Trauma Quality Programs (TQP)
Participant Use File (PUF)
User Manual

Admission Year 2019
Version 1.1
Released: May 2022

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RELEASES AND UPDATES

May 2022

V1.1 released.

- Corrected TQP_INCLUSION table to accurately reflect TQIP Inclusion Criteria applications

June 2021

V1.0 released.

- "Minutes" calculation for EMS, ED, ICD Procedure and TQIP Process Measures variables replaced with "Hours" measurement.
- "Hospital Complication" and "Comorbid Condition" labels changed to "Hospital Event" and "Pre-existing Condition" to match NTDS definitions. Both element domains are now provided using dedicated many-to-one tables: PUF_HOSPITALEVENTS and PUF_PREEXISTINGCONDITIONS
- Expansion of Blank, Inappropriate, Unknown (BIU) values to reflect TQIP blanking. For more information, please see the sections in this document titled *Element Description List* and *Data Validation.*
- PUF_FORMATS table replaced by PUF_TRAUMA_LOOKUP. This change reduces technical complexity and synchronizes PUF datasets with ACS internal infrastructure with the goal of reducing the opportunity for error.

DATA USE AGREEMENT
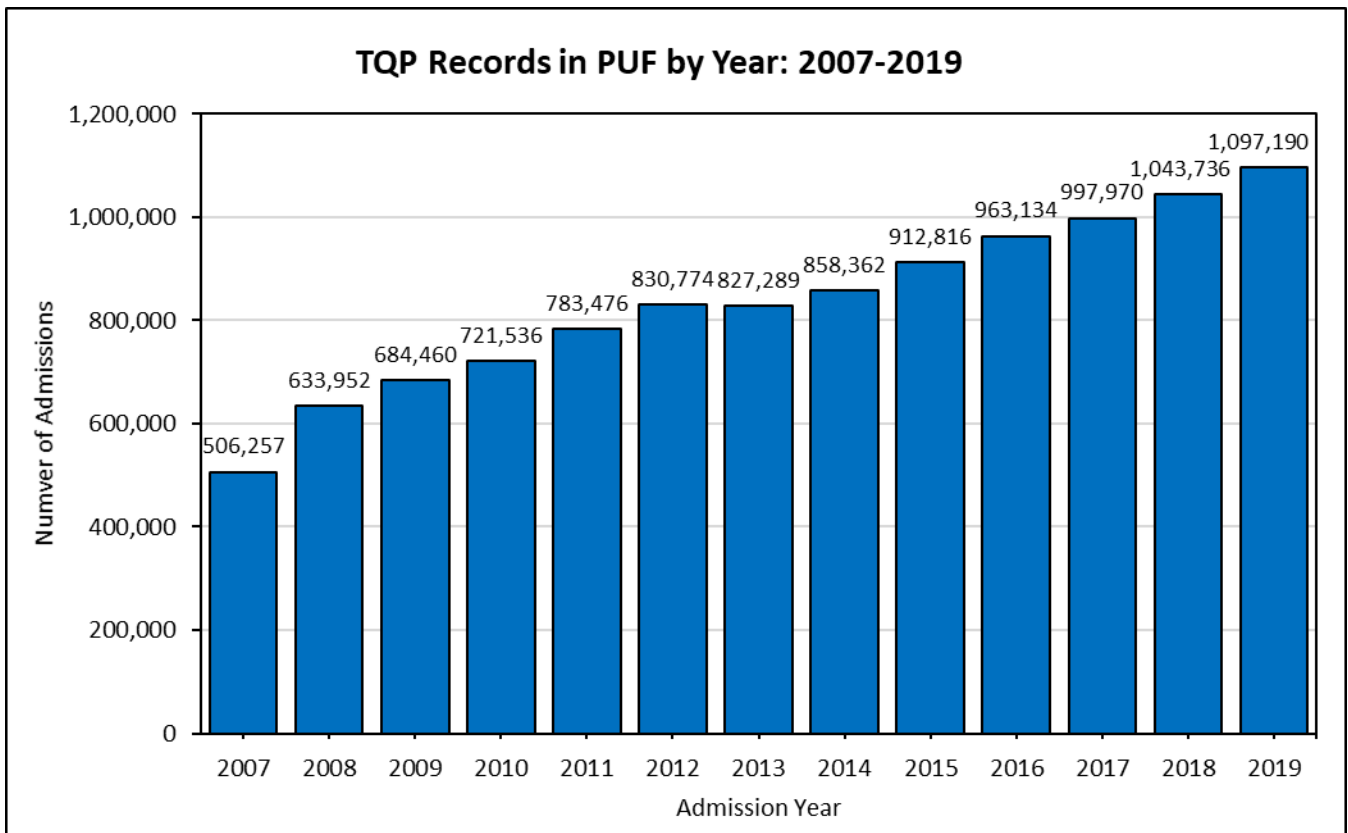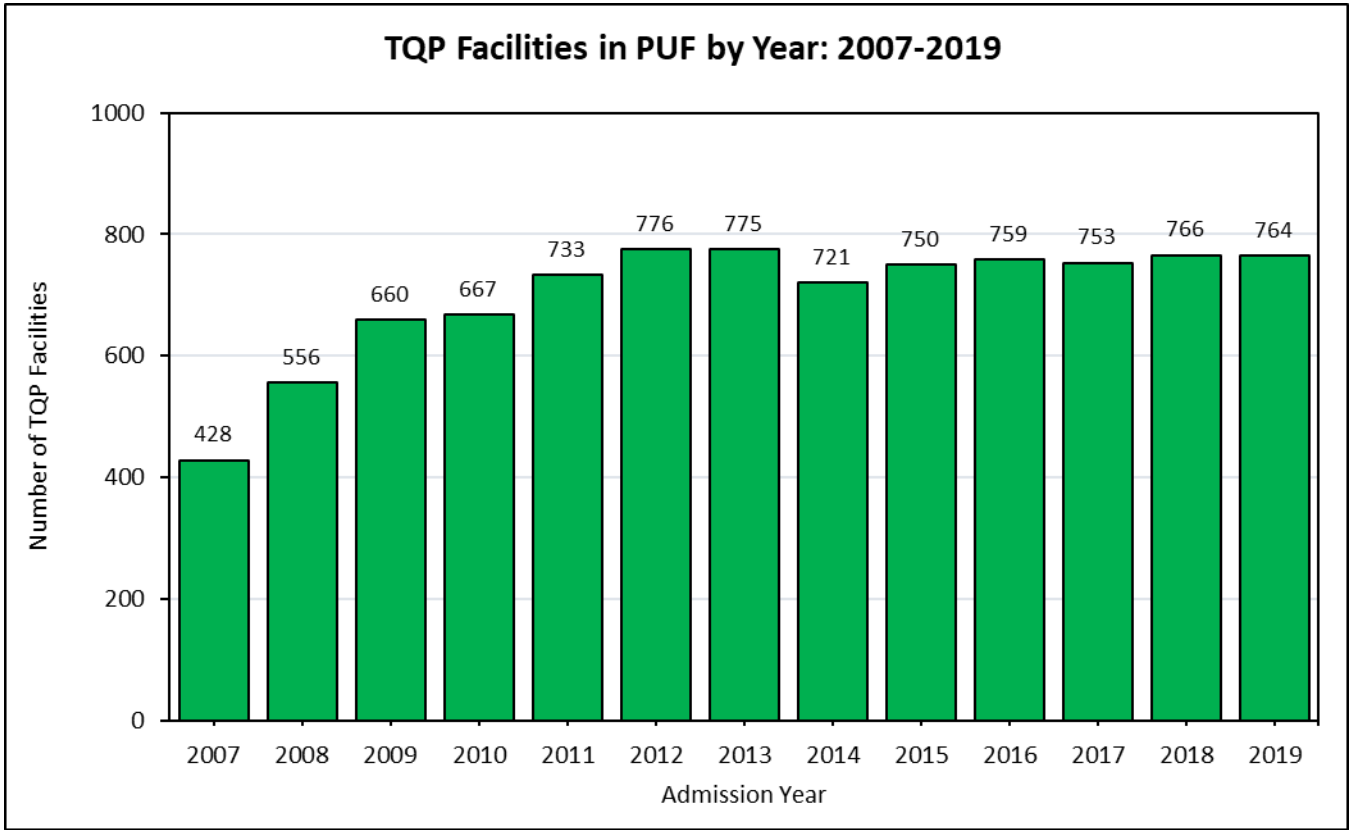
The Trauma Quality Programs Participant Use File (PUF) Data Use Agreement implements the data protections of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the ACS TQIP Hospital Participation Agreement (HPA). Any individual seeking to obtain or use the data in the TQP PUF must agree to the terms in the Data Use Agreement prior to the release of the designated PUF(s).

The requestor may view and download the current Data Use Agreement during the TQP PUF dataset request. The requestor is required to type in their first and last name and click on "Continue" to proceed with the TQP PUF request process. By clicking on "Continue," the requestor agrees to the terms and conditions of said Data Use Agreement.

PUF requests must be focused on a specific research question that should be stated clearly in the application. Prior to planning to submit a PUF application, you are advised to read the information on the PUF Website. Specifically, applicants should review the appropriate PUF User Manuals and NTDS Data Dictionary in order to understand available data elements and their limitations that could impact the proposed research.

TQP Facilities in PUF by Year: 2007-2019

Admission Year	Number of TQP Facilities
2007	428
2008	556
2009	660
2010	667
2011	733
2012	776
2013	775
2014	721
2015	750
2016	759
2017	753
2018	766
2019	764

TQP Records in PUF by Year: 2007-2019

Admission Year	Numver of Admissions
2007	506,257
2008	633,952
2009	684,460
2010	721,536
2011	783,476
2012	830,774
2013	827,289
2014	858,362
2015	912,816
2016	963,134
2017	997,970
2018	1,043,736
2019	1,097,190

PUF DESIGN OVER TIME

The American College of Surgeons (ACS) Trauma Quality Programs (TQP) reserves the right to change the format of the PUF dataset from year to year. As such, researchers should consult the documentation provided for each PUF year separately.

In 2017, the ACS TQP transitioned to a new technical vendor. 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. Researchers using data from before and after this change for a single project are responsible for integrating those designs and should reference the documentation provided in the AY 2017 dataset.

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 the 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 have been removed from the dataset due to concerns 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 PUF data from 2016 or before with more recent PUFs, please see the section in this document titled *PUF Design Over Time*

Table Name	Admission Years	Description
PUF_AIS05TO98_CROSSWALK	2017 - 2019	Crosswalk from AIS (Abbreviated Injury Scale) 05/08 codes to AIS 98 codes. Can be merged with PUF_AISDIAGNOSIS
PUF_AISDIAGNOSIS	2017 – 2019	AIS codes
PUF_AISDIAGNOSIS_LOOKUP	2017 - 2019	AIS code descriptions, etc. Can be merged with PUF_AISDIAGNOSIS
PUF_ECODE_LOOKUP	2017 - 2019	ICD-10-CM External Cause Code descriptions, mechanisms, etc. Can be merged with PUF_TRAUMA
PUF_FORMATS	2017 - 2018	*Metadata:* Formats applied to other tables in this dataset. Replaced by PUF_TRAUMA_LOOKUP in 2019.
PUF_HOSPITALEVENTS	2019	Hospital events
PUF_ICDDIAGNOSIS	2017 - 2019	ICD-10-CM diagnosis codes
PUF_ICDDIAGNOSIS_LOOKUP	2017 - 2019	ICD-10-CM diagnosis codes descriptions, etc. Can be merged with PUF_ICDDIAGNOSIS
PUF_ICDPROCEDURE	2017 - 2019	ICD-10-CM procedure codes
PUF_ICDPROCEDURE_LOOKUP	2017 - 2019	ICD-10-CM procedure code descriptions, etc. Can be merged with PUF_ICDPROCEDURE
PUF_PREEXISTINGCONDITIONS	2019	Pre-existing conditions
PUF_TRAUMA	2017 - 2019	Record-level NTDS data other than diagnosis codes (ICD, AIS), procedure codes, hospital events, and pre-existing conditions
PUF_TRAUMA_LOOKUP	2019	*Metadata*: Formats applied to other tables in this dataset
TQP_INCLUSION	2017 - 2019	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 **PUF Dictionary by Admission Year** companion 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 TQIP 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
  - 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.
- 3: Missing Discharge Disposition
  - This null value applies if, at the time of the Days/Hours element calculation, the Hospital Discharge Disposition or the ED Discharge Disposition is missing.
- 4: Discharge Disposition Conflict
  - This null value applies if, at the time of the Days/Hours element calculation, ED/Hospital Discharge Dispositions and corresponding Discharge Dates/Times do not align; e.g., patient is discharged home from ED but Hospital Discharge Date/Time are reported.
- 5: Missing Date/Time
  - This null value applies if, at the time of the Days/Hours element calculation, the Date/Time information is not available.
- 7: Finished Before Start
  - This null value applies if, at the time of the Days/Hours element calculation, the Date/Times for the ending data element occurs prior to the starting data element; e.g., Procedure Date is before Hospital Arrival Date.
- 8: Finished After Discharge
  - This null value applies if, at the time of the Days/Hours element calculation, the submitted Date/Time information occurs after Final Discharge.
- 9: Date After Call for Data
  - This null value applies if, at the time of the Days/Hours element calculation, the submitted Date/Time information occurs after the patient record was received by Trauma Quality Programs.

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. XXXXXX.X), but the components are separated in the PUF
AISPREDOT_BIU	AIS diagnosis pre-dot BIU	2017	2018	BIU element
AISSEVERITY	AIS diagnosis severity value	2017	None	
AISSEVERITY_BIU	AIS diagnosis severity BIU	2017	2018	BIU element
AISVERSION	The version of AIS used to code the incident	2017	None	

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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_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_HOSPITALEVENTS
Definition: Hospital Events
Frequency: Multiple rows per record possible

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2019	None	Link to PUF_TRAUMA.INC_KEY
HOSPITALEVENT	Hospital Event	2019	None	Hospital Event code text provided in PUF_TRAUMA_LOOKUP
HOSPITALEVENTANSWER	Hospital Event Answer	2019	None	
HOSPITALEVENTANSWER_BIU	Hospital Event Answer BIU	2019	None	BIU element

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	2018	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	
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	2018	BIU element
ICDPROCEDUREVERSI ON	ICD CM procedure code version	2017	None	
HOSPITALPROCEDUR ESTARTHRS	Number of hours from ED/hospital arrival until the beginning of procedure	2019	None	Calculated by ACS from submitted procedure dates/times. Replaces PROCEDUREMINS
HOSPITALPROCEDUR ESTARTDAYS	Number of days from ED/hospital arrival until the beginning of procedure	2019	None	Calculated by ACS from submitted procedure dates/times. Replaces PROCEDUREDAYS
HOSPITALPROCEDUR ESTARTDH_BIU	Hospital Procedure Start Days/Hours BIU	2019	None	BIU element
PROCEDUREMINS	Number of minutes from ED/hospital arrival until the beginning of procedure	2017	2018	Calculated by ACS from submitted procedure dates/times. Replaced by HOSPITALPROCEDURESTA RTHRS in 2019.
PROCEDUREDAYS	Number of days from ED/hospital arrival until the beginning of procedure	2017	2018	Calculated by ACS from submitted procedure dates. Replaced by HOSPITALPROCEDURESTA RTDAYS in 2019.

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

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_PREEXISTINGCONDITIONS
Definition: Pre-existing Conditions
Frequency: Multiple rows per record possible

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
INC_KEY	Unique identifier for each record	2019	None	Link to PUF_TRAUMA.INC_KEY
PREEXISTINGCONDITION	Pre-existing Condition	2019	None	Pre-existing Condition code text provided in PUF_TRAUMA_LOOKUP
PREEXISTINGCONDITIONANSWER	Pre-existing Condition Answer	2019	None	
PREEXISTINGCONDITIONANSWER_BIU	Pre-existing Condition Answer BIU	2019	None	BIU element

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.
AMERICANINDIA	Race Category: American	2017	None	Flattened many-to-one

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
N	Indian			response values from Race
ASIAN	Race Category: Asian	2017	None	Flattened many-to-one response values from Race
BLACK	Race Category: Black or African American	2017	None	Flattened many-to-one response values from Race
PACIFICISLANDER	Race Category: Native Hawaiian or Other 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
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
PLACEOFINJURYCODE	ICD10 Place of Injury Code	2017	None	
PLACEOFINJURYCODE_BIU	ICD10 Place of Injury Code BIU	2017	None	BIU element
PRIMARYECODEICD10	ICD10 Primary External Cause Code	2017	None	
PRIMARYECODEICD10_BIU	ICD10 Primary External Cause Code BIU	2017	None	
ADDITIONALECODEICD10	ICD10 Additional External Cause Code	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
ADDITIONALECODEICD10_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_LAP_BELT	Protective Device: Lap Belt	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_PER_FLOAT	Protective Device: Personal Floatation Device	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_PROTECT_GEAR	Protective Device: Protective Non-Clothing Gear	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_EYE_PROTECT	Protective Device: Eye Protection	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_CHILD_RESTRAINT	Protective Device: Child Restraint (booster seat or child car seat)	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_HELMET	Protective Device: Helmet	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_AIRBAG_PRESENT	Protective Device: Airbag Present	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_PROTECT_CLOTH	Protective Device: Protective Clothing	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_SHOULDER_BELT	Protective Device: Shoulder Belt	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_OTHER	Protective Device: Other	2017	None	Flattened many-to-one response values from Protective Devices
PROTDEV_NA	Protective Device: Not Applicable	2017	None	BIU element
PROTDEV_UK	Protective Device: Not Known/Not Recorded	2017	None	BIU element
CHILDSPECIFICRESTRAINT	Child Specific Restraint	2017	None	
AIRBAG_NOTDEPLOYED	AirBag Deployment: Not Deployed	2017	None	Flattened many-to-one response values from Airbag Deployment

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
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
CAREGIVERATDISCHARGE	Caregiver at Discharge	2017	None	
CAREGIVERATDISCHARGE_BIU	Caregiver at Discharge BIU	2017	None	BIU element
TRANSPORTMODE	Transport Mode	2017	None	
TRANSPORTMODE_BIU	Transport Mode BIU	2017	None	BIU element
TM_GROUNDAMBULANCE	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 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

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				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
EMSRESPIRATOR YRATE	Initial EMS Respiratory Rate	2017	None	
EMSRESPIRATOR YRATE_BIU	Initial EMS Respiratory Rate BIU	2017	None	BIU element
EMSPULSEOXIM ETRY	EMS Oxygen Saturation	2017	None	
EMSPULSEOXIM ETRY_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
EMSGCSMOTOR	EMS GCS - Motor	2017	None	
EMSGCSMOTOR _BIU	EMS GCS - Motor BIU	2017	None	BIU element
EMSGCSVERBAL	EMS GCS - Verbal	2017	None	
EMSGCSVERBAL _BIU	EMS GCS - Verbal BIU	2017	None	BIU element
EMSTOTALGCS	EMS Total GCS	2017	None	
EMSTOTALGCS_ BIU	EMS Total GCS BIU	2017	None	BIU element
EMSDISPATCHH RS	Time from Incident to EMS Dispatch (hours)	2019	None	Calculated by ACS from submitted dates/times.
EMSDISPATCHD AYS	Time from Incident to EMS Dispatch (days)	2019	None	Calculated by ACS from submitted dates.
EMSDISPATCHD H_BIU	EMS Dispatch Days/Hours BIU	2019	None	BIU element
EMSDEPARTURE HRS	Time from EMS Arrival at Scene to EMS Departure from Scene (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces EMSSCENEMINS
EMSDEPARTURE	Time from EMS Arrival at Scene	2019	None	Calculated by ACS from

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
DAYS	to EMS Departure from Scene (days)			submitted date. Replaces EMSSCENEDAYS
EMSDEPARTURE DH_BIU	EMS Departure Days/Hours BIU	2019	None	BIU element
EMSARRIVALHRS	Time from EMS Dispatch to EMS Arrival at Scene (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces EMSRESPONSEMINS
EMSARRIVALDAY S	Time from EMS Dispatch to EMS Arrival at Scene (days)	2019	None	Calculated by ACS from submitted date. Replaces EMSRESPONSEDAYS
EMSARRIVALDH _BIU	EMS Arrival Days/Hours BIU	2019	None	BIU element
EMSRESPONSEM INS	Time to EMS Response (mins)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by EMSARRIVALHRS in 2019.
EMSRESPONSED AYS	Time to EMS Response (days)	2017	2018	Calculated by ACS from submitted date. Replaced by EMSARRIVALDAYS in 2019.
EMSSCENEMINS	Time EMS spent at scene (mins)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by EMSDEPARTUREHRS in 2019.
EMSSCENEDAYS	Time EMS spent at scene (days)	2017	2018	Calculated by ACS from submitted dates. Replaced by EMSDEPARTUREDAYS in 2019.
EMSMINS	Time from dispatch to ED/hospital arrival (mins)	2017	2018	Calculated by ACS from submitted dates/times.
EMSDAYS	Time from dispatch to ED/hospital arrival (days)	2017	2018	Calculated by ACS from submitted dates.
INTERFACILITYTR ANSFER	Inter-Facility Transfer	2017	None	
INTERFACILITYTR	Inter-Facility Transfer BIU	2017	None	BIU element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
ANSFER_BIU				
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
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

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				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
VPOFALLADULT	Vehicular, Pedestrian, Other Risk Injury: Fall adults: > 20 ft. (one story is equal to 10 ft.)	2017	None	Flattened many-to-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,

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
				Other Risk Injury
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
EDDISCHARGEHRS	Total time between ED arrival and ED discharge (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces EDMINS
EDDISCHARGEDAYS	Total time between ED arrival and ED discharge (days)	2019	None	Calculated by ACS from submitted dates. Replaces EDDAYS
EDDISCHARGEDH_BIU	ED Discharge Days/Hours BIU	2019	None	BIU element
EDMINS	Total time between ED arrival and ED discharge (mins)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by EDDISCHARGEHRS in 2019.
EDDAYS	Total time between ED arrival	2017	2018	Calculated by ACS from

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	and ED discharge (days)			submitted dates. Replaced by EDDISCHARGEDAYS in 2019.
SBP	Systolic Blood Pressure	2017	None	
SBP_BIU	Systolic Blood Pressure BIU	2017	None	BIU element
PULSERATE	Pulse Rate	2017	None	
PULSERATE_BIU	Pulse Rate BIU	2017	None	BIU element
TEMPERATURE	Temperature	2017	None	
TEMPERATURE_BIU	Temperature BIU	2017	None	BIU element
RESPIRATORYRATE	Respiratory Rate	2017	None	
RESPIRATORYRATE_BIU	Respiratory Rate BIU	2017	None	BIU element
RESPIRATORYASSISTANCE	Respiratory Assistance	2017	None	
RESPIRATORYASSISTANCE_BIU	Respiratory Assistance BIU	2017	None	BIU element
PULSEOXIMETRY	Pulse Oximetry	2017	None	
PULSEOXIMETRY_BIU	Pulse Oximetry BIU	2017	None	BIU element
SUPPLEMENTALOXYGEN	Supplemental Oxygen	2017	None	
SUPPLEMENTALOXYGEN_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
GCSQ_SEDATED	GCS Assessment Qualifiers:	2017	None	Flattened many-to-one

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
PARALYZED	Patient Chemically Sedated or Paralyzed			response values from GCS Assessment Qualifier
GCSQ_EYEOBSTRUCTION	GCS Assessment Qualifiers: Obstruction to the Patient's Eye	2017	None	Flattened many-to-one response values from GCS Assessment Qualifier
GCSQ_INTUBATED	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_AMPHETAMINE	Drug Screen: AMP (Amphetamine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_BARBITURATE	Drug Screen: BAR (Barbiturate)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_BENZODIAZEPINES	Drug Screen: BZO (Benzodiazepines)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_COCAINE	Drug Screen: COC (Cocaine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_METHAMPHETAMINE	Drug Screen: mAMP (Methamphetamine)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_ECSTASY	Drug Screen: MDMA (Ecstasy)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_METHADONE	Drug Screen: MTD (Methadone)	2017	None	Flattened many-to-one response values from Drug Screen
DRGSCR_OPIOID	Drug Screen: OPI (Opioid)	2017	None	Flattened many-to-one response values from Drug Screen

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
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
EDDISCHARGEDISPOSITION	ED Discharge Disposition	2017	None	
EDDISCHARGEDISPOSITION_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
HOSPDISCHARGEDISPOSITION	Hospital Discharge Disposition	2017	None	
HOSPDISCHARGEDISPOSITION_BIU	Hospital Discharge Disposition BIU	2017	None	BIU element
CC_ADHD	Comorbid Condition: Attention	2017	2018	Moved to

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)			PUF_PREEXISTINGCON DITIONS table in 2019.
CC_ADLC	Comorbid Condition: Advanced Directive Limiting Care	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_ALCOHOLIS M	Comorbid Condition: Alcohol Use Disorder	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_ANGINAPECT ORIS	Comorbid Condition: Angina Pectoris	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_ANTICOAGUL ANT	Comorbid Condition: Anticoagulant Therapy	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_BLEEDING	Comorbid Condition: Bleeding Disorder	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_CHEMO	Comorbid Condition: Currently Receiving Chemotherapy for Cancer	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_CIRRHOSIS	Comorbid Condition: Cirrhosis	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_CONGENITAL	Comorbid Condition: Congenital Anomalies	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_COPD	Comorbid Condition: Chronic Obstructive Pulmonary Disease (COPD)	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_CVA	Comorbid Condition: Cerebrovascular Accident (CVA)	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_DEMENTIA	Comorbid Condition: Dementia	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_DIABETES	Comorbid Condition: Diabetes Mellitus	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_DISCANCER	Comorbid Condition: Disseminated Cancer	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_FUNCTIONAL	Comorbid Condition:	2017	2018	Moved to

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	Functionally Dependent Health Status			PUF_PREEXISTINGCON DITIONS table in 2019.
CC_CHF	Comorbid Condition: Congestive Heart Failure	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_HYPERTENSI ON	Comorbid Condition: Hypertension	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_MI	Comorbid Condition: Myocardial Infarction (MI)	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_OTHER	Comorbid Condition: Other	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_PAD	Comorbid Condition: Peripheral Arterial Disease (PAD)	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_PREMATURIT Y	Comorbid Condition: Prematurity	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_MENTALPER SONALITY	Comorbid Condition: Mental/Personality Disorder	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_RENAL	Comorbid Condition: Chronic Renal Failure	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_SMOKING	Comorbid Condition: Current Smoker	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_STEROID	Comorbid Condition: Steroid Use	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_SUBSTANCEA BUSE	Comorbid Condition: Substance Abuse Disorder	2017	2018	Moved to PUF_PREEXISTINGCON DITIONS table in 2019.
CC_UK	Comorbid Condition: Not Known/Not Recorded	2017	2018	BIU element
CC_NA	Comorbid Condition: Not Applicable	2017	2018	BIU element
TOTALICULOS	Total ICU Length of Stay (days)	2017	None	
TOTALICULOS_BI U	Total ICU Length of Stay BIU	2017	None	BIU element
TOTALVENTDAYS	Total Vent Days	2017	None	
TOTALVENTDAYS	Total Vent Days BIU	2017	None	BIU element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
_BIU				
FINALDISCHARGEHRS	Time from ED/Hospital Arrival to Final Discharge (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces LOSMINS
FINALDISCHARGEDAYS	Time from ED/Hospital Arrival to Final Discharge (days)	2019	None	Calculated by ACS from submitted dates. Replaces LOSDAYS
FINALDISCHARGEDH_BIU	Final Discharge Hours/Days BIU	2019	None	BIU element
HOSPITALARRIVALHRS	Time from Incident to ED/Hospital Arrival (hours)	2019	None	Calculated by ACS from submitted dates/times.
HOSPITALARRIVALDAYS	Time from Incident to ED/Hospital Arrival (days)	2019	None	Calculated by ACS from submitted dates.
HOSPITALARRIVALDH_BIU	Hospital Arrival Days/Hours BIU	2019	None	BIU element
HOSPITALDISCHARGEHRS	Time from ED/Hospital Arrival to Hospital Discharge (hours)	2019	None	Calculated by ACS from submitted dates/times.
HOSPITALDISCHARGEDAYS	Time from ED/Hospital Arrival to Hospital Discharge (days)	2019	None	Calculated by ACS from submitted dates.
HOSPITALDISCHARGEDH_BIU	Hospital Discharge Days/Hours BIU	2019	None	BIU element
LOSMINS	Length of stay (minutes)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by FINALDISCHARGEHRS in 2019.
LOSDAYS	Length of stay (days)	2017	2018	Calculated by ACS from submitted dates. Replaced by FINALDISCHARGEDAYS in 2019.
HC_ALCOHOLWITHDRAWAL	Hospital Complication: Alcohol Withdrawal Syndrome	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_CARDARREST	Hospital Complication: Cardiac Arrest with CPR	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_CAUTI	Hospital Complication: Catheter-Associated Urinary Tract Infection	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	(CAUTI)			
HC_CLABSI	Hospital Complication: Central Line-Associated Bloodstream Infection (CLABSI)	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_DEEPSSI	Hospital Complication: Deep Surgical Site Infection	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_DVTHROMBOSIS	Hospital Complication: Deep Vein Thrombosis (DVT)	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_EMBOLISM	Hospital Complication: Pulmonary Embolism	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_EXTREMITYCS	Hospital Complication: Extremity Compartment Syndrome	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_INTUBATION	Hospital Complication: Unplanned Intubation	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_KIDNEY	Hospital Complication: Acute Kidney Injury	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_MI	Hospital Complication: Myocardial Infarction	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_ORGANSPACESSI	Hospital Complication: Organ/Space Surgical Site Infection	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_OSTEOMYELITIS	Hospital Complication: Osteomyelitis	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_OTHER	Hospital Complication: Other	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_RESPIRATORY	Hospital Complication: Acute Respiratory Distress Syndrome (ARDS)	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_RETURNOR	Hospital Complication: Unplanned Return to the OR	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_SEPSIS	Hospital Complication: Severe Sepsis	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
HC_STROKECVA	Hospital Complication: Stroke / CVA	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_SUPERFICIAL INCISIONSSI	Hospital Complication: Superficial Incisional Surgical Site Infection	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_PRESSUREUL CER	Hospital Complication: Pressure Ulcer	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_UNPLANNED ICU	Hospital Complication: Unplanned Admission to the ICU	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_VAPNEUMO NIA	Hospital Complication: Ventilator-Associated Pneumonia (VAP)	2017	2018	Moved to PUF_HOSPITALEVENTS table in 2019.
HC_NA	Hospital Complication: Not Applicable	2017	2018	BIU element
HC_UK	Hospital Complication: Not Known/Not Recorded	2017	2018	BIU element
TBIHIGHESTTOT ALGCS	**PM:** Highest GCS Total	2017	None	
TBIHIGHESTTOT ALGCS_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
PMGCSQ_SEDAT EDPARALYZED	**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_EYEOB STRUCTION	**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_INTUB ATED	**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	2017	None	Flattened many-to-one response values from GCS Assessment

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	not sedated, not intubated, and did not have obstruction to the eye			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
TBIPUPILLARYRESPONSE	**PM:** Pupillary Response	2017	None	
TBIPUPILLARYRESPONSE_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
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	2018	
BLOOD24HOURS_BIU	**PM:** Transfusion Blood (24 Hours) BIU	2017	2018	BIU element
BLOODMEASURE	**PM:** Transfusion Blood Measurement	2017	None	
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	2018	
PLASMA24HOURS_BIU	**PM:** Transfusion Plasma (24 Hours) BIU	2017	2018	BIU element
PLASMAMEASURE	**PM:** Transfusion Plasma Measurement	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
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	2018	
PLATELETS24HOURS_BIU	**PM:** Transfusion Platelets (24 Hours) BIU	2017	2018	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
CRYOPRECIPITATE24HOURS	**PM:** Cryoprecipitate (24 Hours)	2017	2018	
CRYOPRECIPITATE24HOURS_BIU	**PM:** Cryoprecipitate (24 Hours) BIU	2017	2018	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
ESLIVER	**PM:** Embolization Site: Liver	2017	None	Flattened many-to-one response values from Embolization Site

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
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 vascular (neck, extremities)	2017	None	Flattened many-to-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
ANGIOGRAPHY	**PM:** Angiography	2017	None	
ANGIOGRAPHY_BIU	**PM:** Angiography BIU	2017	None	BIU element
ANGIOGRAPHYHRS	**PM:** Time To: Angiography (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces ANGIOGRAPHYMINS
ANGIOGRAPHYMINS	**PM:** Time To: Angiography (minutes)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by ANGIOGRAPHYHRS in 2019.
ANGIOGRAPHYDAYS	**PM:** Time To: Angiography (days)	2017	None	Calculated by ACS from submitted dates
ANGIOGRAPHYDH_BIU	**PM:** Angiography Days/Hours BIU	2019	None	BIU element
HMRRHGCTRLSURGTYPE	**PM:** Surgery for Hemorrhage Control Type	2017	None	
HMRRHGCTRLSU	**PM:** Surgery for Hemorrhage	2017	None	BIU element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
RGTYPE_BIU	Control Type BIU			
HMRRHGCTRLSURGHRS	**PM:** Time To: Surgery for Hemorrhage Control (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces HMRRHGCTRLSURGMINS
HMRRHGCTRLSURGMINS	**PM:** Time To: Surgery for Hemorrhage Control (minutes)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by HMRRHGCTRLSURGHRS in 2019.
HMRRHGCTRLSURGDAYS	**PM:** Time To: Surgery for Hemorrhage Control (days)	2017	None	Calculated by ACS from submitted dates
HMRRHGCTRLSURGDH_BIU	**PM:** Surgery for Hemorrhage Control Days/Hours BIU	2019	None	
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 bolt, subarachnoid bolt, intraparenchymal catheter)	2017	None	Flattened many-to-one response value from Cerebral 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
TBICEREBRALMONITORHRS	**PM:** Time To: Cerebral Monitoring (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces CEREBRALMONITORMINS

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
TBICEREBRALMONITORDAYS	**PM:** Time To: Cerebral Monitoring (days)	2019	None	Calculated by ACS from submitted dates. Replaces CEREBRALMONITORDAYS
TBICEREBRALMONITORDH_BIU	TBI Cerebral Monitoring Days/Hours BIU	2019	None	BIU element
CEREBRALMONITORMINS	**PM:** Time To: Cerebral Monitoring (minutes)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by TBICEREBRALMONITORHRS in 2019.
CEREBRALMONITORDAYS	**PM:** Time To: Cerebral Monitoring (days)	2017	2018	Calculated by ACS from submitted dates. Replaced by TBICEREBRALMONITORDAYS in 2019.
VTEPROPHYLAXISTYPE	**PM:** VTE Prophylaxis Type	2017	None	
VTEPROPHYLAXISTYPE_BIU	**PM:** VTE Prophylaxis Type BIU	2017	None	BIU element
VTEPROPHYLAXISHRS	**PM:** Time To: VTE Prophylaxis (hours)	2019	None	Calculated by ACS from submitted dates/times. Replaces VTEPROPHYLAXISMINS
VTEPROPHYLAXISMINS	**PM:** Time To: VTE Prophylaxis (minutes)	2017	2018	Calculated by ACS from submitted dates/times. Replaced by VTEPROPHYLAXISHRS in 2019.
VTEPROPHYLAXISDAYS	**PM:** Time To: VTE Prophylaxis (days)	2017	None	Calculated by ACS from submitted dates/times
VTEPROPHYLAXISDH_BIU	**PM:** VTE Prophylaxis Days/Hours BIU	2019	None	BIU element
WITHDRAWALLST	**PM:** Withdrawal of Life Supporting Treatment	2017	None	
WITHDRAWALLST_BIU	**PM:** Withdrawal of Life Supporting Treatment BIU	2017	None	BIU element
WITHDRAWALLSTHRS	**PM:** Time To: Withdrawal of Life Supporting Treatment (hours)	2019	None	Calculated by ACS from submitted dates/times
WITHDRAWALLS	**PM:** Time To: Withdrawal of	2017	2018	Calculated by ACS from

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
TMINS	Life Supporting Treatment (minutes)			submitted dates/times
WITHDRAWALLSTDAYS	**PM:** Time To: Withdrawal of Life Supporting Treatment (days)	2017	None	Calculated by ACS from submitted dates
WITHDRAWALLSTDH_BIU	**PM:** Withdrawal of Life Supporting Treatment Days/Hours BIU	2019	None	BIU element
ANTIBIOTICTHERAPY	**PM**: Antibiotic Therapy	2019	None	
ANTIBIOTICTHERAPY_BIU	**PM**: Antibiotic Therapy BIU	2019	None	BIU Element
ANTIBIOTICTHERAPYHRS	**PM**: Time To: Antibiotic Therapy (hours)	2019	None	Calculated by ACS from submitted dates/times
ANTIBIOTICTHERAPYDAYS	**PM**: Time To: Antibiotic Therapy (days)	2019	None	Calculated by ACS from submitted dates
ANTIBIOTICTHERAPYDH_BIU	**PM**: Antibiotic Therapy Days/Hours BIU	2019	None	BIU Element
ISS_05	AIS derived ISS	2017	None	Calculated by ACS from AIS diagnoses
EMSGCS40EYE	EMS GCS 40 - Eye	2019	None	
EMSGCS40EYE_BIU	EMS GCS 40 - Eye BIU	2019	None	BIU Element
EMSGCS40MOTOR	EMS GCS 40 - Motor	2019	None	
EMSGCS40MOTOR_BIU	EMS GCS 40 - Motor BIU	2019	None	BIU Element
EMSGCS40VERBAL	EMS GCS 40 - Verbal	2019	None	
EMSGCS40VERBAL_BIU	EMS GCS 40 - Verbal BIU	2019	None	BIU Element
GCS40EYE	GCS 40 - Eye	2019	None	
GCS40EYE_BIU	GCS 40 - Eye BIU	2019	None	BIU Element
GCS40MOTOR	GCS 40 - Motor	2019	None	
GCS40MOTOR_BIU	GCS 40 - Motor BIU	2019	None	BIU Element
GCS40VERBAL	GCS 40 - Verbal	2019	None	
GCS40VERBAL_BIU	GCS 40 - Verbal BIU	2019	None	BIU Element
TBIGCS40MOTOR	**PM**: Highest TBI GCS 40 - Motor	2019	None	
TBIGCS40MOTOR_BIU	**PM**: Highest TBI GCS 40 – Motor BIU	2019	None	BIU Element
TEACHINGSTATU	Facility Level: Hospital Teaching	2017	None	Facility-level element

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
S	Status			provided at the 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
VERIFICATIONLEVEL	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	2018	
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	2017	None	

Element Name	Definition	Admission Year Added	Admission Year Retired	Notes
	details.			
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 formats table is included in both SAS and CSV formats. This file contains all the formats used for the PUF dataset.

Format Locations

All variable formats used in the PUF are contained in PUF_TRAUMA_LOOKUP SAS and CSV datasets (**PUF_FORMATS** for 2017/2018 PUFs). Variable Formats document the relationships between codes used in PUF datasets and their meanings; e.g., for variable Sex code 1 denotes 'Male' and code 2 is used to indicate 'Female'.

Variable Formats

I. SAS datasets
    a. Variable formats are assigned to variables in all PUF SAS datasets. Some variables that do not require a format are not assigned a format in PUF SAS datasets.
    b. Formats need to be compiled for use in a SAS session by using PROC FORMAT SAS procedure 'CntlIn' option:
        > PROC FORMAT library = [specify desired permanent destination; temporary WORK
        >   library is used by default] CntlIn=[optional libname.]PUF_TRAUMA_LOOKUP;
        > run;
II. CSV datasets
    a. Variable Formats associated with PUF Variable Names in each PUF dataset are listed in the 'PUF Variable Formats.CSV' document
    b. PUF Format codes and labels are listed in the PUF_TRAUMA_LOOKUP.csv dataset

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 are validations beyond NTDS validation rules which have been applied in the TQP PUF.

PUF_TRAUMA:
1. All calculated time (days/hours) elements are invalidated based on the following null values (see the *Element Description List* page for BIU element values and definitions):
    - Missing Discharge Disposition
    - Discharge Disposition Conflict
    - Missing Date/Time
    - Finished Before Start
    - Finished After Discharge
    - Date After Call for Data

PUF_ICDPROCEDURE:
1. Calculated hospital procedure start time (days/hours) elements are invalidated based on the following null values (see the *Element Description List* page for BIU element values and definitions):
    - Missing Date/Time
    - Finished Before Start
    - Finished After Discharge
    - Date After Call for Data

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
- 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, records from Canadian facilities have been removed from the dataset. Additionally, patients < 1 or > 89 years of age have their PUF_TRAUMA.AGEYEARS blanked.
- 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 2019 TQP_INCLUSION table, are as follows:

<u>Adult TQIP</u>:
- 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)

<u>Pediatric TQIP</u>:
- 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)

<u>Level III TQIP</u>:
- 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.