

Trauma Quality Programs (TQP)

Participant Use File (PUF)

User Manual

Admission Year 2017

Version 1.1

Released: March 2020

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RELEASES AND UPDATES

March 2020:

V1.1 released.

- Corrected the following data inaccuracies:
 - Corrected LOSDays element calculation for datasets obtained prior to 9/26/2019
 - Corrected blanking of all mins/days elements (e.g. PROCEDUREHRS/PROCEDUREDAYS) for limited patient scenarios
 - Removed 6,470 records used for testing
- INC_KEYS revised to ensure no overlap with prior PUF years. If needing to duplicate INC_KEYS from the V1.0 2017 PUF, subtract 170,000,000,000.
- EDMIN was relabeled EDMINS.
- Removed ICD_Country elements as only US data is included in the PUF.
- Tables in this document were updated to more accurately reflect the dataset structure.

June 2019:

V1.0 released.

- Reflects major structural changes from the design of prior TQP PUFs. For more information, please see the section in this document titled *2017 PUF Reorganization*.

TERMS OF USE

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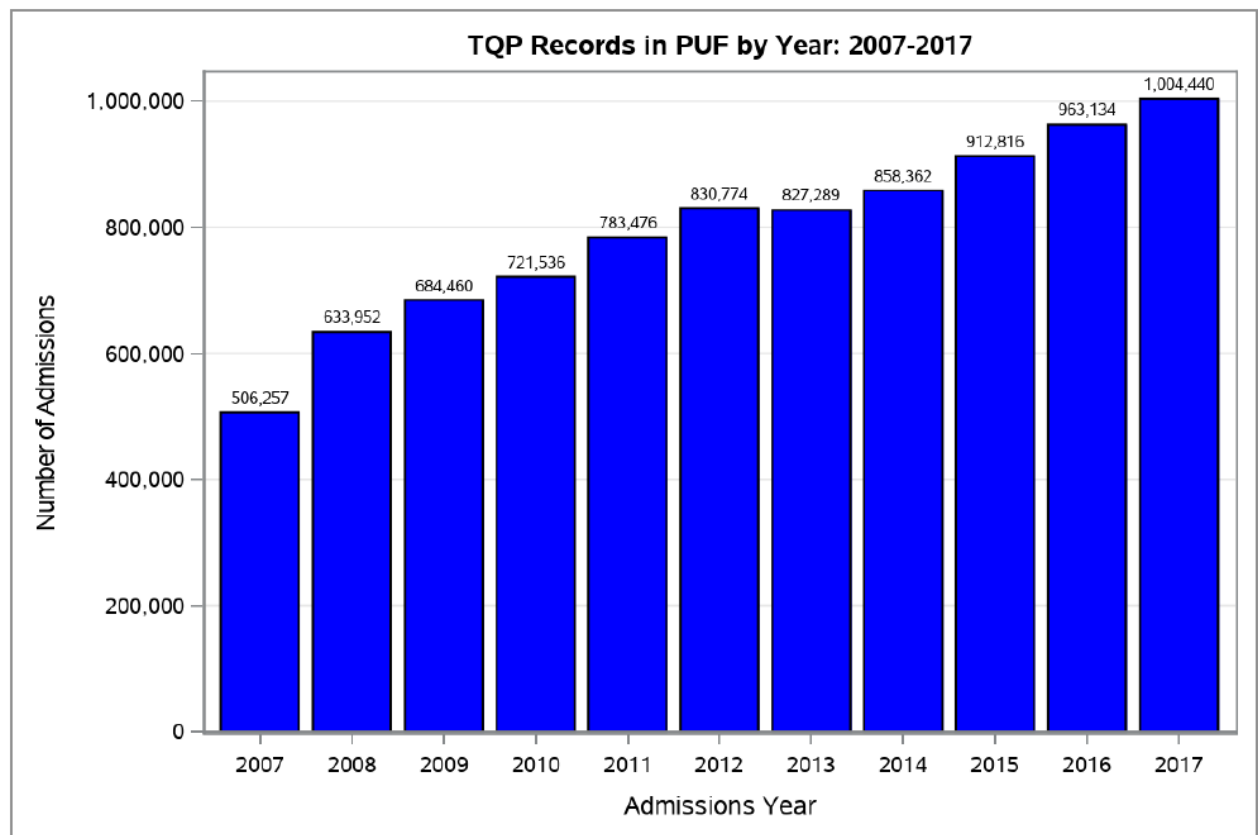
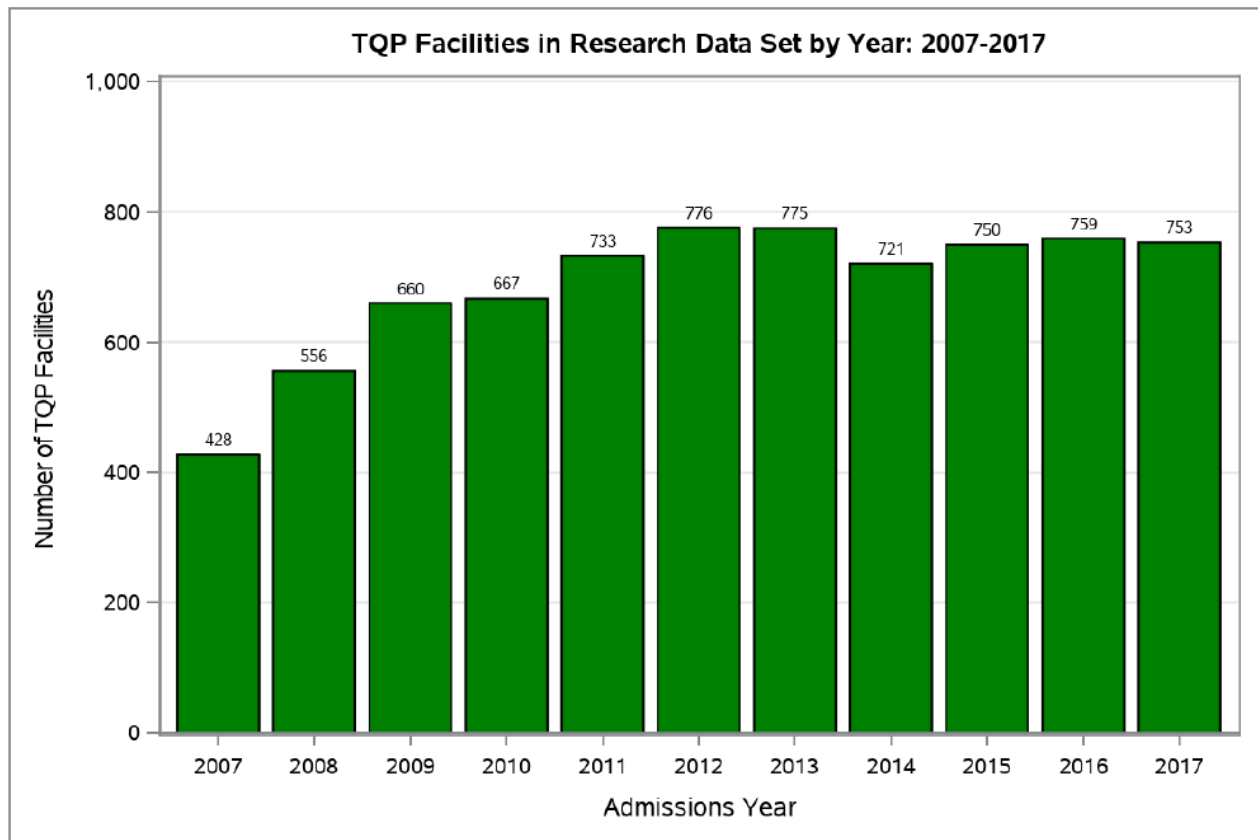
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RECORD AND FACILITY COUNTS BY YEAR



2017 PUF REORGANIZATION

The American College of Surgeons (ACS) Trauma Quality Programs (TQP) transitioned to a new technical vendor in 2017. Because of this transition, we redesigned our data infrastructure and that infrastructure is reflected in the design of the PUF starting with AY 2017 data. Due to this redesign, researchers using data from 2017 and prior for a single project will be responsible for integrating those designs for their analyses. The main structural changes in the dataset is as follows:

- Significant reduction in the count of tables as most many-to-one tables from 2016 and prior have been flattened into columns in the Trauma table for 2017 onwards
- Addition of Blank, Inappropriate, Unknown (BIU) columns representing element null values
- Simplification of AIS to include all submitted codes, as well as AIS version, along with an AIS crosswalk from AIS 05 to AIS 98
- Addition of format table for convenient data processing. For more information, please see the section in this document titled *Formats*

The column “AY 2016 Dataset Location” in the *PUF Dictionary by Admission Year* companion document shows the location of each 2017 column in the AY 2016 dataset. Researchers should also consult the NTDS Data Dictionary for each admission year included in their analyses to be aware of the changes in element definitions from year to year.

DATASET DETAILS

The PUF is a set of relational tables containing elements as defined by the National Trauma Data Standard (NTDS) for each respective admission year. It is *strongly recommended* that anyone using this PUF consults the NTDS for each admission year involved in their research to ensure familiarity with data definitions and to understand how those definitions may have shifted across years.

Data from non-American trauma centers was removed from this dataset due to issues with identifying nation-specific coding standards.

These tables are provided in ASCII-CSV (comma separated value) format and standard SAS (*.sas7bdat) data tables. The relational tables are generally too large to be analyzed in Excel, but have been used in SAS, STATA, SPSS, Access, and Tableau.

Two different classes of tables exist in the data set:

- **Clinical record tables**
 - Table with information related to each clinical record, either one-to-one in design or many-to-one in design.
 - These tables include a unique record identifier (INC_KEY) for merging tables together.
- **Lookup tables**
 - The remaining tables are lookup tables with descriptions of relevant code sets.
 - These tables can be merged with clinical record tables using the code from the relevant coding standard (e.g. AIS).

Note that due to PUF restructuring first applied with admission year (AY) 2017 data, all following tables and elements are listed as starting in 2017.

If you are interested in linking the AY 2017 data with prior AY PUFs, please see the section in this document titled *2017 PUF Reorganization*.

Table Name	Admission Years	Description
PUF_AIS05TO98_CROSSWALK	2017	Crosswalk from AIS (Abbreviated Injury Scale) 05/08 codes to AIS 98 codes. Can be merged with PUF_AISDIAGNOSIS
PUF_AISDIAGNOSIS	2017	AIS codes
PUF_AISDIAGNOSIS_LOOKUP	2017	AIS code descriptions, etc. Can be merged with PUF_AISDIAGNOSIS
PUF_ECODE_LOOKUP	2017	ICD-10-CM External Cause Code descriptions, mechanisms, etc. Can be merged with PUF_TRAUMA
PUF_FORMATS	2017	<i>Metadata:</i> Formats applied to other tables in this dataset
PUF_ICDDIAGNOSIS	2017	ICD-10-CM diagnosis codes
PUF_ICDDIAGNOSIS_LOOKUP	2017	ICD-10-CM diagnosis codes descriptions, etc. Can be merged with PUF_ICDDIAGNOSIS
PUF_ICDPROCEDURE	2017	ICD-10-CM procedure codes
PUF_ICDPROCEDURE_LOOKUP	2017	ICD-10-CM procedure code descriptions, etc. Can be merged with PUF_ICDPROCEDURE
PUF_TRAUMA	2017	Record-level NTDS data other than diagnosis codes (ICD, AIS) and procedure codes
TQP_INCLUSION	2017	Information about a record's affiliation with a Trauma Quality Improvement Program (TQIP) facility, and whether that record met TQIP inclusion criteria for any TQIP reporting products

ELEMENT DESCRIPTION LIST

This section includes the definition, addition year, retirement year, and notes about each element. For more detail related to data formats, length, etc., please refer to the included Excel PUF Dictionary document.

For clinical definitions of all data elements, please consult the NTDS Data Dictionary for each respective admission year.

Some elements in the PUF_TRAUMA table are TQIP Processes of Care Measures. These elements are only requested from level I and II trauma centers and are subject to specific collection criteria noted in the NTDS Data Dictionary. These criteria are important to consider when defining your analyses. These elements are marked with a **“PM”** in the *Description* column.

NOTE: All data elements have Common Null Values (blank inappropriate values, here forth known as BIU Values) as valid values unless specified.

BIU Element Values and Definitions

- 1: Not Applicable
 - This null value code applies if, at the time of patient care documentation, the information requested was “Not Applicable” to the patient, the hospitalization or the patient care event.
- 2: Not Known/Not Recorded
 - *Not Known/Not Recorded:* This null value applies if, at the time of patient care documentation, information was “Not Known” to the patient, family, or health care provider or the information was unavailable in the chart for abstraction.

Table Name: PUF_AIS05TO98_CROSSWALK

Definition: Crosswalk from AIS 05 codes to AIS 98 codes. This crosswalk is not meant as a bidirectional crosswalk.

Frequency: One row per AIS 05 diagnosis code

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
AIS05_PREDOT	Pre-dot of the AIS 05 source code	2017	None	Link to PUF_AISDIAGNOSIS.AISPREDOT
AIS05_SEVERITY	Severity of the AIS 05 source code	2017	None	
AIS98_PREDOT	Pre-dot of the AIS 98 destination code	2017	None	
AIS98_SEVERITY	Severity of the AIS 98 destination code	2017	None	
AIS98_DESCRIPTION	The description of the AIS 98 destination code	2017	None	

Table Name: PUF_AISDIAGNOSIS

Definition: AIS© (Abbreviated Injury Scale) codes

Frequency: Multiple rows per record possible

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2017	None	Link to PUF_TRAUMA.INC_KEY
AISPREDOT	AIS diagnosis pre-dot value	2017	None	Full AIS codes are documented as AISPREDOT.AISSEVERITY (e.g. 111111.1), but the components are separated in the PUF
AISPREDOT_BIU	AIS diagnosis pre-dot BIU	2017	None	BIU element
AISSEVERITY	AIS diagnosis severity value	2017	None	
AISSEVERITY_BIU	AIS diagnosis severity BIU	2017	None	BIU element
AISVERSION	The version of AIS used to code the incident	2017	None	

Table Name: PUF_AISDIAGNOSIS_LOOKUP
Definition: Lookup table for AIS diagnosis codes
Frequency: One row per AIS diagnosis code

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
AISPREDOT	AIS diagnosis pre-dot value	2017	None	Link to PUF_AISDIAGNOSIS.AISPREDOT
AISSEVERITY	AIS diagnosis severity value	2017	None	
AISDESCRIPTION	AIS diagnosis code (AISPREDOT.AISSEVERITY) description	2017	None	
AISVERSION	AIS version for this AIS diagnosis code	2017	None	
ISSREGION	ISS body region for this AIS diagnosis code	2017	None	

Table Name: PUF_ICDDIAGNOSIS
Definition: ICD CM diagnosis codes
Frequency: Multiple rows per record possible

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2017	None	Link to PUF_TRAUMA.INC_KEY
ICDDIAGNOSISCODE	ICD CM diagnosis code	2017	None	
ICDDIAGNOSISCODE_BIU	ICD CM diagnosis code BIU	2017	None	BIU element
ICDDIAGNOSISVERSION	ICD CM version	2017	None	

Table Name: PUF_ICDDIAGNOSIS_LOOKUP
Definition: Lookup table for ICD CM diagnosis codes
Frequency: One row per ICD CM diagnosis code

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
ICDDIAGNOSISCODE	ICD CM diagnosis code value	2017	None	Link to PUF_ICDDIAGNOSIS.ICDDIAGNOSISCODE
ICDDIAGNOSISCODE_DESC	ICD CM diagnosis code description	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
ICD_VERSION	ICD CM diagnosis code version	2017	None	

Table Name: PUF_ECODE_LOOKUP

Definition: Lookup table for ICD CM External Cause Codes (E-codes). The content of this table was developed by a collaboration between the ACS and the CDC.

Frequency: One row per ICD CM E-code

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
ECODE	Unique ICD CM E-Code	2017	None	Link to PUF_TRAUMA.PRIMARYECODEICD10
ECODE_DESC	Description of each ICD CM E-Code	2017	None	
INTENT	Injury intentionality	2017	None	
MECHANISM	Mechanism of injury	2017	None	
TRAUMA_TYPE	Trauma type	2017	None	
ICD_VERSION	ICD CM diagnosis code version	2017	None	

Table Name: PUF_ICDPROCEDURE

Definition: ICD CM procedure codes

Frequency: Multiple rows per record possible

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2017	None	Link to PUF_TRAUMA.INC_KEY
ICDPROCEDURECODE	ICD CM procedure code	2017	None	
ICDPROCEDURECODE_BIU	ICD CM procedure code BIU	2017	None	BIU element
ICDPROCEDUREVERSION	ICD CM procedure code version	2017	None	
PROCEDUREMINS	Number of minutes from ED/hospital arrival until the beginning of procedure	2017	None	Calculated by ACS from submitted dates/times
PROCEDUREDAYS	Number of days from ED/hospital arrival until the	2017	None	Calculated by ACS from submitted

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	beginning of procedure			dates/times

Table Name: PUF_ICDPROCEDURE_LOOKUP

Definition: Lookup table for ICD CM procedure codes

Frequency: One row per ICD CM procedure code

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
ICDPROCEDURE CODE	ICD CM procedure code value	2017	None	Link to PUF_ICDPROCEDURE.ICDPROCEDURECODE
ICDPROCEDURE CODE_DESC	ICD CM procedure code description	2017	None	
ICD_VERSION	ICD CM procedure code version	2017	None	

Table Name: PUF_TRAUMA

Definition: Record-level NTDS data elements other than diagnosis codes (ICD, AIS) and procedure codes.

Frequency: One row per record

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2017	None	
SEX	Sex	2017	None	
SEX_BIU	Sex BIU	2017	None	BIU element
AGEYEARS	Age (years)	2017	None	Calculated by ACS from Date of Birth or Age/Age Units. Age values < 1 or > 89 are blanked.
ASIAN	Race Category: Asian	2017	None	Flattened many-to-one response values from Race
PACIFICISLANDER	Race Category: Pacific Islander	2017	None	Flattened many-to-one response values from Race
RACEOTHER	Race Category: Other	2017	None	Flattened many-to-one response values from Race
AMERICANINDIAN	Race Category: American Indian	2017	None	Flattened many-to-one response values

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				from Race
BLACK	Race Category: Black	2017	None	Flattened many-to-one response values from Race
WHITE	Race Category: White	2017	None	Flattened many-to-one response values from Race
RACE_NA	Race Category: Not Applicable	2017	None	BIU element
RACE_UK	Race Category: Not Known/Not Recorded	2017	None	BIU element
ETHNICITY	Ethnicity	2017	None	
ETHNICITY_BIU	Ethnicity BIU	2017	None	BIU element
WORKRELATED	Work-Related	2017	None	
WORKRELATED_BIU	Work-Related BIU	2017	None	BIU element
PTOCCUPATIONALINDUSTRY	Patient's Occupational Industry	2017	None	
PTOCCUPATIONALINDUSTRY_BIU	Patient's Occupational Industry BIU	2017	None	BIU element
PATIENTSOCCUPATION	Patient's Occupation	2017	None	
PATIENTSOCCUPATION_BIU	Patient's Occupation BIU	2017	None	BIU element
PRIMARYEXTERNALCAUSEICD10	ICD10 Primary External Cause Code	2017	None	
PRIMARYEXTERNALCAUSEICD10_BIU	ICD10 Primary External Cause Code BIU	2017	None	
PLACEOFINJURYCODE	ICD10 Place of Injury Code	2017	None	
PLACEOFINJURYCODE_BIU	ICD10 Place of Injury Code BIU	2017	None	BIU element
ADDITIONALEXTERNALCAUSEICD10	ICD10 Additional External Cause Code	2017	None	
ADDITIONALEXTERNALCAUSEICD10_BIU	ICD10 Additional External Cause Code BIU	2017	None	
PROTDEV_NONE	Protective Device: None	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_LA	Protective Device: Lap Belt	2017	None	Flattened many-to-

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
P_BELT				one response values from Protective Devices
PROTDEV_P R_FLOAT	Protective Device: Personal Floatation Device	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_P ROTECT_GEAR	Protective Device: Protective Non-Clothing Gear	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_E Y_PROTECT	Protective Device: Eye Protection	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_C HILD_RESTRAIN T	Protective Device: Child Restraint (booster seat or child car seat)	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_H E_LMET	Protective Device: Helmet	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_A IRBAG_PRESEN T	Protective Device: Airbag Present	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_P ROTECT_CLOT H	Protective Device: Protective Clothing	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_S HOULDER_BELT	Protective Device: Shoulder Belt	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_O THER	Protective Device: Other	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_N A	Protective Device: Not Applicable	2017	None	BIU element
PROTDEV_U K	Protective Device: Not Known/Not Recorded	2017	None	BIU element
CHILDSPECI FICRESTRAINT	Child Specific Restraint	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
AIRBAG_NOT DEPLOYED	AirBag Deployment: Not Deployed	2017	None	Flattened many-to-one response values from Airbag Deployment
AIRBAG_DEPLOYED_FRNT	AirBag Deployment: Front	2017	None	Flattened many-to-one response values from Airbag Deployment
AIRBAG_DEPLOYED_SIDE	AirBag Deployment: Side	2017	None	Flattened many-to-one response values from Airbag Deployment
AIRBAG_DEPLOYED_OTHER	AirBag Deployment: Other	2017	None	Flattened many-to-one response values from Airbag Deployment
AIRBAG_DEPLOYED_NA	AirBag Deployment: Not Applicable	2017	None	BIU element
AIRBAG_DEPLOYED_UK	AirBag Deployment: Not Known/Not Recorded	2017	None	BIU element
ABUSEREPORT	Report of Physical Abuse	2017	None	
ABUSEREPORT_BIU	Report of Physical Abuse BIU	2017	None	BIU element
ABUSEINVESTIGATION	Investigation of Physical Abuse	2017	None	
ABUSEINVESTIGATION_BIU	Investigation of Physical Abuse BIU	2017	None	BIU element
CAREGIVERAT DISCHARGE	Caregiver at Discharge	2017	None	
CAREGIVERAT DISCHARGE_BIU	Caregiver at Discharge BIU	2017	None	BIU element
TRANSPORTMODE	Transport Mode	2017	None	
TRANSPORTMODE_BIU	Transport Mode BIU	2017	None	BIU element
TM_GROUND AMBULANCE	Other Transport Mode: Ground Ambulance	2017	None	Flattened many-to-one response values from Other Transport Mode
TM_HELICOPTERAMBULANCE	Other Transport Mode: Helicopter Ambulance	2017	None	Flattened many-to-one response values from Other Transport

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				Mode
TM_FIXEDWINGAMBULANCE	Other Transport Mode: Fixed-wing Ambulance	2017	None	Flattened many-to-one response values from Other Transport Mode
TM_PRIVPUBVEHWALKIN	Other Transport Mode: Private/Public Walk-in	2017	None	Flattened many-to-one response values from Other Transport Mode
TM_POLICE	Other Transport Mode: Police	2017	None	Flattened many-to-one response values from Other Transport Mode
TM_OTHER	Other Transport Mode: Other	2017	None	Flattened many-to-one response values from Other Transport Mode
TM_NA	Other Transport Mode: Not Applicable	2017	None	BIU element
TM_UK	Other Transport Mode: Not Known/Not Recorded	2017	None	BIU element
EMSSBP	Initial EMS Systolic Blood Pressure	2017	None	
EMSSBP_BIU	Initial EMS Systolic Blood Pressure BIU	2017	None	
EMSPULSERATE	Initial EMS Pulse Rate	2017	None	
EMSPULSERATE_BIU	Initial EMS Pulse Rate BIU	2017	None	BIU element
EMSRESPIRATORYRATE	Initial EMS Respiratory Rate	2017	None	
EMSRESPIRATORYRATE_BIU	Initial EMS Respiratory Rate BIU	2017	None	BIU element
EMSPULSEOXIMETRY	EMS Oxygen Saturation	2017	None	
EMSPULSEOXIMETRY_BIU	EMS Oxygen Saturation BIU	2017	None	BIU element
EMSGCSEYE	EMS GCS - Eye	2017	None	
EMSGCSEYE_BIU	EMS GCS - Eye BIU	2017	None	BIU element
EMSGCSVERBAL	EMS GCS - Verbal	2017	None	
EMSGCSVERBAL_BIU	EMS GCS - Verbal BIU	2017	None	BIU element
EMSGCSMOT	EMS GCS - Motor	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
OR				
EMSGCSMOTOR_BIU	EMS GCS - Motor BIU	2017	None	BIU element
EMSTOTALGCS	EMS Total GCS	2017	None	
EMSTOTALGCS_BIU	EMS Total GCS BIU	2017	None	BIU element
EMSRESPONSEMINS	Time to EMS Response (mins)	2017	None	Calculated by ACS from submitted dates/times
EMSRESPONSEDAYS	Time to EMS Response (days)	2017	None	Calculated by ACS from submitted dates/times
EMSSCENEMINS	Time EMS spent at scene (mins)	2017	None	Calculated by ACS from submitted dates/times
EMSSCENEDAYS	Time to EMS Response (days)	2017	None	Calculated by ACS from submitted dates/times
EMSMINS	Time from dispatch to ED/hospital arrival (mins)	2017	None	Calculated by ACS from submitted dates/times
EMSDAYS	Time from dispatch to ED/hospital arrival (days)	2017	None	Calculated by ACS from submitted dates/times
INTERFACILITYTRANSFER	Inter-Facility Transfer	2017	None	
INTERFACILITYTRANSFER_BIU	Inter-Facility Transfer BIU	2017	None	BIU element
PREHOSPITALCARDIACARREST	Pre-Hospital Cardiac Arrest	2017	None	
PREHOSPITALCARDIACARREST_BIU	Pre-Hospital Cardiac Arrest BIU	2017	None	BIU element
TCCGCSLE13	Trauma Center Criteria: GCS <=13	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCSBPLT30	Trauma Center Criteria: SBP < 90	2017	None	Flattened many-to-one response values from Trauma Center Criteria

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
TCC10RR29	Trauma Center Criteria: Respiratory rate < 10 or > 29 breaths per minute (< 20 in infants aged < 1 year) or need for ventilatory support	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCPEN	Trauma Center Criteria: All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCCHEST	Trauma Center Criteria: Chest wall instability or deformity (e.g., flail chest)	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCLONGBONE	Trauma Center Criteria: Two or more proximal long-bone fractures	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCCRUSHED	Trauma Center Criteria: Crushed, degloved, mangled, or pulseless extremity	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCAMPUTATION	Trauma Center Criteria: Amputation proximal to wrist or ankle	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCPELVIC	Trauma Center Criteria: Pelvic fracture	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCSKULLFRACTURE	Trauma Center Criteria: Open or depressed skull fracture	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCCPARALYSIS	Trauma Center Criteria: Paralysis	2017	None	Flattened many-to-one response values from Trauma Center Criteria
TCC_NA	Trauma Center Criteria: Not Applicable	2017	None	BIU element
TCC_UK	Trauma Center Criteria: Not Known/Not Recorded	2017	None	BIU element
VPOFALLADU	Vehicular, Pedestrian, Other Risk	2017	None	Flattened many-to-

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
LT	Injury: Fall adults: > 20 ft. (one story is equal to 10 ft.)			one response values from Vehicular, Pedestrian, Other Risk Injury
VPOFALLCHILD	Vehicular, Pedestrian, Other Risk Injury: Fall children: > 10 ft. or 2-3 times the height of the child	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOCRASHINTRUSION	Vehicular, Pedestrian, Other Risk Injury: Crash intrusion, including roof: > 12 in. occupant site; > 18 in. any site	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOCRASHEJECT	Vehicular, Pedestrian, Other Risk Injury: Crash ejection (partial or complete) from automobile	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOCRASHDEATH	Vehicular, Pedestrian, Other Risk Injury: Crash death in same passenger compartment	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOCRASHTELEMETRY	Vehicular, Pedestrian, Other Risk Injury: Crash vehicle telemetry data (AACN) consistent with high risk injury	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOAUTOPEDIMPACT	Vehicular, Pedestrian, Other Risk Injury: Auto v. pedestrian/bicyclist thrown, run over, or > 20 MPH impact	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOMOTORCYCLECRASH	Vehicular, Pedestrian, Other Risk Injury: Motorcycle crash > 20 mph	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPO65SBP110	Vehicular, Pedestrian, Other Risk Injury: For adults > 65; SBP < 110	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
VPOANTICOAGULANT	Vehicular, Pedestrian, Other Risk Injury: Patients on anticoagulants and bleeding disorders	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOPREGNANCY20WKS	Vehicular, Pedestrian, Other Risk Injury: Pregnancy > 20 weeks	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOEMSJUDGE	Vehicular, Pedestrian, Other Risk Injury: EMS provider judgment	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOBURNS	Vehicular, Pedestrian, Other Risk Injury: Burns	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPOTRAUMABURNS	Vehicular, Pedestrian, Other Risk Injury: Burns with Trauma	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPO_NA	Vehicular, Pedestrian, Other Risk Injury: Not Applicable	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
VPO_UK	Vehicular, Pedestrian, Other Risk Injury: Not Known/Not Recorded	2017	None	Flattened many-to-one response values from Vehicular, Pedestrian, Other Risk Injury
EDMINS	Total time between ED/hospital arrival and ED discharge (mins)	2017	None	Calculated by ACS from submitted dates/times
EDDAYS	Total time between ED/hospital arrival and ED discharge (days)	2017	None	Calculated by ACS from submitted dates/times
SBP	Systolic Blood Pressure	2017	None	
SBP_BIU	Systolic Blood Pressure BIU	2017	None	BIU element
PULSERATE	Pulse Rate	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
PULSERATE_BIU	Pulse Rate BIU	2017	None	BIU element
TEMPERATURE	Temperature	2017	None	
TEMPERATURE_BIU	Temperature BIU	2017	None	BIU element
RESPIRATORY RATE	Respiratory Rate	2017	None	
RESPIRATORY RATE_BIU	Respiratory Rate BIU	2017	None	BIU element
RESPIRATORY ASSISTANCE	Respiratory Assistance	2017	None	
RESPIRATORY ASSISTANCE_BIU	Respiratory Assistance BIU	2017	None	BIU element
PULSEOXIMETRY	Pulse Oximetry	2017	None	
PULSEOXIMETRY_BIU	Pulse Oximetry BIU	2017	None	BIU element
SUPPLEMENT ALOXYGEN	Supplemental Oxygen	2017	None	
SUPPLEMENT ALOXYGEN_BIU	Supplemental Oxygen BIU	2017	None	BIU element
HEIGHT	Height	2017	None	
HEIGHT_BIU	Height BIU	2017	None	BIU element
WEIGHT	Weight	2017	None	
WEIGHT_BIU	Weight BIU	2017	None	BIU element
PRIMARYMETHODPAYMENT	Primary Method of Payment	2017	None	
PRIMARYMETHODPAYMENT_BIU	Primary Method of Payment BIU	2017	None	BIU element
GCSEYE	GCS - Eye	2017	None	
GCSEYE_BIU	GCS - Eye BIU	2017	None	BIU element
GCSVERBAL	GCS - Verbal	2017	None	
GCSVERBAL_BIU	GCS - Verbal BIU	2017	None	BIU element
GCSMOTOR	GCS - Motor	2017	None	
GCSMOTOR_BIU	GCS - Motor BIU	2017	None	BIU element
TOTALGCS	Total GCS	2017	None	
TOTALGCS_BIU	Total GCS BIU	2017	None	BIU element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
U				
GCSQ_SEDAT EDPARALYZED	GCS Assessment Qualifiers: Patient Chemically Sedated or Paralyzed	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier
GCSQ_EYEOB STRUCTION	GCS Assessment Qualifiers: Obstruction to the Patient's Eye	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier
GCSQ_INTUB ATED	GCS Assessment Qualifiers: Patient Intubated	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier
GCSQ_VALID	GCS Assessment Qualifiers: Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to the eye	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier
GCSQ_NA	GCS Assessment Qualifiers: Not Applicable	2017	None	BIU element
GCSQ_UK	GCS Assessment Qualifiers: Not Known/Not Recorded	2017	None	BIU element
DRGSCR_AMP HETAMINE	Drug Screen: AMP (Amphetamine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_BAR BITURATE	Drug Screen: BAR (Barbiturate)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_BEN ZODIAZEPINE S	Drug Screen: BZO (Benzodiazepines)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_COC AINE	Drug Screen: COC (Cocaine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_MET HAMPHETAMI NE	Drug Screen: mAMP (Methamphetamine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_ECST ASY	Drug Screen: MDMA (Ecstasy)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_MET HADONE	Drug Screen: MTD (Methadone)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_OPI OID	Drug Screen: OPI (Opioid)	2017	None	Flattened many-to-one response values

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				from Drug Screen
DRGSCR_OXYCODONE	Drug Screen: OXY (Oxycodone)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_PHENCYCLIDINE	Drug Screen: PCP (Phencyclidine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_TRICYCLICDEPRESS	Drug Screen: TCA (Tricyclic Antidepressant)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_CANNABINOID	Drug Screen: THC (Cannabinoid)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_OTHER	Drug Screen: Other	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_NONE	Drug Screen: None	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_NOTTESTED	Drug Screen: Not Tested	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_UK	Drug Screen: Not Known/Not Recorded	2017	None	BIU element
DRGSCR_NA	Drug Screen: Not Applicable	2017	None	BIU element
ALCOHOLSCREEN	Alcohol Screen	2017	None	
ALCOHOLSCREEN_BIU	Alcohol Screen BIU	2017	None	BIU element
ALCOHOLSCREENRESULT	Alcohol Screen Result	2017	None	
ALCOHOLSCREENRESULT_BIU	Alcohol Screen Result BIU	2017	None	BIU element
EDDISCHARGE DISPOSITION	ED Discharge Disposition	2017	None	
EDDISCHARGE DISPOSITION_BIU	ED Discharge Disposition BIU	2017	None	BIU element
DEATHINED	Signs of Life	2017	None	
DEATHINED_BIU	Signs of Life BIU	2017	None	BIU element
HOSPDISCHARGE DISPOSITION	Hospital Discharge Disposition	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
N				
HOSPDISCHARGEDISPOSITION_BIU	Hospital Discharge Disposition BIU	2017	None	BIU element
CC_ADHD	Comorbid Condition: Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_ADLC	Comorbid Condition: Advanced Directive Limiting Care	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_ALCOHOLISM	Comorbid Condition: Alcohol Use Disorder	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_ANGINPECTORIS	Comorbid Condition: Angina Pectoris	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_ANTI COAGULANT	Comorbid Condition: Anticoagulant Therapy	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_BLEEDING	Comorbid Condition: Bleeding Disorder	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_CHEMO	Comorbid Condition: Currently Receiving Chemotherapy for Cancer	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_CIRRHOSIS	Comorbid Condition: Cirrhosis	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_CONGENITAL	Comorbid Condition: Congenital Anomalies	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_COPD	Comorbid Condition: Chronic Obstructive Pulmonary Disease (COPD)	2017	None	Flattened many-to-one response values from Comorbid Conditions

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
CC_CVA	Comorbid Condition: Cerebrovascular Accident (CVA)	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_DEMENTIA	Comorbid Condition: Dementia	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_DIABETES	Comorbid Condition: Diabetes Mellitus	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_DISCANSER	Comorbid Condition: Disseminated Cancer	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_FUNCTIONAL	Comorbid Condition: Functionally Dependent Health Status	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_CHF	Comorbid Condition: Congestive Heart Failure	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_HYPERTENSION	Comorbid Condition: Hypertension	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_MI	Comorbid Condition: Myocardial Infarction (MI)	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_OTHER	Comorbid Condition: Other	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_PAD	Comorbid Condition: Peripheral Arterial Disease (PAD)	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_PREMATURITY	Comorbid Condition: Prematurity	2017	None	Flattened many-to-one response values from Comorbid Conditions

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
CC_MENTALPERSONALITY	Comorbid Condition: Mental/Personality Disorder	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_RENAL	Comorbid Condition: Chronic Renal Failure	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_SMOKING	Comorbid Condition: Current Smoker	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_STEROID	Comorbid Condition: Steroid Use	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_SUBSTANCEABUSE	Comorbid Condition: Substance Abuse Disorder	2017	None	Flattened many-to-one response values from Comorbid Conditions
CC_UK	Comorbid Condition: Not Known/Not Recorded	2017	None	BIU element
CC_NA	Comorbid Condition: Not Applicable	2017	None	BIU element
TOTALICULOS	Total ICU Length of Stay	2017	None	
TOTALICULOS_BIU	Total ICU Length of Stay BIU	2017	None	BIU element
TOTALVENTDAYS	Total Vent Days	2017	None	
TOTALVENTDAYS_BIU	Total Vent Days BIU	2017	None	BIU element
LOSDays	Length of stay (days)	2017	None	
HC_ALCOHOLWITHDRAWAL	Hospital Complication: Alcohol Withdrawal Syndrome	2017	None	Flattened many-to-one response values from Hospital Complications
HC_CARDARREST	Hospital Complication: Cardiac Arrest with CPR	2017	None	Flattened many-to-one response values from Hospital Complications
HC_CAUTI	Hospital Complication: Catheter-Associated Urinary Tract Infection (CAUTI)	2017	None	Flattened many-to-one response values from Hospital Complications

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
HC_CLABSI	Hospital Complication: Central Line-Associated Bloodstream Infection (CLABSI)	2017	None	Flattened many-to-one response values from Hospital Complications
HC_DEEPSSI	Hospital Complication: Deep Surgical Site Infection	2017	None	Flattened many-to-one response values from Hospital Complications
HC_DVTHROMBOSIS	Hospital Complication: Deep Vein Thrombosis (DVT)	2017	None	Flattened many-to-one response values from Hospital Complications
HC_EMBOLISM	Hospital Complication: Pulmonary Embolism	2017	None	Flattened many-to-one response values from Hospital Complications
HC_EXTREMITIES	Hospital Complication: Extremity Compartment Syndrome	2017	None	Flattened many-to-one response values from Hospital Complications
HC_INTUBATION	Hospital Complication: Unplanned Intubation	2017	None	Flattened many-to-one response values from Hospital Complications
HC_KIDNEY	Hospital Complication: Acute Kidney Injury	2017	None	Flattened many-to-one response values from Hospital Complications
HC_MI	Hospital Complication: Myocardial Infarction	2017	None	Flattened many-to-one response values from Hospital Complications
HC_ORGANSPACESSI	Hospital Complication: Organ/Space Surgical Site Infection	2017	None	Flattened many-to-one response values from Hospital Complications
HC_OSTEOMYELITIS	Hospital Complication: Osteomyelitis	2017	None	Flattened many-to-one response values from Hospital Complications
HC_OTHER	Hospital Complication: Other	2017	None	Flattened many-to-one response values from Hospital Complications

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
HC_RESPIRATORY	Hospital Complication: Acute Respiratory Distress Syndrome (ARDS)	2017	None	Flattened many-to-one response values from Hospital Complications
HC_RETURNOR	Hospital Complication: Unplanned Return to the OR	2017	None	Flattened many-to-one response values from Hospital Complications
HC_SEPSIS	Hospital Complication: Severe Sepsis	2017	None	Flattened many-to-one response values from Hospital Complications
HC_STROKECVA	Hospital Complication: Stroke / CVA	2017	None	Flattened many-to-one response values from Hospital Complications
HC_SUPERFICIALINCISIONSSI	Hospital Complication: Superficial Incisional Surgical Site Infection	2017	None	Flattened many-to-one response values from Hospital Complications
HC_PRESSUREULCER	Hospital Complication: Pressure Ulcer	2017	None	Flattened many-to-one response values from Hospital Complications
HC_UNPLANNEDICU	Hospital Complication: Unplanned Admission to the ICU	2017	None	Flattened many-to-one response values from Hospital Complications
HC_VAPNEUMONIA	Hospital Complication: Ventilator-Associated Pneumonia (VAP)	2017	None	Flattened many-to-one response values from Hospital Complications
HC_NA	Hospital Complication: Not Applicable	2017	None	BIU element
HC_UK	Hospital Complication: Not Known/Not Recorded	2017	None	BIU element
TBIHIGHESTTOTALGCS	PM: Highest GCS Total	2017	None	
TBIHIGHESTTOTALGCS_BIU	PM: Highest GCS Total BIU	2017	None	BIU element
TBIGCSMOTOR	PM: Highest GCS Motor	2017	None	
TBIGCSMOTOR_BIU	PM: Highest GCS Motor BIU	2017	None	BIU element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
PMGCSQ_SEDATEDPARALYZED	PM: GCS Assessment Qualifier Component of Highest GCS Total: Patient chemically sedated or paralyzed	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier of Highest GCS Total
PMGCSQ_EYE OBSTRUCTION	PM: GCS Assessment Qualifier Component of Highest GCS Total: Obstruction to the patient's eye	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier of Highest GCS Total
PMGCSQ_INTUBATED	PM: GCS Assessment Qualifier Component of Highest GCS Total: Patient intubated	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier of Highest GCS Total
PMGCSQ_VALID	PM: GCS Assessment Qualifier Component of Highest GCS Total: Valid GCS: patient was not sedated, not intubated, and did not have obstruction to the eye	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier of Highest GCS Total
PMGCSQ_NA	PM: GCS Assessment Qualifier Component of Highest GCS Total: Not Applicable	2017	None	BIU element
PMGCSQ_UK	PM: GCS Assessment Qualifier Component of Highest GCS Total: Not Known/Not Recorded	2017	None	BIU element
TBIPUPILLARY RESPONSE	PM: Pupillary Response	2017	None	
TBIPUPILLARY RESPONSE_BIU	PM: Pupillary Response BIU	2017	None	BIU element
TBIMIDLINESHIFT	PM: Midline Shift	2017	None	
TBIMIDLINESHIFT_BIU	PM: Midline Shift BIU	2017	None	BIU element
ICPEVDRAIN	PM: Cerebral Monitor: Intraventricular drain/catheter (e.g. ventriculostomy, external ventricular drain)	2017	None	Flattened many-to-one response value from Cerebral Monitoring
ICPPARENCH	PM: Cerebral Monitor: Intraparenchymal pressure monitor (e.g. Camino	2017	None	Flattened many-to-one response value from Cerebral

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	bolt, subarachnoid bolt, intraparenchymal catheter)			Monitoring
ICPO2MONITOR	PM: Cerebral Monitor: Intraparenchymal oxygen monitor (e.g. Licox)	2017	None	Flattened many-to-one response value from Cerebral Monitoring
ICPJVBULB	PM: Cerebral Monitor: Jugular venous bulb	2017	None	Flattened many-to-one response value from Cerebral Monitoring
ICPNONE	PM: Cerebral Monitor: None	2017	None	Flattened many-to-one response value from Cerebral Monitoring
ICP_NA	PM: Cerebral Monitor: Not Applicable	2017	None	BIU element
ICP_UK	PM: Cerebral Monitor: Not Known/Not Recorded	2017	None	BIU element
VTEPROPHYLAXISTYPE	PM: VTE Prophylaxis Type	2017	None	
VTEPROPHYLAXISTYPE_BIU	PM: VTE Prophylaxis Type BIU	2017	None	BIU element
CerebralMonitorMins	PM: Time To: Cerebral Monitoring (minutes)	2017	None	Calculated by ACS from submitted dates/times
CerebralMonitorDays	PM: Time To: Cerebral Monitoring (days)	2017	None	Calculated by ACS from submitted dates/times
VTEProphylaxisMins	PM: Time To: VTE Prophylaxis (minutes)	2017	None	Calculated by ACS from submitted dates/times
VTEProphylaxisDays	PM: Time To: VTE Prophylaxis (days)	2017	None	Calculated by ACS from submitted dates/times
BLOOD4HOURS	PM: Transfusion Blood (4 Hours)	2017	None	
BLOOD4HOURS_BIU	PM: Transfusion Blood (4 Hours) BIU	2017	None	BIU element
BLOOD24HOURS	PM: Transfusion Blood (24 Hours)	2017	None	
BLOOD24HOURS_BIU	PM: Transfusion Blood (24 Hours) BIU	2017	None	BIU element
BLOODMEASURE	PM: Transfusion Blood Measurement	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
BLOODMEASURE_BIU	PM: Transfusion Blood Measurement BIU	2017	None	BIU element
BLOODCONVERSION	PM: Transfusion Blood Conversion	2017	None	
BLOODCONVERSION_BIU	PM: Transfusion Blood Conversion BIU	2017	None	BIU element
PLASMA4HOURS	PM: Transfusion Plasma (4 Hours)	2017	None	
PLASMA4HOURS_BIU	PM: Transfusion Plasma (4 Hours) BIU	2017	None	BIU element
PLASMA24HOURS	PM: Transfusion Plasma (24 Hours)	2017	None	
PLASMA24HOURS_BIU	PM: Transfusion Plasma (24 Hours) BIU	2017	None	BIU element
PLASMAMEASURE	PM: Transfusion Plasma Measurement	2017	None	
PLASMAMEASURE_BIU	PM: Transfusion Plasma Measurement BIU	2017	None	BIU element
PLASMACONVERSION	PM: Transfusion Plasma Conversion	2017	None	
PLASMACONVERSION_BIU	PM: Transfusion Plasma Conversion BIU	2017	None	BIU element
PLATELETS4HOURS	PM: Transfusion Platelets (4 Hours)	2017	None	
PLATELETS4HOURS_BIU	PM: Transfusion Platelets (4 Hours) BIU	2017	None	BIU element
PLATELETS24HOURS	PM: Transfusion Platelets (24 Hours)	2017	None	
PLATELETS24HOURS_BIU	PM: Transfusion Platelets (24 Hours) BIU	2017	None	BIU element
PLATELETSMEASURE	PM: Transfusion Platelets Measurement	2017	None	
PLATELETSMEASURE_BIU	PM: Transfusion Platelets Measurement BIU	2017	None	BIU element
PLATELETSCONVERSION	PM: Transfusion Platelets Conversion	2017	None	
PLATELETSCONVERSION_BIU	PM: Transfusion Platelets Conversion BIU	2017	None	BIU element
CRYOPRECIPITATE4HOURS	PM: Cryoprecipitate (4 Hours)	2017	None	
CRYOPRECIPITATE4HOURS_BIU	PM: Cryoprecipitate (4 Hours) BIU	2017	None	BIU element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
CRYOPRECIPITATE24HOURS	PM: Cryoprecipitate (24 Hours)	2017	None	
CRYOPRECIPITATE24HOURS_BIU	PM: Cryoprecipitate (24 Hours) BIU	2017	None	BIU element
CRYOPRECIPITATEMEASURE	PM: Cryoprecipitate Measurement	2017	None	
CRYOPRECIPITATEMEASURE_BIU	PM: Cryoprecipitate Measurement BIU	2017	None	BIU element
CRYOPRECIPITATECONVERSION	PM: Cryoprecipitate Conversion	2017	None	
CRYOPRECIPITATECONVERSION_BIU	PM: Cryoprecipitate Conversion BIU	2017	None	BIU element
LOWESTSBP	PM: Lowest SBP	2017	None	
LOWESTSBP_BIU	PM: Lowest SBP BIU	2017	None	BIU element
ANGIOGRAPHY	PM: Angiography	2017	None	
ANGIOGRAPHY_BIU	PM: Angiography BIU	2017	None	BIU element
ESLIVER	PM: Embolization Site: Liver	2017	None	Flattened many-to-one response values from Embolization Site
ESSPLEEN	PM: Embolization Site: Spleen	2017	None	Flattened many-to-one response values from Embolization Site
ESKIDNEY	PM: Embolization Site: Kidneys	2017	None	Flattened many-to-one response values from Embolization Site
ESPELVIS	PM: Embolization Site: Pelvic (iliac, gluteal, obturator)	2017	None	Flattened many-to-one response values from Embolization Site
ESRETROPERI	PM: Embolization Site: Retroperitoneum (lumbar, sacral)	2017	None	Flattened many-to-one response values from Embolization Site
ESVASCULAR	PM: Embolization Site: Peripheral	2017	None	Flattened many-to-

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	vascular (neck, extremities)			one response values from Embolization Site
ESAORTA	PM: Embolization Site: Aorta (thoracic or abdominal)	2017	None	Flattened many-to-one response values from Embolization Site
ESOTHER	PM: Embolization Site: Other	2017	None	Flattened many-to-one response values from Embolization Site
ES_UK	PM: Embolization Site: Not Known/Not Recorded	2017	None	BIU element
ES_NA	PM: Embolization Site: Not Applicable	2017	None	BIU element
ANGIOGRAPH YMins	PM: Time To: Angiography (minutes)	2017	None	Calculated by ACS from submitted dates/times
ANGIOGRAPH YDays	PM: Time To: Angiography (days)	2017	None	Calculated by ACS from submitted dates/times
HMRRHGCTRL SURGTYPE	PM: Surgery for Hemorrhage Control Type	2017	None	
HMRRHGCTRL SURGTYPE_BIU	PM: Surgery for Hemorrhage Control Type BIU	2017	None	BIU element
HMRRHGCTRL SURGMins	PM: Time To: Surgery for Hemorrhage Control (minutes)	2017	None	Calculated by ACS from submitted dates/times
HMRRHGCTRL SURGDays	PM: Time To: Surgery for Hemorrhage Control (days)	2017	None	Calculated by ACS from submitted dates/times
WITHDRAWA LLST	PM: Withdrawal of Life Supporting Treatment	2017	None	
WITHDRAWA LLST_BIU	PM: Withdrawal of Life Supporting Treatment BIU	2017	None	BIU element
WITHDRAWA LLSTMins	PM: Time To: Withdrawal of Life Supporting Treatment (minutes)	2017	None	Calculated by ACS from submitted dates/times
WITHDRAWA LLSTDays	PM: Time To: Withdrawal of Life Supporting Treatment (days)	2017	None	Calculated by ACS from submitted dates/times
TEACHINGSTATUS	Facility Level: Hospital Teaching Status	2017	None	Facility-level element provided at the

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				record-level
HOSPITALTYPE	Facility Level: Hospital Type	2017	None	Facility-level element provided at the record-level
BEDSIZE	Facility Level: Bed size	2017	None	Facility-level element provided at the record-level
VERIFICATION LEVEL	Facility Level: ACS Verification Level	2017	None	Facility-level element provided at the record-level
PEDIATRICVERIFICATIONLEVEL	Facility Level: Pediatric Verification Level	2017	None	Facility-level element provided at the record-level
STATEDESIGNATION	Facility Level: State Designation	2017	None	Facility-level element provided at the record-level
STATEPEDIATRICDESIGNATION	Facility Level: Pediatric State Designation	2017	None	Facility-level element provided at the record-level
YODISCH	Year of Discharge	2017	None	
ISS_05	AIS derived ISS	2017	None	Calculated by ACS from AIS diagnoses

Table Name: TQP_INCLUSION

Definition: Information about TQP enrollment and TQIP inclusion criteria application

Frequency: One row per record

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2017	None	Link to PUF_TRAUMA.INC_KEY
TQIPSITE	Facility Level: Record from a facility participating in TQIP	2017	None	Facility-level element provided at the record-level
ADULTTQIP	Record meeting Adult TQIP inclusion criteria from a participating facility. See FAQ for details.	2017	None	
PEDSTQIP	Record meeting Pediatric TQIP inclusion criteria from a participating facility. See FAQ for details.	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
L3TQIP	Record meeting Level III TQIP inclusion criteria from a participating facility. See FAQ for details.	2017	None	

FORMATS

Beginning with the 2017 PUF, a PUF_FORMATS table is included in both SAS and CSV formats. This file contains all the formats used for the PUF_TRAUMA table. It can be utilized in two ways:

- 1) As a code book for the 2017 PUF_TRAUMA variables, and
- 2) If imported, these formats' labels can be automatically applied to the data. This document describes the contents of the file.

There are four columns:

1. **FmtName:** This column lists the names of each format. Where applicable, each format is named after its corresponding variable. Please reference the *Format* column in the "PUF Dictionary by Admission Year, 2007-2017.xlsx" for further specification.
2. **Value:** This column lists the numerical values of each format. Notice there are at least two values for each format name.
3. **Label:** This column lists the character description of the value for each format name.
4. **Length:** This lists the maximum character length of each Label.

Example:

The variable, **AbuseInvestigation**, has a corresponding format named *AbuseInvestigation*. It has two possible values: 1 or 'Yes' and 2 or 'No'. Value 1 has a maximum length of 3 characters and the Value 2 has a maximum length of 3 characters.

DATA VALIDATION

Data contained in this dataset are validated at the time of submission using the validation system and rules defined in the NTDS Data Dictionary. For more information about those rules, please consult the NTDS Data Dictionary.

Beyond those rules, ACS has kept additional data validation processing to a minimum to allow researchers maximum flexibility and discretion to apply additional data validation as appropriate for their analyses. However, below is a list of validations beyond NTDS validation rules which have been applied in the TQP PUF.

PUF_TRAUMA:

1. The following elements are invalidated if occurring before ED/Hospital Arrival or after Final Discharge:
 - EMS Response Minutes
 - EMS Response Days
 - EMS Scene Minutes
 - EMS Scene Days
 - EMS Minutes
 - EMS Days
 - ED Minutes
 - ED Days
 - Length of Stay Minutes
 - Length of Stay Days
 - Cerebral Monitoring Minutes
 - Cerebral Monitoring Days
 - VTE Prophylaxis Minutes
 - VTE Prophylaxis Days
 - Angiography Minutes
 - Angiography Days
 - Hemorrhage Control Surgery Minutes
 - Hemorrhage Control Surgery Days
 - Withdrawal of Life Support (WOLST) Minutes
 - Withdrawal of Life Support (WOLST) Days

PUF_ICDPROCEDURE:

1. The following elements are invalidated if occurring before ED/Hospital Arrival or after Final Discharge:
 - Procedure Minutes
 - Procedure Days

ADDITIONAL TQIP DATA VALIDATION:

Many PUF variables are also used in the Trauma Quality Improvement Program (TQIP). Below are the processing rules for how TQIP invalidates these variables. Researchers using the PUF can choose whether to invalidate PUF data to follow TQIP's processing guidelines.

1. Invalidating of multi-select variable combinations:

Completed for the following elements if 'Not Known/Not Recorded' AND 'Not Applicable' are both selected, or 'Not Known/Not Recorded' OR 'Not Applicable' is selected with any of the valid values.

- Embolization Site
- Intracranial Pressure
- Venous Thromboembolism
- Angiography
- Comorbid Conditions
- Hospital Complications
- Drug Screening
- Race
 - **Example:** *If patient's Race is Not Known/Not Recorded AND/OR Not Applicable AND patient has a Race of either American Indian, Asian, Black, Pacific Islander, White, or Other Race then all above Race variables (including Not Known/Not Recorded and Not Applicable) are set to missing.*

2. Invalidating submitted time variables if conflicting with length of stay:

- Ventilation Days
- ICU Length of Stay Days

3. Invalidating Vitals outside of the following ranges:

- Respiratory Rate
 - Cannot be greater than 120 for ages less than 6 years
 - Cannot be greater than 99 for ages 6 years or more
- SBP
 - Cannot be greater than 300 mmHg
- Pulse
 - Cannot be greater than 299 beats per minute
- Temperature
 - Cannot be greater than 45° Celsius
- Pulse Oximetry
 - Must be between 0 and 100

FREQUENTLY ASKED QUESTIONS

What are the system requirements for downloading the TQP PUF?

- Minimum of 1.5 GB of hard drive space for each admission year (CSV or SAS)
- Minimum of 1GB of RAM strongly recommended

What are the differences between the file types (CSV vs. SAS)

- SAS files are standard SAS data tables.
- CSV files are comma separated value files. We are aware that SAS handles CSVs inconsistently when using PROC IMPORT. Please use caution and check your datasets prior to analysis, including checking elements values against the element list.
 - The inconsistencies include: truncation of values and changing of element type (numeric to character).

How can I merge the tables in TQP PUF?

- The TQP PUF tables can be merged by using the unique key for each record (INC_KEY) or by using codes from a relevant coding standard (e.g. AIS) to merge with a lookup table.

Is the dataset HIPAA compliant or confidential?

- Yes, the data set is de-identified and no protected health information is provided.
- To further limit possible identification of hospitals or patients, facilities that have patient counts of less than 30 have been removed from the dataset.
- TQP PUF data are maintained in a secure database with limited internal access. External users must gain permission to the database and data; users are then supplied data at the aggregate level only. Use of TQP PUF data is in strict compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA).⁷ TQP does not distribute or report hospital information in any manner that allows the reporting hospital to be identified without the express written permission of the hospital. The dataset collected by TQP is considered a limited dataset under HIPAA.

Can I estimate the number of trauma patients in the US based on the TQP PUF?

- The TQP PUF is an incident-based database derived from a voluntary subset of trauma centers, and there are no linkable patient identifiers in the database. If a patient has more than one trauma incident during an admission year, this patient will be in the database twice.

What are the patient inclusion criteria for the TQP?

- Please see the NTDS Data Dictionary for each admission year to understand the yearly NTDS inclusion criteria. These criteria define which records are submitted to the TQP from participating facilities.
- TQIP inclusion criteria, used for the AY 2017 TQP_INCLUSION table, are as follows:

Adult TQIP:

- Age greater than or equal to 16 years
- Blunt or penetrating trauma, or abuse of any trauma type (derived from submitted External Cause Code)
- At least one AIS 05/08 injury with severity between 3 - 6 in AIS body regions 1 – 8
- Admitted patients (Hospital Discharge Disposition other than Not Known/Not Recorded or Not Applicable), or patients who died in the ED (ED Discharge Disposition = Deceased/Expired)
- *Exclude* patients with a pre-existing advanced directive to withhold life sustaining interventions
- *Exclude* patients with the following combinations of Initial ED/Hospital vitals:
 - SBP=0, and pulse=0, and GCS motor=1
 - SBP=NK/NR, and pulse=0, and GCS motor=1
 - SBP=0, and pulse=0, and GCS motor=NK/NR
 - SBP=0, and pulse=NK/NR, and GCS motor=1
 - SBP=NK/NR, and pulse=0, and GCS motor=NK/NR
- *Exclude* patients with severe burns (as defined in TQIP Reporting Code Sets)

Pediatric TQIP:

- Age less than or equal to 18 years
- Blunt or penetrating trauma, or abuse of any trauma type (derived from submitted External Cause Code)
- At least one AIS 05/08 injury with severity between 2 - 6 in AIS body regions 1 – 8
- Admitted patients (Hospital Discharge Disposition other than Not Known/Not Recorded or Not Applicable), or patients who died in the ED (ED Discharge Disposition = Deceased/Expired)
- *Exclude* patients with pre-existing advanced directive to withhold life sustaining interventions
- *Exclude* patients with the following combinations of ED vitals:
 - SBP=0, and pulse=0, and GCS motor=1
 - SBP=NK/NR, and pulse=0, and GCS motor=1
 - SBP=0, and pulse=0, and GCS motor=NK/NR
 - SBP=0, and pulse=NK/NR, and GCS motor=1
 - SBP=NK/NR, and pulse=0, and GCS motor=NK/NR
- *Exclude* patients with severe burns (as defined in TQIP Reporting Code Sets)

Level III TQIP:

- Age greater than or equal to 0
- Blunt or penetrating trauma, or abuse of any trauma type (derived from submitted External Cause Code)
- At least one AIS 05/08 injury with severity between 2 - 6 in AIS body regions 1 - 8
 - Patients transferred from the ED are not required to meet this criterion
- Admitted patients (Hospital Discharge Disposition other than Not Known/Not Recorded or Not Applicable), or patients who either died in the ED (ED Discharge Disposition = Deceased/Expired) or were transferred from the ED (ED Discharge Disposition = Transferred to Another Hospital)
- *Exclude* patients with a pre-existing advanced directive to withhold life sustaining interventions
- *Exclude* patients with the following combinations of Initial ED/Hospital vitals:
 - SBP=0, and pulse=0, and GCS motor=1
 - SBP=NK/NR, and pulse=0, and GCS motor=1
 - SBP=0, and pulse=0, and GCS motor=NK/NR
 - SBP=0, and pulse=NK/NR, and GCS motor=1
 - SBP=NK/NR, and pulse=0, and GCS motor=NK/NR
- *Exclude* patients with severe burns (as defined in TQIP Reporting Code Sets)

PUBLICATIONS

In addition to the studies specifically cited above, we are pleased to note the increasing number of publications utilizing the TQP PUF, a listing of which we try to keep updated on our website. We recognize that the quality of these studies is variable, and that some of them fail to acknowledge the limitations we have described above. We request that researchers using TQP PUF notify us of any publications and hope that the criticism of these studies will also help us find ways to improve the quality of the database. Authors should be aware that the following recommendations have been provided to the editors of journals most likely to publish articles based upon TQP PUF data:

Recommendations for Peer Review of Studies using the TQP PUF (From the NTDB Subcommittee, ACS Committee on Trauma, March 2007)

The ACS Committee on Trauma does not presume or desire to involve itself directly in the editorial process by which manuscripts are selected for publication. However, we do wish to inform this process and maximize the quality of these publications by making editors and reviewers aware of the obligations of licensees to the Trauma Quality Programs, as well as some of the technical issues posed by research involving this database.

Licensees have agreed to include a statement in their manuscripts acknowledging that “the TQP remains the full and exclusive copyrighted property of the American College of Surgeons. The American College of Surgeons is not responsible for any claims arising from works based on the original Data, Text, Tables, or Figures.”

Licensees have further agreed to include language indicating which version of the TQP PUF (e.g., Version 6.1) they are using. This is important since the database is updated frequently, and other researchers should be provided with enough information to allow replication of the findings using the same data set.

The TQP PUF tables provide only general information about contributing institutions, such as trauma center verification status and categorical number of beds. We and our licensees are committed to maintaining the confidentiality of contributing institutions and patients as mandated by federal law. Studies claiming to add information about hospitals or patients from sources outside the TQP PUF should therefore be evaluated with great caution. Reviewers may wish to verify assertions about the characteristics of contributing hospitals against the characteristics available in the PUF.

Like any large database, the TQP PUF does not have complete data for all cases; therefore authors should be expected to state how they dealt with missing data (exclusion, imputation, etc.). Similarly, the TQP PUF is not a population-based dataset; therefore statements about the incidence of specific conditions are inappropriate if based only on NTDB data. A User Manual, which describes these and other sources of potential bias inherent to the TQP PUF, has been provided to all researchers with the database tables. Reviewers are advised to look for explicit discussion of these biases and their possible effects on the analysis.