MRI/NMR, surgical results, or autopsy, the following clinical findings may be used to confirm a diagnosis of basilar skull fracture or renal, pulmonary, or cardiac contusion.

A diagnosis of basilar skull fracture or renal, pulmonary, or cardiac contusion **MUST** be documented in the medical record by a physician. This can be made without definitive studies if the following criteria are met:

1. **Basilar Skull Fracture**

A basilar skull fracture diagnosed by clinical findings with no CT/x-ray confirmation should be reported to PTOS. The diagnosis should be listed along with the clinical findings (i.e. raccoon eyes, hemotympanum, CSF leak) used to substantiate the diagnosis, such as: ***basilar skull fracture with CSF otorrhea***.

2. **Renal Contusion**

Patient must have diagnosis documented by physician and **both** of the following:

- a. History of truncal trauma - defined by contusion of the abdominal wall or flank, or penetrating injury to the trunk.
- b. Macroscopic hematuria (gross) - defined as able to see with the naked eye, on first urine, Trauma Flow Sheet.

3. **Pulmonary Contusion**

Patient must have diagnosis documented by physician, history of chest wall contusion or penetration, and positive test as currently defined by PTOS (x-ray, CT, MRI/NMR, surgery, autopsy). An x-ray, taken within 72 hours of injury, stating “pulmonary infiltrate” is considered a positive x-ray in conjunction with the diagnosis of pulmonary contusion.

4. **Cardiac Contusion**

Patient must have diagnosis documented by physician, history of chest wall contusion, and **one** of the following:

- a. Positive Echocardiogram - defined as a reading by echocardiographer as abnormal echocardiogram.
- b. Myocardial band, CPK of greater than 5% (Note: this is specified as > 5%, not 5 units.)
- c. Abnormal electrocardiogram (EKG) - defined as [1] an arrhythmia requiring monitoring, or [2] EKG interpretation of, "consistent with ischemia or contusion".

Accurate and detailed descriptions will enable a more precise characterization of all injury severity. If the blood loss related to a specific injury is known, please record.

If the patient is a pediatric patient, record the age on the first line of the anatomical diagnoses section. ISS and AIS may be directly affected by the age of the patient with certain types of injuries. Refer to your AIS manual for further details.

Listed below are several injury categories along with examples of specific points of detail needed for accurate coding. When documented in the medical record, be sure to include such detail with the injury description.

1. **External Injuries:** (abrasions, lacerations, contusions):

- record location on the body
- record size, length and depth

2. **Fractures:** *RR: Apr '01; Jul '02; Dec '02*

- record bone involved as well as right, left, bilateral
- record descriptive detail: comminuted, open, displaced, depressed
- record side and exact ribs (not just total fractured)
Ex. Fx L ribs (3,4,5)

3. **Head Injuries:** *RR: Apr '01; Apr '03; Mar '04; Jun '04*

- record presence or absence of loss of consciousness (LOC). Where appropriate, record duration of LOC (the point at which the patient follows command should be used as a cut off for estimation of duration of LOC)
- if LOC prior to arrival but duration unknown, state such
- indicate size and region of brain for all intracranial injuries
- record "concussion" or "closed head injury" as documented by physician only

4. **Organ Injuries:** *RR: Oct '03*

- record injuries as contusion, laceration, perforation, rupture, etc.
- record size and number of injuries
- record size (in ml, if possible) for hemoperitoneum, hemothoraces
- record exact organ as well as left, right, bilateral
- record vessel injuries and state if injury is laceration, internal tear, partial transection, complete transection, or rupture

5. **Penetrating Injuries: RR: Apr '02**

- record location and size of exit and entrance wounds
- record location where the missile lodged

6. **Spinal Injuries: RR: Oct '02**

- record exact location (level) of injury
- record extent of motor or sensory loss

6. **Burns: RR: Jul '03**

- include patient age if less than 5 years old
- document total body surface area involved
- combine all burns of the same degree on one line
- face/hand/genitalia involvement will affect code assignment

Please list **each** anatomic injury on a separate line. This is especially important for head injuries. Indicate the area of skull fracture, lobe(s) of brain contused or having hemorrhage, including right, left or bilateral, for all injuries. We realize this is more time consuming than stating “multiple cerebral contusions”, however, accurate anatomic injury scoring requires very specific injury descriptions.

A maximum of 27 ICD-9-CM codes may be recorded. This does not necessarily mean that 27 lines of diagnoses may be recorded.

Example: Each of the following injuries would be listed if they occurred in the same patient:

1. Right frontal skull fracture
2. Right frontal subdural hematoma
3. Left temporal skull fracture
4. Left temporal cerebral contusion
5. Left parietal cerebral contusion
6. Cerebral edema
7. Brain stem hemorrhage

If possible, write in the detailed diagnosis in a manner similar to the example below.

Examples:

1. **Intraventricular hemorrhage**
2. **Small (right) posterior temporal contusion, unconscious 56 days**
3. **(Right) frontal lobe contusion**
4. **Closed fracture (left) humerus**
5. **(Left) lower lobe pulmonary contusion**
6. **3 cm laceration of proximal jejunum at the ligament of Trietz**
7. **Laceration of liver 3 cm deep 10 cm long**

APPENDIX 11: PROCEDURE CODES ~ LIST B

Angiography/Vascular Imaging/Arteriography

- Aortography upper arteries, see B30, B31; lower arteries – see B40, B41 (88.42)
- Arteriography of femoral and other lower extremity arteries see B40, B41 (88.48)
- Arteriography of cerebral arteries see B30, B31 (88.41)
- Anoscopy 0DJD8ZZ (49.21)
- Arthroscopies (Arthroendoscopy) see 0SJ, 0RJ (80.20 - 80.29)
- Biliary Tract Endoscopy BF1 (51.10 - 51.11)
OF5 (51.64)
OF7 (51.84 - 51.88)
OF7 (51.98)
- Bronchoscopy 0BJ, 0B9 (33.21 - 33.24)
0BB(33.27)
- Cervical Stabilization - Halo, Tongs.....0NH0 (02.94)
(It is not necessary to use the cast code)
- Chest Tubes - Unilateral, Bilateral 0W9__0Z (34.04)
- Circulatory Monitoring/Vascular Access*
 - Arterial catheterization. Upper – 03HY, Lower – 04HY (38.91)
 - Central venous pressure monitoring 4A14XB1 (89.62)
 - Pulmonary artery wedge monitoring (Swan-Ganz, Pulmonary capillary wedge monitoring)02H (89.64)
 - Systemic arterial pressure monitoring 4A13XB1 (89.61)
 - Central venous catheterization (Peripheral IVs do not need recorded).....see 05H, 06H, 0JH (38.93)
(Peripheral venous catheterizations **must not** be recorded in the Procedures section of the registry)
- *The circulatory monitoring/vascular access codes are only required to be recorded during the resuscitative phase of care.** (The resuscitative phase is the time between ED arrival and Time Transported to Post ED Destination.)
- Colonoscopy 0DJD_ZZ (45.21 - 45.23)
0DB (45.25)
- **Computerized Tomography** ~~(1x per body region)~~ 1x per ICD-10 code
 - Abdominal.....BW20 (88.01)
 - Bone or Skeleton (includes CT of facial bones).....BQ2, BR2, BP2 (88.38)
 - Head and Brain (use BN2 (88.38) for CT of facial bones).....brain - B02, head - BW28 87.03
 - Kidney.....BT2 (87.71)
 - Thorax.....BP2, B22, BW2 (87.41)
 - CTA Head and/or Neck.....BW29
(87.04)
 - CTA ThoraxBW03ZZZ (87.42)
- Cystoscopy OTJB8ZZ (57.31); OTJB8ZZ (57.32); OT9_OTB(57.33)
- Duodenoscopy 0DJD4ZZ (45.11); 0DJ07ZZ (45.12); 0DJ08ZZ (45.13)
- **Embolization**
 - Unspecified site..... see 03LY, 04LY, 05LY, 06LY (38.80)
 - Intracranial vessels..... 03LG (38.81)
 - Other vessels of head and neck..... 03L, 05L (38.82)
 - Upper limb vessels 03L (38.83)
 - Aorta, abdominal 04L (38.84)
 - Thoracic vessel 02L, 03L, 05L (38.85)

Abdominal arteries	04L (38.86)
Abdominal veins.....	06L (38.87)
Lower limb arteries.....	04L (38.88)
Lower limb veins	06L (38.89)
• Endovascular occlusion of head and neck vessels (coil embolization).....	03L (39.72)
• Other Endovascular repair of other vessels (coil embolization)see	02L, 03L, 04L, 05L, 06L (39.79)
• Escharotomy (Only required for burn patients at burn centers)	0HB (86.09)
• Esophagogastroduodenoscopy.....	0DJ08ZZ (45.11); 0DJ (45.12 - 45.13) 45.15 - 45.16
• Esophagoscopy	0DJ04ZZ (42.21); 0DJ08ZZ (42.22); 0DJ08ZZ– (42.23)
• Exploratory Laparotomy	0WJG0ZZ (54.11)
• Fasciotomy (Only required for burn patients at burn centers)	see 0J8, 0JD (83.14)
• Gastroscopy	0DJ6_ZZ (44.11 - 44.13)
• Intracranial Pressure Monitor (ICP)	4A__BD (01.10)
• Intubation	0BH1_EZ(96.04)
• Other Intubation - King Airway, Laryngeal Mask Airway (LMA), Combi-tube	0BH1_EZ(96.05)
•	
• Laparoscopy (Abdominoscopy, Celioscopy)	0WJ_4ZZ (54.21)
• Magnetic Resonance Angiography (MRA)	88.97
• Magnetic Resonance Imaging	
Abdomen.....	BW30 (88.97)
Brain.....	B030 (88.91)
Chest.....	BR3__Z (88.92)
Spine/spinal cord.....	BR3 (88.93)
• Mediastinoscopy.....	0WJC4ZZ (34.22)
• Open Cardiac Massage.....	02QA0ZZ (37.91)
• Pancreatic Endoscopy	see BF1, OF (52.13 - 52.14) OF__8ZZ (52.21) OF__DZ (52.93 - 52.94) OF9D80Z (52.97); OF708ZZ(52.98)
• Pericardiocentesis.....	0W9D__ (37.0)
• Peritoneal Lavage (1x).....	3E1M38X (54.25)
• Peritoneoscopy	0WJ_4ZZ (54.21)
• Flexible Sigmoidoscopy	0DJD8ZZ (45.24) 0DJD4ZZ (48.21); 0DJD8ZZ (48.23); 0D9P, 0DBP(48.24)
• Resuscitation - Closed Cardiopulmonary	5A12012 (99.60)
• Subxiphoid Pericardial Window	0W9D__ (37.12)
• REBOA.....	04L0FDZ
• Surgical Airways	
Cricothyroidotomy.....	0B11__4 (31.1)
Mediastinal tracheostomy	0B11__4 (31.21)
Percutaneous tracheostomy (PTSF defined).....	0B11__4 (31.12)
Permanent tracheostomy.....	0B11__4 (31.29)
• Thoracoscopy (Transpleural, Cavernoscopy).....	0_JQ4ZZ (34.21)
• Thoracotomy (Exploratory).....	0WJ (34.02)

- Tracheoscopy/Laryngoscopy0BJ18ZZ (31.41); OCJS8ZZ (31.42)
- Transcatheter Embolization for gastric or duodenal bleeding 04L23DZ (44.44)
- **Ultrasound**
 - Abdomen and retroperitoneum.....BW4_ZZZ (88.76)
 - Digestive system..... GI – BD4_ZZZ; hepatobiliary – BF4_ZZZ (88.74)
 - Gravid Uterus..... BY4_ZZZ (88.78)
 - Head and neck CNS – B04_ZZZ; Skin, subq, breast – BH4CZZZ (88.71)
 - Heart (echocardiogram)..... B24_Z_ (88.72)
 - Other (BU4, BV4, BW4 - multiple sites; BU46_ZZ - nongravid uterus; BW4- total body) (88.79)
 - FAST exam BW4_ZZZ AND B24_____(88.79)
 - Other sites of thorax..... BH4BZZZ(88.73)
 - Peripheral vascular system..... see B34_ZZZ, B44_ZZZ, B54_ZZZ (88.77)
 - Transesophageal echocardiogram (both codes **must** be used)B24_ZZ4 (88.72 and 42.23)
 - Urinary system.....BT4_ZZZ (88.75)
- Ureteroscopy. OTJ98ZZ (56.31)
 - OT9, OTB_ZX (56.33)
 - OTJ98ZZ(56.35)
- UrethroscopyOTJD_ZZ (58.22)
- Ventilator (> 6 hours post operative **and** OR any other mechanical ventilation).....5A1955Z (96.71- 96.72)
- Insertion or replacement of external ventricular drain (EVD).....00_6__ (02.21)
- Intracranial ventricular shunt or anastomosis.....0016__B(02.22)

APPENDIX 12: PRE-EXISTING CONDITIONS

A.02 – Coronary Artery Disease – A condition caused by plaque buildup inside the coronary arteries which reduces the blood flow through the arteries to the heart muscle and typically results in chest pain or heart damage. It also causes formation of blood clots. CAD must be documented by a physician. Condition includes a revascularization, but not angioplasty, stent, CABG or a cardiac catheterization by itself.

A.03 – Congestive Heart Failure – utilize the NTDB Co-Morbid Condition definition for Congestive Heart Failure which is defined as the inability of the heart to pump a sufficient quantity of blood to meet the metabolic needs of the body or can do so only at an increased ventricular filling pressure. To be included, this condition must be noted in the medical record as CHF, congestive heart failure, or pulmonary edema with onset or increasing symptoms within 30 days prior to injury. Common manifestations are:

1. Abnormal limitation in exercise tolerance due to dyspnea or fatigue
2. Orthopnea (dyspnea on lying supine)
3. Paroxysmal nocturnal dyspnea (awakening from sleep with dyspnea)
4. Increased jugular venous pressure
5. Pulmonary rales on physical examination
6. Cardiomegaly
7. Pulmonary vascular engorgement

A.05 – Myocardial Infarction – utilize the NTDB definition for History of myocardial Infarction which is defined as history of a non-Q wave, or a Q wave infarction in the six months prior to injury as diagnosed in patient's medical record. Utilize the NTDB Co-morbid condition definition for Myocardial Infarction which is defined as History of a MI in the six months prior to injury. A diagnosis of MI must be documented in the patient's medical record.

A.06 – Hypertension requiring medication – utilize the NTDB definition for Hypertension requiring medication which is defined as History of persistent elevated blood pressure requiring medical therapy, present prior to injury. A diagnosis of Hypertension must be documented in the patient's medical record.

B.03 – Diabetes Mellitus – utilize the NTDB definition for Diabetes Mellitus which is defined as diabetes mellitus prior to injury that required exogenous parenteral insulin or an oral hypoglycemic agent.

C.01 – Peptic Ulcer Disease – Is a raw area (erosion) of the lining of the intestinal tract. Peptic ulcers are typically found in the lower half of the stomach or the first part of the duodenum.

C.02 – Gastric or Esophageal Varices

which is defined as engorged collateral veins in the esophagus which bypass a scarred liver to carry portal blood to the superior vena cava. A sustained increase in portal pressure results in esophageal varices which are most frequently demonstrated by direct visualization at esophagoscopy.

C.05 – Bariatric Surgery – Bariatric surgery, or weight loss surgery, includes a variety of procedures performed on people who are obese. Weight loss is achieved by reducing the size of the stomach with an implanted medical device (gastric banding) or through removal of a portion of the stomach (sleeve gastrectomy or biliopancreatic diversion with duodenal switch) or by resecting and re-routing the small intestines to a small stomach pouch (gastric bypass surgery.) Also includes: Jejunioileal bypass, endoluminal sleeve, vertical banding gastroplasty, adjustable gastric band, sleeve gastrectomy, intragastric balloon (Gastric balloon), Gastric Plication, Gastric bypass surgery, sleeve gastrectomy with duodenal switch, implantable gastric stimulation.

D.02 – Reversible Anticoagulant Therapy – REMOVED FOR 2017

Do not include patients on chronic aspirin therapy.

Examples of reversible anticoagulant agents include (but are not limited to): warfarin (Coumadin), heparin, enoxaparin (Lovenox), dalteparin (Fragmin), nadroparin (Fraziparine), tinzaparin (Innohep), and low molecular weight heparin (up to 60% reversible)

D.05 – Anti-platelet Agents – REMOVED FOR 2017 – Antiplatelet agents are medicines that interfere with the blood's

ability to clot. They prevent the platelets in the blood from clumping together to form a clot in an artery, vein or the heart. This type of clot in an artery can be the cause of a stroke.

Examples of antiplatelets include: aspirin, clopidogrel (Plavix) and dipyridamole (Aggrenox).

D.07 – Non-Reversible Anticoagulant Therapy – REMOVED FOR 2017 – Use of a prescription blood thinning medicine used to reduce the risk of stroke and blood clots in people with atrial fibrillation not caused by a heart valve problem. With atrial fibrillation, part of the heart does not beat the way it should. This can cause blood clots to form, increasing your risk of a stroke. Non-reversible anticoagulant therapies lower the chance of blood clots forming in your body. Unfortunately, non-reversible anticoagulant therapies cannot be reversed like reversible anticoagulant therapies can. Do not include patients on chronic aspirin therapy.

Examples of non-reversible anticoagulant agents include: fondaparinux (Arixtra), bivalirubin (Angiomax), argatroban, lepirudin (Refludan), dabigatran (Pradaxa), apixaban (Eliquis), rivaroxaban (Xarelto), prasugrel (Effient), ticlopidine, prasugrel (Effient), ticlopidine, ticagrelor (Brilinta), eptifibatid (Integrilin), abciximab (ReoPro), tirofiban (Aggrastat), cilostazol (Pletal)

D.08 – Bleeding Disorder - (Consistent with the American Society of Hematology, 2015. Always use the most recent definition provided by the American Society of Hematology.) A group of conditions that result when the blood cannot clot properly, present prior to injury. A Bleeding Disorder diagnosis must be documented in the patient's medical record (e.g. Hemophilia, von Willenbrand Disease, Factor V Leiden.)

D.09 – Chronic Aspirin Use - Aspirin taken at least once daily.

D.10 – Anticoagulant Therapy – Utilize the NTDB definition for Anticoagulant Therapy, which states -

Documentation in the medical record of the administration of medication (anticoagulants, antiplatelet agents, thrombin inhibitors, thrombolytic agents) that interferes with blood clotting, present prior to injury. Exclude patients who are on chronic Aspirin therapy. Some examples are:

ANTICOAGULANTS	ANTIPLATELET AGENTS	THROMBIN INHIBITORS	THROMBOLYTIC AGENTS
Fondaparinux	Tirofiban	Bevalirudin	Alteplase
Warfarin	Dipyridamole	Argatroban	Retepase
Dalteparin	Anagrelide	Lepirudin, Hirudin	Tenecteplase
Lovenox	Eptifibatide	Drotrecogin alpha	kabikinase
Pentasaccharide	Dipyridamole	Dabigatran	tPA
APC	Clopidogrel		
Ximelagatran	Cilostazol		
Pentoxifylline	Abciximab		
Rivaroxaban	Ticlopidine		
Apixaban	Prasugrel		
Heparin	Ticagrelor		

E.00 – History of Psychiatric Disorders—Mental/Personality Disorder – utilize the NTDB definition for Mental/Personality Disorder, which is defined as - (Consistent with American Psychiatric Association (APA) DSM 5, 2013.

Always use the most recent definition provided by the APA.) Documentation of the presence of pre-injury depressive disorder, bipolar disorder, schizophrenia, borderline or antisocial personality disorder, and/or adjustment disorder/post-traumatic stress disorder. A diagnosis of Mental/Personality Disorder must be documented in the patient's medical record.

E.01 – Attention Deficit Disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD)

ADD is a developmental disorder. It is primarily characterized by "the co-existence of attentional problems and hyperactivity, with each behavior occurring infrequently alone" and symptoms starting before seven years of age. **ADHD** is the most commonly studied and diagnosed psychiatric disorder in children, affecting about 3 to 5 percent of children globally and diagnosed in about 2 to 16 percent of school aged children. It is a chronic disorder with 30 to 50 percent of those individuals diagnosed in childhood continuing to have symptoms into adulthood.

E.02 – Intellectual Disability is a generalized disorder appearing before adulthood, characterized by significantly impaired cognitive functioning and deficits in two or more adaptive behaviors. It has historically been defined as an Intelligence Quotient score under 70. Once focused almost entirely on cognition, the definition now includes both a component relating to mental functioning and one relating to individuals' functional skills in their environment. As a result, a person with a below-average intelligence quotient (BAIQ) may not be considered intellectually disabled.

- F.01 – HIV/AIDS** – All HIV-infected individuals with CD4 counts of <200/cells/μL (or CD4 <14%) as well as those with certain HIV related conditions and symptoms. The CDC categorization of HIV/AIDS is based on the lowest documented CD4 cell and on previously diagnosed HIV-related conditions. Patients in categories A3, B3, and C1-C3 are considered to have HIV/AIDS.
- F.02 – Routine Steroid Therapy** – utilize the NTDB definition of Steroid Use which is defined as patients that required the regular administration of oral or parenteral corticosteroid medications (e.g. prednisone, dexamethasone) in the 30 days prior to injury for a chronic medical condition (e.g., COPD, asthma, rheumatologic disease, rheumatoid arthritis, inflammatory bowel disease.) Do not include topical corticosteroids applied to the skin or corticosteroids administered by inhalation or rectally.
- F.03 – Transplants (Major organ transplants ONLY)** – The surgical replacement of an organ that is no longer functioning with a viable functioning organ. Transplanted organs to include: heart, lung, liver, pancreas, kidney, and small bowel.
- F.04 – Active Chemotherapy** – utilize the NTDB definition of Currently receiving chemotherapy for cancer, which is defined as a patient who is currently receiving any chemotherapy treatment for cancer prior to admission. 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 lymphoma, leukemia, and multiple myeloma.
- G.02 – Documented History Of Cirrhosis** – utilize the NTDB definition for Cirrhosis which is defined as documentation in the medical record of cirrhosis, which might also be referred to as end stage liver disease. If there is documentation of prior or present esophageal or gastric varices, portal hypertension, previous hepatic encephalopathy, or ascites with notation of liver disease, then cirrhosis should be considered present. Cirrhosis should also be considered present if documented by diagnostic imaging studies or a laparotomy/laparoscopy.
- H.01 – Undergoing Current Therapy** – Patients with a past medical history of cancer that is currently being treated (within the past 30 days) with either chemotherapy, radiation, hormone therapy or immunotherapy.
- H.02 – Concurrent or Existence of Metastasis** – utilize the NTDB definition for Disseminated Cancer which is defined as patients who have cancer that has spread to one site or more sites in addition to the primary site, AND in whom the presence of multiple metastases indicates the cancer is widespread, fulminant, or near terminal.
- I.01 – Arthritis** - A form of joint disorder that involves inflammation of one or more joints. There are over 100 different forms of arthritis. The most common form, osteoarthritis (degenerative joint disease) is a result of trauma to the joint, infection of the joint, or age. Other arthritis forms are rheumatoid arthritis, psoriatic arthritis, and related autoimmune diseases.
- I.02 – Systematic Lupus Erythematosus** – A chronic inflammatory condition caused by an

autoimmune disease. An autoimmune disease occurs when the body's tissues are attacked by its own immune system. Patients with lupus have unusual antibodies in their blood that are targeted against their own body tissues.

J.03 – Osteogenesis Imperfecta (OI) – Osteogenesis imperfecta is a genetic disorder characterized by bones that break easily, often from little or no apparent cause. Type I through Type VIII.

J.01 – Spinal Cord Injury – Any insult that causes temporary or permanent change in normal motor and/or sensory functions in the spinal cord of the thoracic, lumbar, or sacral segments.

J.03 – Alzheimer's Disease – REMOVED FOR 2017

~~utilize the NTDB definition for Dementia, which is defined as with particular attention to senile or vascular dementia (e.g., Alzheimer's) documentation in the patient's medical record of dementia including senile or vascular dementia (e.g., Alzheimer's.)~~

~~**J.06 – Chronic Dementia** – REMOVED FOR 2017 utilize the NTDB definition for Dementia, which is defined as documentation in the patient's medical record of dementia including senile or vascular dementia (e.g., Alzheimer's.)~~

J.09 – CVA (any documented h/o CVA with residual motor or cognitive deficits) - utilize the NTDB definition for CVA, which is defined as a history prior to injury of a cerebrovascular accident (embolic, thrombotic, or hemorrhagic) with persistent residual motor sensory or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory).

J.10 – Autism Spectrum – Autism spectrum disorders (ASDs) are a group of related developmental disabilities, caused by a problem with the brain, that affect a child's behavior, social, and communication skills. Autism, Asperger Syndrome, and Pervasive Developmental Disorder–Not Otherwise Specified (PDD-NOS) are the three recognized autism spectrum disorders.

J.11 – Cerebral Palsy (CP) – Cerebral palsy is a heterogeneous group of neuromotor conditions involving disordered movement or posture and weakness resulting from a non-progressive brain lesion, injury, or malformation occurring prenatally or in the first two (2) years of life.

J.12 – Dementia – utilize the NTDB definition for Dementia, which is defined as documentation in the patient's medical record of dementia including senile or vascular dementia (e.g., Alzheimer's) present prior to injury

K.00 – Obesity – Documented by a physician OR a BMI of 30 or greater.

~~**L.05 - Respiratory Disease** **Chronic Obstructive Pulmonary Disease (COPD)** – utilize the NTDB definition for Chronic Obstructive Pulmonary Disease (COPD) which states - (Consistent with World Health Organization (WHO),~~

2015. Always use the most recent definition provided by the WHO.) Lung ailment that is characterized by a persistent blockage of airflow from the lungs, present prior to injury. It is not one single disease but an umbrella term used to describe chronic lung diseases that cause limitations in lung airflow. The more familiar terms "chronic bronchitis" and "emphysema" are no longer used, but are now included within the COPD diagnosis and result in any one or more of the following:

- Functional disability from COPD (e.g., dyspnea, inability to perform activities of daily living [ADLs]).
- Hospitalization in the past for treatment of COPD.
- Requires chronic bronchodilator therapy with oral or inhaled agents.
- A Forced Expiratory Volume in 1 second (FEV1) of < 75% or predicted on pulmonary function testing.

A diagnosis of COPD must be documented in the patient's medical record. Do not include patients whose only pulmonary disease is acute asthma, and/or diffuse interstitial fibrosis or sarcoidosis.

M.01 – Serum Creatinine > 2 mg % (On admission) – Patient presents with a history of renal disease and the serum creatinine level is > 2 mg% on initial admission blood work, or the serum creatinine level is > 2 mg% on initial admission blood work, but no documented history of renal disease.

M.02 – Dialysis (excluding transplant patients) – utilize the NTDB definition for Chronic renal failure, which is defined as acute or chronic renal failure prior to injury that was requiring periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration.

N.01 – ~~Substance Abuse Disorder~~ ~~Drug Use Disorder~~ – utilize the NTDB definition for Substance Abuse Disorder (*Consistent with American Psychiatric Association (APA) DSM 5, 2013.*

Always use the most recent definition provided by the APA.) Documentation of Substance Abuse Disorder documented in the patient medical record, present prior to injury. A diagnosis of Substance Abuse Disorder must be documented in the patient's medical record.

N.02 – Chronic Ongoing Alcohol Abuse - utilize the NTDB definition for Alcohol Use Disorder, which is defined Diagnosis of alcohol use disorder documented in the patient medical record, present prior to injury, consistent with APA DSM 5. Note: Social work, drug and alcohol counselor consults may be used to document this pre-existing condition.

P.00 – Pregnancy – Patient presenting with current (gravid) pregnancy with obvious physical findings of pregnancy, confirmed by lab work, ultrasound, or as reported by patient and/or family members.

Q.01 – Previous history of head trauma – Any previous injury to the brain, skull or scalp (whether open or closed), that caused anything from drowsiness to an intracranial bleed. A TBI must be clearly documented.

R.01 – Thyroid Disease – Thyroid disease is a medical condition impairing the function of the thyroid. Hypothyroidism (underactivity) includes Hashimoto's thyroiditis, thyroiditis, Ord's thyroiditis, postoperative hypothyroidism, postpartum thyroiditis, silent thyroiditis, acute thyroiditis, iatrogenic hypothyroidism, thyroid hormone resistance,

Euthyroid sick syndrome. Hyperthyroidism (overactivity) includes Thyroid storm, Grave's disease, Toxic thyroid nodule, Toxic nodular struma (Plummer's disease), Hashitoxicosis, Iatrogenic hyperthyroidism, De Quervain's thyroiditis (inflammation starting as hyperthyroidism, can end as hypothyroidism). If the patient is on synthroid medication, this can be used to document thyroid disease as a pre-existing condition.

S.02 – Current Smoker –patient who reports smoking cigarettes every day or some days within the last 12 months. Includes electronic cigarette use. Excludes patients who smoke cigars or pipes or use smokeless tobacco (chewing tobacco or snuff).

S.03 – Advanced Directive Limited Care – NTDB Co-Morbid Condition - utilize the NTDB definition, which states - the patient had a Do Not Resuscitate (DNR) document or similar advance directive recorded prior to injury.

S.04 – Functionally Dependent Health Status –utilize the NTDB definition, pre-injury functional status may be represented by the ability of the patient to complete age appropriate activities of daily living (ADL) including: bathing, feeding, dressing, toileting, and walking. This item is marked YES if the patient, prior to injury, and as a result of cognitive or physical limitations relating to a pre-existing medical condition, was partially dependent or completely dependent upon equipment, devices or another person to complete some or all activities of daily living.

~~**S.05 – History of angina within 30 days** –DELETED FOR 2017– NTDB Co-Morbid Condition –utilize the NTDB definition, which states documentation of chest pain or pressure, jaw pain, arm pain, or other equivalent discomfort suggestive of cardiac ischemia present within the last 30 days from hospital arrival date.~~

~~**S.06 – History of Peripheral Vascular Disease (PVD) Peripheral Arterial Disease- NTDB Co-Morbid Condition – Utilize the NTDB definition - (Consistent with Centers for Disease Control, 2014 Fact Sheet. Always use the most recent definition provided by the CDC.)** The narrowing or blockage of the vessels that carry blood from the heart to the legs, present prior to injury. It is primarily caused by the buildup of fatty plaque in the arteries, which is called atherosclerosis. PAD can occur in any blood vessel, but it is more common in the legs than the arms. A diagnosis of PAD must be documented in the patient's medical record.~~

S.07 – Prematurity – NTDB Co-Morbid Condition –Utilize the NTDB definition, defined as documentation of premature birth, a history of bronchopulmonary dysplasia, or ventilator support for greater than 7 days after birth—Premature birth is defined as infants delivered before 37 weeks from the first day of the last menstrual period.

S.08 – Pre-hospital cardiac arrest with CPR – A patient who experienced a sudden cessation of cardiac activity. The patient was unresponsive with no normal breathing and no signs of circulation. The event must have occurred outside of the reporting hospital, prior to admission at the center in which the registry is maintained. Pre-hospital cardiac arrest could occur at a transferring institution. Any component of basic and/or advanced cardiac life support must have been initiated by a health care provider.

**If this pre-existing condition is selected, it will map to a 'yes' response to the NTDB element 'Pre-hospital Cardiac Arrest.' If this pre-existing condition is not selected, it will map to a response of 'no' to the NTDB element 'Pre-hospital Cardiac Arrest.'

S.09 – Angina Pectoris – Utilize the NTDB Definition for Angina Pectoris which states- *(Consistent with the American Heart Association (AHA), May 2015. Always use the most recent definition provided by the AHA.)* Chest pain or discomfort due to Coronary Heart Disease, present prior to injury. Usually causes uncomfortable pressure, fullness, squeezing or pain in the center of the chest. Patient may also feel the discomfort in the neck, jaw, shoulder, back or arm. Symptoms may be different in women than men. A diagnosis of Angina or Chest Pain must be documented in the patient's medical record.

T.00 – Congenital Disorder Utilize the NTDB definition for Congenital Anomalies, which is defined as documentation of a cardiac, pulmonary, body wall, CNS/spinal, GI, renal, orthopaedic, or metabolic congenital anomaly.

APPENDIX 13: AUDIT FILTERS

Definitions of the audit filters provided in your **COLLECTOR** version are given on the following pages. ACS filters are indicated by ACS in parenthesis. JCAHO clinical indicators are indicated by JCAHO in parenthesis.

- Ambulance scene time > 20 minutes (**ACS Audit Filter #1**)

Trauma Patient; AND

Transport from Scene (SCENE_TRANSP) = 1 (Ambulance), 2 (Helicopter),
3 (Ambulance/Helicopter) or 5 (Fire Rescue); AND

Arrive at Scene Time (SCENE_ARRIVE_TIME) to
Leave Scene Time (SCENE_LEAVE_TIME) > 20 minutes.

If the response to “Were scene provider and transport provider the same?” is a 1 (yes) then just the Scene Section Arrive and Leave dates and times are used to calculate the time.

If the response to “Were scene provider and transport provider the same?” is a 2 (no) then the earliest Arrive date and time in either the Scene or Transport section and the Leave date and time in the Transport section are used to calculate the time.

Interhospital times are not utilized.

- Absence of ambulance report on medical record for patient transported by EMS from scene (**ACS Audit Filter #2**)

Transport from Scene (SCENE_TRANSP) = 1 (Ambulance), 2 (Helicopter),
3 (Ambulance/Helicopter) or 5 (Fire Rescue); AND

Patient Care Record in Patient Medical Record from Scene (SCENE_RUN_FORM) = 2 (No).

If the response to “Were scene provider and transport provider the same?” is a 1 (yes) then just the Scene Section “Patient Care Record in Medical Record” is used to determine the absence.

If the response to “Were scene provider and transport provider the same?” is a 2 (no) then just the Transport Section “Patient Care Record in Medical Record” is used to determine the absence.

The Interhospital Section is not utilized.

- Patient with admission GCS < 14 who does not receive a CT of the head (**ACS Audit Filter #3**)

Trauma Patient; AND

GCS on Admission (GCS_A) < 14; AND

"Did patient receive a CT scan of the head?" (CT_SCAN) = 2 (No).

- Absence of sequential neurological documentation on emergency department record of trauma patient with a diagnosis of skull fracture or intracranial injury (**ACS Audit Filter #4a**)

Trauma Patient; AND

Any ICD-10-CM diagnosis code (ICD10_01, ICD10_02, ... ICD10_27) that starts with S02.0, S02.1, S04, S06, S07.1; AND

~~800.xx, 801.xx, 803.xx, 804.xx, 850.xx, 851.xx, 852.xx, 853.xx or 854.xx~~

"Is there sequential neurological documentation on ED record of trauma patient with admission diagnosis of skull fx, intracranial injury, or spinal cord injury?"

(NURS_N_DOC) = 2 (No).

- Absence of sequential neurological documentation on emergency department record of trauma patient with a diagnosis of spinal cord injury (**ACS Audit Filter #4b**)

Trauma Patient; AND

Any ICD-10-CM diagnosis code (ICD10_01, ICD10_02, ... ICD10_27) that starts with

S14.0, S14.1, S24.0, S24.1, S34.0, S34.1, S34.3; AND

~~806.xx, 952.0x, 952.1x, 952.2-952.4, 952.8 or 952.9~~

"Is there sequential neurological documentation on ED record of trauma patient with admission diagnosis of skull fx, intracranial injury, or spinal cord injury?" (NURS_N_DOC) = 2 (No).

- Absence of hourly documentation of blood pressure, pulse and respiration for any trauma patient beginning with arrival in ED, including time spent in radiology, up to admission to the ward, floor, OR, or ICU; death; or transfer to another hospital (**ACS Audit Filter #5**)

"Is there hourly documentation beginning with ED arrival?" (NURS_DOC_S) = 2 (No).

- Patient left ED with a discharge GCS ≤ 8 and without a definitive airway established (**ACS Audit Filter #6**)

Trauma Patient; AND

Post ED Destination (POST_ED_D) \neq 6 (Morgue); AND

"Did patient leave ED with a discharge GCS ≤ 8 ?" (ED_GCS_8) = 1 (Yes); AND

"If yes, did patient leave ED with definitive airway?" (ED_AIRWAY) = 2 (No).

- Patient seen in ED, discharged and then admitted to the hospital within 72 hours of initial evaluation (**ACS Audit Filter #7**)

ACS AUDIT FILTER #7 IS NOT USED BY PTOS.

- Any patient sustaining a GSW to the abdomen who is managed nonoperatively (**ACS Audit Filter #8**)

Trauma Patient; AND

"Did patient sustain a gunshot wound to the abdomen and receive non-operative management?"
(NONOP_GSWA) = 1 (Yes).

- Patient requiring laparotomy which is not performed within 2 hours of ED arrival
(ACS Audit Filter #9)

Trauma Patient; AND

"Did patient require a laparotomy that was not performed within 2 hours of ED arrival?"
(LAPAROT) = 1 (Yes).

- Patient with epidural or subdural brain hematoma receiving initial craniotomy > 4 hours after arrival at ED, excluding those performed for ICP monitoring **(ACS Audit Filter #10)**

Trauma Patient; AND

Any ICD-10-CM diagnosis code (ICD10_01, ICD10_02, ... ICD10_27) that starts with S06.4; AND S06.5; AND

~~800.2x, 800.7x, 801.2x, 801.7x, 803.2x, 803.7x, 804.2x, 804.7x, or 852.20-852.59~~

Any Operative procedure (PR_01_I10...PR_84_I10) =
that starts with ON [8,9,B,R,T,U] [0,1,2,3,4,5,6,7,8,C,D,F,G,]0 OR 00[8,9,B,C,Q] [0,1,2,3,4,5,6,7,8,9,A,B,C,D]0; AND
the associated time for the earliest (initial qualifying Operative procedure
(e.g., O_1_P1_DATE, O_1_P1_TIME) is greater than 4 hours after ED arrival
(EDA_DATE, EDA_TIME).

- Patient transferred in after 3 hours at initial hospital **(ACS Audit Filter #11a)**

"Is this a transfer patient?" (TRANSF_PT) = 1 (Yes); AND

Time from Arrival at Referring Hospital (DATE_REF_AR, TIME_REF_AR)
to Departure from Referring Hospital > 3 hours (DATE_REF_DP, TIME_REF_DP).

- Patient transferred out after 3 hours from ED arrival **(ACS Audit Filter #11b)**

Discharge Status (DIS_STATUS) = 6 (Survivor); AND

Discharge Destination (DISCG_TO) = 2 (Other Hospital), 3 (Trauma Center), 6 (Burn Center), 14 (Pennsylvania Trauma Center) or 15 (Out of State Trauma Center) AND

Time from ED Arrival (EDA_DATE, EDA_TIME) to Discharge (D_C_DATE, D_C_TIME) > 3 hours.

- Initial abdominal, intrathoracic, vascular, or cranial surgery performed > 24 hours after ED arrival (**ACS Audit Filter #13**)

Trauma Patient; AND

"Abdominal Surgery > 24 Hours" (ABD_GT_24) = 1 (Yes); OR

"Intrathoracic Surgery > 24 Hours" (THOR_GT_24) = 1 (Yes); OR

"Vascular Surgery > 24 Hours" (VASC_GT_24) = 1 (Yes); OR

"Cranial Surgery > 24 Hours" (CRAN_GT_24) = 1 (Yes).

- Unplanned return to the operating room within 48 hours of initial procedure (**ACS Audit Filter #14**)

ACS FILTER #14 IS NOT USED BY PTOS

- Trauma patient admitted to hospital under care of admitting or attending physician who is not a surgeon (**ACS Audit Filter #15a**)

Trauma Patient; AND

Admitting Service (ADM_SERV) = 6 (Other Non-Surgical) or 9 (Burn Service)

- Burn patient with inhalation injury not admitted to burn or pulmonary service (**ACS Audit Filter #15b**)

Burn Patient; AND

Any ICD-9-CM diagnosis code (ICD9_01, ICD9_02, ... ICD9_27) = 987.9; AND

Not Admitted to Burn Service (ADM_SERV ≠ 9) or Pulmonary (ADM_SRV_NS ≠ "Pulmonary")

- Nonfixation of femoral diaphyseal fracture in adult trauma patient (**ACS Audit Filter #16**)

Trauma Patient; AND

Derived Age (AGE) ≥ 15; AND

Any ICD-10-CM diagnosis code (ICD10_01, ICD10_02, ... ICD10_27) that starts with S72.3;

AND

NO Procedure that starts with (PR_01_I10...PR_84_I10 OQS [6,7,8,9,B,C] [0,3,4]_[4,5,6,B,C,D]OR starts with OQH [6,7,8,9,B,C]

- Patient developing deep vein thrombosis, pulmonary embolism, or pressure ulcer (ACS Audit Filter #17)

ACS FILTER #17 IS NOT USED BY PTOS

- Any patient requiring reintubation within 48 hours of extubation (ACS Audit Filter #18)

"Was reintubation required within 48 hours of extubation?" (REINTUBAT) = 1 (Yes).

- Specific occurrences (ACS Audit Filter #19)

Any Occurrences (COMPLIC_1, COMPLIC_2, ... COMPLIC_10) valued and ≠ 01 (None).

- Patient with diagnosis at discharge of cervical spine fracture, subluxation, or neuro deficit not addressed on admission (ACS Audit Filter #20)

Trauma Patient; AND

"Did patient have discharge diagnosis of cervical spine fracture, subluxation, or neuro deficit not addressed on admission?" (MISSED_CS) = 1 (Yes).

- All deaths (ACS Audit Filter #21)

Discharge Status (DIS_STATUS) = 7 (Dead).

- Adult patient receiving transfusion of platelets or fresh frozen plasma within 24 hours of ED arrival after having received < 8 units of packed red blood cells or whole blood (ACS Audit Filter #22)

ACS FILTER #22 IS NOT USED BY PTOS

- Burn patient with inhalation injury and not intubated (ACS Audit Filter #23)

Burn Patient; AND

Any Predot codes = 419200.2, 419201.2, 419202.3, 419204.4, 419206.5, 419208.6; AND

Intubated with Artificial Airway (INTUBAT_A) ≠ 1 (Yes); AND

NO Procedure (PR_01_I10...PR_84_I10) = 0BH10DZ, 0BH13EZ, 0BH14DZ, 0BH17DZ, 0BH17EZ, 0BH18DZ, 0BH18EZ, 0DH57BZ, 0CHY7BZ, 0CHY8BZ **AND** Procedure Location = ED; **OR** Procedure Start Date/Time within ED Stay

- Burn patient with initial escharotomy performed > 8 hours after admission (**ACS Audit Filter #24**)

ACS FILTER #24 IS NOT USED BY PTOS

Burn Patient; AND

Any Operative procedure (PROC_01_PR ...PROC_84_PR) or Non-operative procedure (NON_OP_P1, ...NON_OP_P48) = 86.09; AND the associated time for the earliest (initial qualifying Operative procedure e.g., O_1_P1_DATE, O_1_P1_TIME or Non-operative procedure e.g., NOP_1_DATE, NOP_1_TIME) is greater than 8 hours after ED arrival (EDA_DATE, EDA_TIME).

- Trauma patient with prehospital EMS scene time > 20 minutes (**JCAHO Clinical Indicator #1**)

Same definition as **ACS Audit Filter #1**.

- Trauma patient with BP, pulse rate, respiration, and GCS not documented in ED record on arrival and hourly until inpatient admission to the floor, OR, specialty care unit, death, or transfer to another care facility (**JCAHO Clinical Indicator #2**)

Same definition as **ACS Audit Filter #5**.

- Comatose patient (discharge GCS ≤ 8) discharged from ED prior to establishment of a definitive airway (**JCAHO Clinical Indicator #3**)

Same definition as **ACS Audit Filter #6**.

- Trauma patient with diagnosis of intracranial injury and altered state of consciousness upon ED arrival receiving initial head CT scan > 2 hours after ED arrival (**JCAHO Clinical Indicator #4**)

Same definition as **ACS Audit Filter #3**.

- Trauma patient with diagnosis of extradural or subdural brain hemorrhage undergoing initial craniotomy > 4 hours after ED arrival, excluding ICP monitoring (**JCAHO Clinical Indicator #5**)

Same definition as **ACS Audit Filter #10**.

- Trauma patient with open fractures of long bones as a result of blunt trauma receiving initial surgical treatment > 8 hours after ED arrival (**JCAHO Clinical Indicator #6**)

Trauma Patient; AND

Type of Injury (INJ_TYPE) = 1 (Blunt); AND

Any ICD-9-CM diagnosis code (ICD9_01, ICD9_02, ..., ICD9_27) = 812.1x, 812.3x, 812.5x, 813.1x, 813.3x, 813.5x, 813.9x, 818.10, 820.1x, 820.3x, 820.90, 821.1x, 821.3x, 823.1x, 823.3x or 823.9x; AND

Any Operative Procedure (OPER_1_P1, ..., OPER_3_P12) = 78.02, 78.03, 78.05, 78.07, 78.12, 78.13, 78.15, 78.17, 78.42, 78.43, 78.45, 78.47, 78.52, 78.53, 78.55, 78.57, 79.11, 79.12, 79.15, 79.16, 79.21, 79.22, 79.25, 79.26, 79.31, 79.32, 79.35, 79.36, 79.51, 79.52, 79.55, 79.56, 79.61, 79.62, 79.65 or 79.66; AND the associated time for the earliest (initial) qualifying Operative procedure (e.g., O_1_P1_DATE, O_1_P1_TIME) is greater than 8 hours after ED arrival (EDA_DATE, EDA_TIME).

- Trauma patient with diagnosis of liver or spleen laceration undergoing initial laparotomy > 2 hours after ED arrival (**JCAHO Clinical Indicator #7**)

Trauma Patient; AND

Any ICD-9-CM diagnosis code (ICD9_01, ICD9_02, ... ICD9_27) = 864.02-864.04, 864.12-864.14, 865.02-865.04 or 865.12-865.14; AND

Any Operative procedure (PROC_01_PR ...PROC_84_PR) is = 41.43, 41.5, 41.95, 50.22, 50.3, 50.61 or 50.69; AND the associated time for the earliest (initial) qualifying Operative procedure (e.g., O_1_P1_DATE, O_1_P1_TIME) is greater than 2 hours after ED arrival (EDA_DATE, EDA_TIME).

- Trauma patient undergoing laparotomy for wounds penetrating the abdominal wall (gunshot and stab wounds) (**JCAHO Clinical Indicator #8**)

Trauma Patient; AND

"Did patient sustain a gunshot wound to the abdomen and receive non-operative management?" (NONOP_GSWA) = 1 (Yes); OR

"Did patient sustain a stab wound to the abdomen and receive non-operative management?" (NONOP_STAB) = 1 (Yes).

- Trauma patient transferred in after 3 hours at initial hospital (**JCAHO Clinical Indicator #9a**)

Same definition as **ACS Audit Filter #11a**.

- Trauma patient transferred out after 3 hours from ED admission (**JCAHO Clinical Indicator #9b**)

Same definition as **ACS Audit Filter #11b**.

- Adult trauma patient with femoral diaphyseal fractures treated by nonfixation technique (JCAHO Clinical Indicator #10)

Same definition as **ACS Audit Filter #16**.

- Intrahospital mortality of trauma patient with 1 or more of the conditions who did not undergo a procedure for the condition: tension pneumothorax, hemoperitoneum, hemothoraces, ruptured aorta, pericardial tamponade, and epidural or subdural hemorrhage (JCAHO Clinical Indicator #11)

Trauma Patient; AND

"Is this a transfer patient?" (TRANSF_PT) = 2 (No); AND

Discharge Status (DIS_STATUS) = 7 (Dead); AND

If any of the fields (COND_1, COND_2, ... COND_6) associated with the question:

"If patient had one or more of the following conditions, did he/she undergo a procedure for the condition(s)?" = 2 (No).

- Trauma patient who expired within 48 hours of ED arrival, with autopsy performed (JCAHO Clinical Indicator #12)

Trauma Patient; AND

Discharge Status (DIS_STATUS) = 7 (Dead); AND

"Autopsy Results Available" (AUTOPSY_MR) = 1 (Yes); AND

Time from ED arrival (EDA_DATE, EDA_TIME) to death (DATE_DEATH, TIME_DEATH) ≤ 48 hours.

APPENDIX 14: ICU/STEPDOWN DAYS CALCULATION EXAMPLES

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/02/2014
Step Down	10/03/2014	10/04/2014

ICU Days: 1
Step Down Days: 2

- Subtract date of admit from date of d/c from ICU – 10/2 – 10/1 = 1 ICU day
- Count both stepdown days – 10/3 and 10/4

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/02/2014
Step Down	10/02/2014	10/04/2014

ICU Days: 1
Step Down Days: 2

- 10/2 – 10/1 = 1 ICU day
- 10/2 wouldn't count as stepdown (count highest level/day)
- 10/3 and 10/4 = 2 stepdown days

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/01/2014
Step Down	10/01/2014	10/01/2014

ICU Days: 1
Step Down Days: 0

- Partial day = 1 ICU day
- Count highest level/day (ICU vs. stepdown)

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/01/2014
ICU	10/02/2014	10/02/2014

ICU Days: 2
Step Down Days: 0

- Partial day = 1 ICU day
- Count 1 ICU day for 10/1 and 1 ICU day for 10/2

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/02/2014
Step Down	10/02/2014	10/04/2014
ICU	10/04/2014	10/06/2014
Step Down	10/06/2014	10/07/2014

ICU Days: 3
Step Down Days: 2

- ICU days - 3
- 10/2 – 10/1 = 1
- 10/6 - 10/4 = 2
- Step Down days – 2
- 10/3 and 10/7
- **10/2, 10/4, and 10/6 are counted as ICU days, not step down (only count highest level/day)

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/02/2014
ICU	10/02/2014	10/04/2014

ICU Days: 3
Step Down Days: 0

- 10/2 – 10/1 = 1 ICU day
- 10/4 – 10/2 = 2 ICU days

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/02/2014
ICU	10/03/2014	10/04/2014

ICU Days: 2
Step Down Days: 0

- 10/2 - 10/1 = 1 ICU day
- 10/4 – 10/3 = 1 ICU day

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/01/2014
ICU	10/01/2014	10/03/2014

ICU Days: 2
Step Down Days: 0

- 10/3 – 10/1 = 2 ICU days
- Partial day (10/1) separate lines
- Don't count 10/1 twice

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/01/2014	10/03/2014
ICU	10/03/2014	10/03/2014
Step Down	10/03/2014	10/05/2014

ICU Days: 2
Step Down Days: 2

- 10/3 – 10/1 = 2 ICU days
- Don't count 10/3 twice as ICU day
- Don't count 10/3 as stepdown day
- 10/4 and 10/5 = 2 stepdown days

ICU/Stepdown	Admit Date	Discharge Date
ICU	10/02/2014	10/03/2014
ICU	10/03/2014	10/03/2014

ICU Days: 1
StepDown Days: 0

- 10/3 – 10/2 = 1 ICU day
- Don't count 10/3 twice

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