ACS NTDB
NATIONAL TRAUMA DATA STANDARD:
Data Dictionary

2016 ADMISSIONS

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NATIONAL TRAUMA DATA BANK

American College of Surgeons
Inspiring Quality:
Highest Standards, Better Outcomes

COMMITTEE ON TRAUMA®

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Introduction

Traumatic injury, both unintentional and intentional, is the leading cause of death in the first four decades of life, according to the National Center for Health Statistics.[1] Trauma typically involves young adults and results in the loss of more productive work years than both cancer and heart disease combined.[2] Each year, more than 140,000 Americans die and approximately 80,000 are permanently disabled as a result of injury.[3] The loss of productivity and health care costs account for 100 billion dollars annually.[4]

Research provides evidence of the effectiveness of trauma and EMS systems in reducing mortality, morbidity, and lost productivity from traumatic injuries. Almost three decades of research consistently suggests that in-hospital (and post-discharge) mortality rates are reduced by 20 to 25% among severely injured patients treated in trauma centers organized into a regional or statewide trauma system.[5-9] Nevertheless, much of the work investigating the effectiveness of trauma system (center) development has been hampered by the lack of consistent, quality data to demonstrate differences in mortality over time or between hospitals, regions, or states.

Hospital-based trauma registries are the basis for much of the research and quality assessment work that has informed clinicians and policy makers about methods to optimize the care of injured patients. Yet, the actual data points contained in independent hospital registries are often so different in content and structure that comparison across registries is nearly impossible.[10] Database construction for trauma registries is often completed in isolation with no nationally recognized standard data dictionary to ensure consistency across registries. Efforts to standardize hospital registry content have been published[11,12], yet studies continue to document serious variation and misclassification between hospital-based registries.[13,14]

Recently, federal agencies have made investments to fortify the establishment of a national trauma registry.[15,16] Much of this funding has focused on the National Trauma Data Standard™(NTDS), which represents a concerted and sustained effort by the American College of Surgeons Committee on Trauma (ACSCOT) to provide an extensive collection of trauma registry data provided primarily by accredited/designated trauma centers across the U.S.[17] Members of ACSCOT and staff associated with the NTDB have long recognized that the NTDB inherits the individual weaknesses of each contributing registry.[18]

During 2004 through 2006, the ACSCOT Subcommittee on Trauma Registry Programs was supported by the U.S. Health Resources and Services Administration (HRSA) to devise a uniform set of trauma registry variables and associated variable definitions. The ACSCOT Subcommittee also characterized a core set of trauma registry inclusion criteria that would maximize participation by all state, regional and local trauma registries. This data dictionary represents the culmination of this work. Institutionalizing the basic standards provided in this document will greatly increase the likelihood that a national trauma registry would provide clinical information beneficial in characterizing traumatic injury and enhancing our ability to improve trauma care in the United States.

To realize this objective, it is important that this subset of uniform registry variables are incorporated into all trauma registries, regardless of trauma center accreditation/designation (or lack

thereof). Local, regional or state registries are then encouraged to provide a yearly download of these uniform variables to the NTDB for all patients satisfying the inclusion criteria described in this document. This subset of variables, for all registries, will represent the contents of the new National Trauma Data Bank (NTDB) in the future.

Technical Notes Regarding NTDS Implementation

The NTDS Dictionary is designed to establish a national standard for the exchange of trauma registry data, and to serve as the operational definitions for the National Trauma Data Bank (NTDB). It is expected (and encouraged) that local and state trauma registry committees will move towards extending and/or modifying their registries to adopt NTDS-based definitions. However, it is also recognized that many local and state trauma registry data sets will contain additional data points as well as additional response codes beyond those captured in NTDS. It is important to note that systems that deviate from NTDS can be fully compliant with NTDS via the development of a "mapping" process provided by their vendor which maps each variable (and response code) in the registry to the appropriate NTDS variable (and response code).

There are numerous ways in which mapping may allow variations in hospital or state data sets to conform to the NTDS data fields:

1. Additional response codes for a variable (for example, source of payment) may be collected, but then collapsed (i.e., mapped) into existing NTDS response codes when data are submitted to the NTDB.
2. A local or state registry may collect both a “patient’s home city” and “patient’s home ZIP code,” but the NTDS requires one or the other. A mapping program may ensure only one variable is submitted to the NTDB.

In sum, the NTDS Data Dictionary provides the exact standard for submission of trauma registry data to the NTDB. This standard may be accomplished through abstraction precisely as described in this document, or through mapping provided by a vendor. *If variables are mapped, trauma managers/registrars should consult with their vendor to ensure that the mapping is accurate*. In addition, if variables are mapped, it is important that a registrar abstract data as described by the vendor to ensure the vendor-supplied NTDS mapping works properly to enforce the exact rules outlined in the NTDS data dictionary.

The benefits of having a national trauma registry standard that can support comparative analyses across all facilities are enormous. The combination of having the NTDS standard as well as vendor- supplied mappings (to support that standard) will allow local and state registry data sets to include individualized detail while still maintaining compatibility with the NTDS national standard.

References

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National Trauma Data Standard Patient Inclusion Criteria

Definition:

To ensure consistent data collection across States into the National Trauma Data Standard, a trauma patient is defined as a patient sustaining a traumatic injury and meeting the following criteria:

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

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM): 800–959.9

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

S00-S99 with 7th character modifiers of A, B, or C ONLY. *(Injuries to specific body parts – initial encounter)*
T07 *(unspecified multiple injuries)*
T14 *(injury of unspecified body region)*
T20-T28 with 7th character modifier of A ONLY *(burns by specific body parts – initial encounter)*
T30-T32 *(burn by TBSA percentages)*
T79.A1-T79.A9 with 7th character modifier of A ONLY *(Traumatic Compartment Syndrome – initial encounter)*

Excluding the following isolated injuries:

ICD-9-CM:

905–909.9 (late effects of injury)
910–924.9 (superficial injuries, including blisters, contusions, abrasions, and insect bites)
930–939.9 (foreign bodies)

ICD-10-CM:

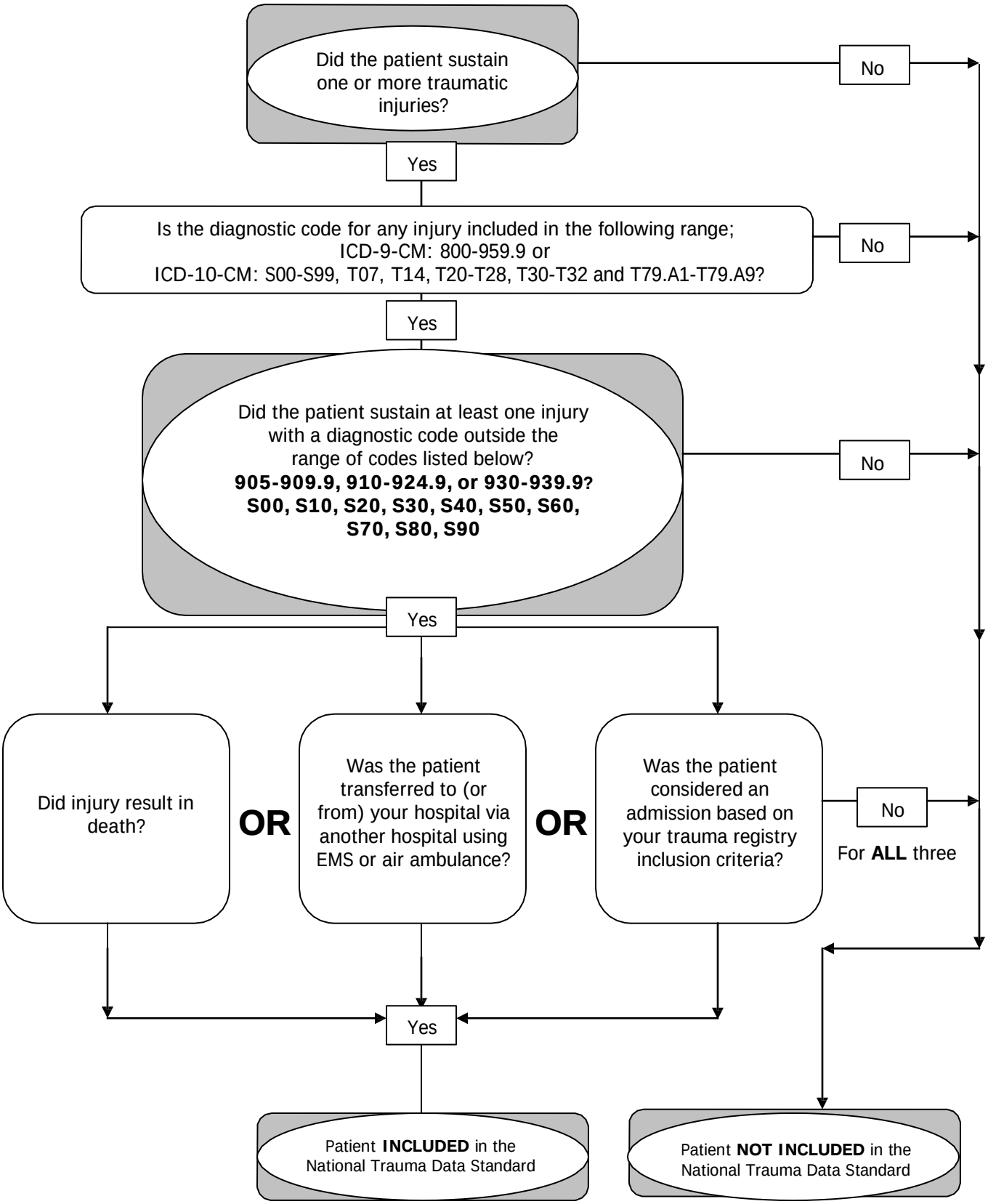
S00 *(Superficial injuries of the head)*
S10 *(Superficial injuries of the neck)*
S20 *(Superficial injuries of the thorax)*
S30 *(Superficial injuries of the abdomen, pelvis, lower back and external genitals)*
S40 *(Superficial injuries of shoulder and upper arm)*
S50 *(Superficial injuries of elbow and forearm)*
S60 *(Superficial injuries of wrist, hand and fingers)*
S70 *(Superficial injuries of hip and thigh)*
S80 *(Superficial injuries of knee and lower leg)*
S90 *(Superficial injuries of ankle, foot and toes)*

Late effect codes, which are represented using the same range of injury diagnosis codes but with the 7th digit modifier code of D through S, are also excluded.

AND MUST INCLUDE ONE OF THE FOLLOWING IN ADDITION TO (ICD-9-CM 800–959.9 OR ICD-10-CM S00-S99, T07, T14, T20-T28, T30-T32 and T79.A1-T79.A9):

- Hospital admission as defined by your trauma registry inclusion criteria; OR
- Patient transfer via EMS transport (including air ambulance) from one hospital to another hospital; OR
- Death resulting from the traumatic injury (independent of hospital admission or hospital transfer status)

National Trauma Data Standard Inclusion Criteria



COMMON NULL VALUES

Definition
These values are to be used with each of the National Trauma Data Standard Data Elements described in this document which have been defined to accept the Null Values.

Field Values
1 Not Applicable

2 Not Known/Not Recorded

Additional Information

- For any collection of data to be of value and reliably represent what was intended, a strong commitment must be made to ensure the correct documentation of incomplete data. When data elements associated with the National Trauma Data Standard are to be electronically stored in a database or moved from one database to another using XML, the indicated null values should be applied.

- *Not Applicable (NA)*: 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. For example, variables documenting EMS care would be "Not Applicable" if a patient self- transports to the hospital.

- *Not Known/Not Recorded (NK/NR):* This null value applies if, at the time of patient care documentation, information was "Not Known" (to the patient, family, health care provider) or no value for the element was recorded for the patient. This documents that there was an attempt to obtain information but it was unknown by all parties or the information was missing at the time of documentation. For example, injury date and time may be documented in the hospital patient care report as "Unknown." Another example, Not Known/Not Recorded should also be coded when documentation was expected, but none was provided (i.e., no EMS run sheet in the hospital record for patient transported by EMS).

References to Other Databases

- Compare with NHTSA V.2.10 - E00

Demographic Information

D_01

PATIENT'S HOME ZIP/POSTAL CODE

Definition

The patient's home ZIP/Postal code of primary residence.

Field Values

- Relevant value for data element

Additional Information

- Can be stored as a 5 or 9 digit code (XXXXX-XXXX) for US and CA, or can be stored in the postal code format of the applicable country.
- May require adherence to HIPAA regulations.
- If ZIP/Postal code is "Not Applicable," complete variable: Alternate Home Residence.
- If ZIP/Postal code is "Not Known/Not Recorded," complete variables: Patient's Home Country, Patient's Home State (US only), Patient's Home County (US only) and Patient's Home City (US only).
- If ZIP/Postal code is known, must also complete Patient's Home Country.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form

Associated Edit Checks

Rule ID	Level	Message
0001	1	Invalid value
0002	2	Field cannot be blank

D_02

PATIENT'S HOME COUNTRY

Definition

The country where the patient resides.

Field Values

- Relevant value for data element (two digit alpha country code)

Additional Information

- Values are two character FIPS codes representing the country (e.g., US).
- If Patient's Home Country is not US, then the null value "Not Applicable" is used for: Patient's Home State, Patient's Home County, and Patient's Home City.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form

Associated Edit Checks

Rule ID	Level	Message
0101	1	Invalid value
0102	2	Field cannot be blank
0104	2	Field cannot be Not Applicable
0105	2	Field cannot be Not Known/Not Recorded when Home Zip is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

D_03

PATIENT'S HOME STATE

Definition

The state (territory, province, or District of Columbia) where the patient resides.

Field Values

- Relevant value for data element (two digit numeric FIPS code)

Additional Information

- Only completed when ZIP/Postal code is "Not Known/Not Recorded" and country is US.
- Used to calculate FIPS code.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form

Associated Edit Checks

Rule ID	Level	Message
0201	1	Invalid value (US only)
0202	2	Field cannot be blank (US only)
0204	2	Field must be Not Applicable (Non-US)

D_04

PATIENT'S HOME COUNTY

Definition

The patient's county (or parish) of residence.

Field Values

- Relevant value for data element (three digit numeric FIPS code)

Additional Information

- Only completed when ZIP/Postal code is "Not Known/Not Recorded" and country is US.
- Used to calculate FIPS code.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form

Associated Edit Checks

Rule ID	Level	Message
0301	1	Invalid value (US only)
0302	2	Field cannot be blank (US only)
0304	2	Field must be Not Applicable (Non-US)

D_05

PATIENT'S HOME CITY

Definition

The patient's city (or township, or village) of residence.

Field Values

- Relevant value for data element (five digit numeric FIPS code)

Additional Information

- Only completed when ZIP/Postal code is "Not Known/Not Recorded" and country is US.
- Used to calculate FIPS code.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form

Associated Edit Checks

Rule ID	Level	Message
0401	1	Invalid value (US only)
0402	2	Field cannot be blank (US only)
0404	2	Field must be Not Applicable (Non-US)

D_06

ALTERNATE HOME RESIDENCE

Definition

Documentation of the type of patient without a home ZIP/Postal code.

Field Values

1. Homeless
2. Undocumented Citizen
3. Migrant Worker
4. ~~RETIRED 2016 Foreign Visitor~~

Additional Information

- Only completed when ZIP/Postal code is "Not Applicable."
- Homeless is defined as a person who lacks housing. The definition also includes a person living in transitional housing or a supervised public or private facility providing temporary living quarters.
- Undocumented Citizen is defined as a national of another country who has entered or stayed in another country without permission.
- Migrant Worker is defined as a person who temporarily leaves his/her principal place of residence within a country in order to accept seasonal employment in the same or different country.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form

Associated Edit Checks

Rule ID	Level	Message
0501	1	Value is not a valid menu option
0502	2	Field cannot be blank

D_07

DATE OF BIRTH

Definition
The patient's date of birth.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- If Date of Birth is “Not Known/Not Recorded”, complete variables: Age and Age Units.
- If Date of Birth equals ED/Hospital Arrival Date, then the Age and Age Units variables must be completed.
- Used to calculate patient age in minutes, hours, days, months, or years.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form
4. Triage/Trauma Flow Sheet
5. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
0601	1	Invalid value
0602	1	Date out of range
0603	2	Field cannot be blank
0605	3	Field should not be Not Known/Not Recorded
0606	2	Date of Birth is later than EMS Dispatch Date
0607	2	Date of Birth is later than EMS Unit Arrival on Scene Date
0608	2	Date of Birth is later than EMS Unit Scene Departure Date
0609	2	Date of Birth is later than ED/Hospital Arrival Date
0610	2	Date of Birth is later than ED Discharge Date
0611	2	Date of Birth is later than Hospital Discharge Date
0612	2	Date of Birth + 120 years must be less than ED/Hospital Arrival Date
0613	2	Field cannot be Not Applicable

D_08

AGE

Definition

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

Field Values

- Relevant value for data element

Additional Information

- Used to calculate patient age in minutes, hours, days, months, or years.
- If Date of Birth is “Not Known/Not Recorded”, complete variables: Age and Age Units.
- If Date of Birth equals ED/Hospital Arrival Date, then the Age and Age Units variables must be completed.
- Must also complete variable: Age Units.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form
4. Triage/Trauma Flow Sheet
5. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
0701	1	Age is outside the valid range of 0 - 120
0703	2	Field cannot be blank
0704	3	Injury Date minus Date of Birth should equal submitted Age as expressed in the Age Units specified.
0705	4	Age is greater than expected for the Age Units specified. Age should not exceed 60 minutes, 24 hours, 30 days, 24 months, or 120 years. Please verify this is correct.
0707	2	Field must be Not Applicable when Age Units is Not Applicable
0708	2	Field must be Not Known/Not Recorded when Age Units is Not Known/Not Recorded

D_09

AGE UNITS

Definition

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

Field Values

1. Hours
2. Days
3. Months
4. Years
5. Minutes

Additional Information

- Used to calculate patient age in minutes, hours, days, months, or years.
- If Date of Birth is “Not Known/Not Recorded”, complete variables: Age and Age Units.
- If Date of Birth equals ED/Hospital Arrival Date, then the Age and Age Units variables must be completed.
- Must also complete variable: Age.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form
4. Triage/Trauma Flow Sheet
5. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
0801	1	Value is not a valid menu option
0803	2	Field cannot be blank
0805	2	Field must be Not Applicable when Age is Not Applicable
0806	2	Field must be Not Known/Not Recorded when Age is Not Known/Not Recorded

D_10

RACE

Definition
The patient's race.

Field Values
1. Asian
2. Native Hawaiian or Other Pacific Islander
3. Other Race
4. American Indian
5. Black or African American
6. White

Additional Information

- Patient race should be based upon self-report or identified by a family member.
- The maximum number of races that may be reported for an individual patient is 2.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form
4. Triage/Trauma Flow Sheet
5. EMS Run Report
6. History & Physical

Associated Edit Checks

Rule ID	Level	Message
0901	1	Value is not a valid menu option
0902	2	Field cannot be blank

D_11

ETHNICITY

Definition
The patient's ethnicity.

Field Values
1. Hispanic or Latino
2. Not Hispanic or Latino

Additional Information

- Patient ethnicity should be based upon self-report or identified by a family member.
- The maximum number of ethnicities that may be reported for an individual patient is 1.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form
4. Triage/Trauma Flow Sheet
5. History & Physical
6. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
1001	1	Value is not a valid menu option
1002	2	Field cannot be blank

D_12

SEX

Definition
The patient's sex.

Field Values
1. Male
2. Female

Additional Information

- Patients who have undergone a surgical and/or hormonal sex reassignment should be coded using the current assignment.

Data Source Hierarchy Guide

1. Face Sheet
2. Billing Sheet
3. Admission Form
4. Triage/Trauma Flow Sheet
5. EMS Run Report
6. History & Physical

Associated Edit Checks

Rule ID	Level	Message
1101	1	Value is not a valid menu option
1102	2	Field cannot be blank
1103	2	Field cannot be Not Applicable

Injury Information

I_01

INJURY INCIDENT DATE

Definition

The date the injury occurred.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Estimates of date of injury should be based upon report by patient, witness, family, or health care provider. Other proxy measures (e.g., 911 call times) should not be used.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. History & Physical
4. Face Sheet

Associated Edit Checks

Rule ID	Level	Message
1201	1	Date is not valid
1202	1	Date out of range
1203	2	Field cannot be blank
1204	4	Injury Incident Date is earlier than Date of Birth
1205	4	Injury Incident Date is later than EMS Dispatch Date
1206	4	Injury Incident Date is later than EMS Unit Arrival on Scene Date
1207	4	Injury Incident Date is later than EMS Unit Scene Departure Date
1208	4	Injury Incident Date is later than ED/Hospital Arrival Date
1209	4	Injury Incident Date is later than ED Discharge Date
1210	4	Injury Incident Date is later than Hospital Discharge Date

I_02

INJURY INCIDENT TIME

Definition
The time the injury occurred.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Estimates of time of injury should be based upon report by patient, witness, family, or health care provider. Other proxy measures (e.g., 911 call times) should not be used.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. History & Physical
4. Face Sheet

Associated Edit Checks

Rule ID	Level	Message
1301	1	Time is not valid
1302	1	Time out of range
1303	2	Field cannot be blank
1304	4	Injury Incident Time is later than EMS Dispatch Time
1305	4	Injury Incident Time is later than EMS Unit Arrival on Scene Time
1306	4	Injury Incident Time is later than EMS Unit Scene Departure Time
1307	4	Injury Incident Time is later than ED/Hospital Arrival Time
1308	4	Injury Incident Time is later than ED Discharge Time
1309	4	Injury Incident Time is later than Hospital Discharge Time

I_03

WORK-RELATED

Definition

Indication of whether the injury occurred during paid employment.

Field Values

1. Yes
2. No

Additional Information

- If work related, two additional data fields must be completed: Patient's Occupational Industry and Patient's Occupation.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. History & Physical
4. Face Sheet
5. Billing Sheet

Associated Edit Checks

Rule ID	Level	Message
1401	1	Value is not a valid menu option
1402	2	Field cannot be blank
1405	4	Work-Related should be 1 (Yes) when Patient's Occupation is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
1406	4	Work-Related should be 1 (Yes) when Patient's Occupational Industry is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

I_04

PATIENT'S OCCUPATIONAL INDUSTRY

Definition

The occupational industry associated with the patient's work environment.

Field Values

1. Finance, Insurance, and Real Estate
2. Manufacturing
3. Retail Trade
4. Transportation and Public Utilities
5. Agriculture, Forestry, Fishing
6. Professional and Business Services
7. Education and Health Services
8. Construction
9. Government
10. Natural Resources and Mining
11. Information Services
12. Wholesale Trade
13. Leisure and Hospitality
14. Other Services

Additional Information

- If work related, also complete Patient's Occupation.
- Based upon US Bureau of Labor Statistics Industry Classification.
- The null value "Not Applicable" is used if Work Related is 2. No.

Data Source Hierarchy Guide

1. Billing Sheet
2. Face Sheet
3. Case Management/Social Services Notes
4. EMS Run Report
5. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
1501	1	Value is not a valid menu option
1504	2	Field cannot be blank

PATIENT'S OCCUPATION

Definition

The occupation of the patient.

Field Values

1. Business and Financial Operations Occupations
2. Architecture and Engineering Occupations
3. Community and Social Services Occupations
4. Education, Training, and Library Occupations
5. Healthcare Practitioners and Technical Occupations
6. Protective Service Occupations
7. Building and Grounds Cleaning and Maintenance
8. Sales and Related Occupations
9. Farming, Fishing, and Forestry Occupations
10. Installation, Maintenance, and Repair Occupations
11. Transportation and Material Moving Occupations
12. Management Occupations
13. Computer and Mathematical Occupations
14. Life, Physical, and Social Science Occupations
15. Legal Occupations
16. Arts, Design, Entertainment, Sports, and Media
17. Healthcare Support Occupations
18. Food Preparation and Serving Related
19. Personal Care and Service Occupations
20. Office and Administrative Support Occupations
21. Construction and Extraction Occupations
22. Production Occupations
23. Military Specific Occupations

Additional Information

- Only completed if injury is work-related.
- If work related, also complete Patient's Occupational Industry.
- Based upon 1999 US Bureau of Labor Statistics Standard Occupational Classification (SOC).
- The null value "Not Applicable" is used if Work Related is 2. No.

Data Source Hierarchy Guide

1. Billing Sheet
2. Face Sheet
3. Case Management/Social Services Notes
4. EMS Run Report
5. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
1601	1	Value is not a valid menu option
1604	2	Field cannot be blank

I_06

ICD-9 PRIMARY EXTERNAL CAUSE CODE

Definition

External cause code used to describe the mechanism (or external factor) that caused the injury event.

Field Values

- Relevant ICD-9-CM code value for injury event

Additional Information

- The primary external cause code should describe the main reason a patient is admitted to the hospital.
- External cause codes are used to auto-generate two calculated fields: Trauma Type (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix).
- ICD-9-CM codes will be accepted for this data element. Activity codes should not be reported in this field.
- The null value “Not Applicable” is used if not coding ICD-9.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical
5. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
1701	1	E-Code is not a valid ICD-9-CM code
1702	2	Field cannot be blank
1703	4	External Cause Code should not be = (810.0, 811.0, 812.0, 813.0, 814.0, 815.0, 816.0, 817.0, 818.0, 819.0) and Age < 15
1704	2	Should not be 849.x (where x is 0-9)
1705	3	External Cause Code should not be an activity code. Primary External Cause Code should be within the range of E800-999.9

I_07

ICD-10 PRIMARY EXTERNAL CAUSE CODE

Definition

External cause code used to describe the mechanism (or external factor) that caused the injury event.

Field Values

- Relevant ICD-10-CM code value for injury event

Additional Information

- The primary external cause code should describe the main reason a patient is admitted to the hospital.
- External cause codes are used to auto-generate two calculated fields: Trauma Type (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix).
- ICD-10-CM codes will be accepted for this data element. Activity codes should not be reported in this field.
- The null value “Not Applicable” is used if not coding ICD-10.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical
5. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
8901	1	E-Code is not a valid ICD-10-CM code (ICD-10 CM only)
8902	2	Field cannot be blank
8904	2	Should not be Y92.X/Y92.XX/Y92.XXX (where X is A-Z or 0-9) (ICD-10 CM only)
8905	3	ICD-10 External Cause Code should not be Y93.X/Y93.XX (where X is A-Z or 0-9) (ICD-10 CM only)
8906	1	E-Code is not a valid ICD-10-CA code (ICD-10 CA only)

I_08

ICD-9 PLACE OF OCCURRENCE EXTERNAL CAUSE CODE

Definition

Place of occurrence external cause code used to describe the place/site/location of the injury event (E 849.X).

Field Values

0. Home
1. Farm
2. Mine
3. Industry
4. Recreation
5. Street
6. Public Building
7. Residential Institution
8. Other
9. Unspecified

Additional Information

- Only ICD-9-CM codes will be accepted for ICD-9 Place of Occurrence External Cause Code.
- The null value “Not Applicable” is used if not coding ICD-9.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical
5. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
1801	1	Value is not a valid menu option
1802	2	Field cannot be blank

I_09

ICD-10 PLACE OF OCCURRENCE EXTERNAL CAUSE CODE

Definition

Place of occurrence external cause code used to describe the place/site/location of the injury event (Y92.x).

Field Values

- Relevant ICD-10-CM code value for injury event

Additional Information

- Only ICD-10-CM codes will be accepted for ICD-10 Place of Occurrence External Cause Code.
- The null value “Not Applicable” is used if not coding ICD-10.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical
5. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
9001	1	Invalid value (ICD-10 CM only)
9002	2	Field cannot be blank
9003	3	Place of Injury code should be Y92.X/Y92.XX/Y92.XXX (where X is A-Z [excluding I,O] or 0-9) (ICD-10 CM only)
9004	1	Invalid value (ICD-10 CA only)
9005	3	Place of Injury code should be U98X (where X is 0-9) (ICD-10 CA only)

I_10

ICD-9 ADDITIONAL EXTERNAL CAUSE CODE

Definition

Additional External Cause Code used in conjunction with the Primary External Cause Code if multiple external cause codes are required to describe the injury event.

Field Values

- Relevant ICD-9-CM code value for injury event

Additional Information

- External cause codes are used to auto-generate two calculated fields: Trauma Type: (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix).
- Only ICD-9-CM codes will be accepted for ICD-9 Additional External Cause Code.
- Activity codes should not be reported in this field.
- Refer to Appendix 3: Glossary of Terms for multiple cause coding hierarchy.
- The null value “Not Applicable” is used if not coding ICD-9.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical
5. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
1901	1	E-Code is not a valid ICD-9-CM code
1902	4	Additional External Cause Code should not be equal to Primary External Cause Code.
1903	2	Field cannot be blank

ICD-10 ADDITIONAL EXTERNAL CAUSE CODE

I_11

Definition

Additional External Cause Code used in conjunction with the Primary External Cause Code if multiple external cause codes are required to describe the injury event.

Field Values

- Relevant ICD-10-CM code value for injury event

Additional Information

- External cause codes are used to auto-generate two calculated fields: Trauma Type: (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix).
- Only ICD-10-CM codes will be accepted for ICD-10 Additional External Cause Code.
- Activity codes should not be reported in this field.
- Refer to Appendix 3: Glossary of Terms for multiple cause coding hierarchy.
- The null value “Not Applicable” is used if not coding ICD-10.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical
5. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
9101	1	E-Code is not a valid ICD-10-CM code (ICD-10 CM only)
9102	4	Additional External Cause Code ICD-10 should not be equal to Primary External Cause Code ICD-10
9103	2	Field cannot be blank
9104	1	E-Code is not a valid ICD-10-CA code (ICD-10 CA only)

INCIDENT LOCATION ZIP/POSTAL CODE

I_12

Definition

The ZIP/Postal code of the incident location.

Field Values

- Relevant value for data element

Additional Information

- Can be stored as a 5 or 9 digit code (XXXXX-XXXX) for US and CA, or can be stored in the postal code format of the applicable country.
- If "Not Applicable" or "Not Known/Not Recorded," complete variables: Incident Country, Incident State (US Only), Incident County (US Only) and Incident City (US Only).
- May require adherence to HIPAA regulations.
- If ZIP/Postal code is known, then must complete Incident Country.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
2001	1	Invalid value
2002	2	Field cannot be blank

INCIDENT COUNTRY

I_13

Definition
The country where the patient was found or to which the unit responded (or best approximation).

Field Values

- Relevant value for data element (two digit alpha country code)

Additional Information

- Values are two character FIPS codes representing the country (e.g., US).
- If Incident Country is not US, then the null value "Not Applicable" is used for: Incident State, Incident County, and Incident City.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
2101	1	Invalid value
2102	2	Field cannot be blank
2104	2	Field cannot be Not Applicable
2105	2	Field cannot be Not Known/Not Recorded when Home Zip is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

I_14

INCIDENT STATE

Definition

The state, territory, or province where the patient was found or to which the unit responded (or best approximation).

Field Values

- Relevant value for data element (two digit numeric FIPS code)

Additional Information

- Only completed when Incident Location ZIP/Postal code is "Not Applicable" or "Not Known/Not Recorded", and country is US.
- Used to calculate FIPS code.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
2201	1	Invalid value (US only)
2203	2	Field cannot be blank (US only)
2204	2	Field must be Not Applicable (Non-US)

INCIDENT COUNTY

I_15

Definition

The county or parish where the patient was found or to which the unit responded (or best approximation).

Field Values

- Relevant value for data element (three digit numeric FIPS code)

Additional Information

- Only completed when Incident Location ZIP/Postal code is "Not Applicable" or "Not Known/Not Recorded", and country is US.
- Used to calculate FIPS code.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
2301	1	Invalid value (US only)
2303	2	Field cannot be blank (US only)
2304	2	Field must be Not Applicable (Non-US)

I_16

INCIDENT CITY

Definition

The city or township where the patient was found or to which the unit responded.

Field Values

- Relevant value for data element (five digit numeric FIPS code)

Additional Information

- Only completed when Incident Location ZIP/Postal code is "Not Applicable" or "Not Known/Not Recorded", and country is US.
- Used to calculate FIPS code.
- If incident location resides outside of formal city boundaries, report nearest city/town.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
2401	1	Invalid value (US only)
2403	2	Field cannot be blank (US only)
2404	2	Field must be Not Applicable (Non-US)

I_17

PROTECTIVE DEVICES

Definition

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

Field Values

1. None
2. Lap Belt
3. Personal Floatation Device
4. Protective Non-Clothing Gear (e.g., shin guard)
5. Eye Protection
6. Child Restraint (booster seat or child car seat)
7. Helmet (e.g., bicycle, skiing, motorcycle)
8. Airbag Present
9. Protective Clothing (e.g., padded leather pants)
10. Shoulder Belt
11. Other

Additional Information

- Check all that apply.
- If "Child Restraint" is present, complete variable "Child Specific Restraint."
- If "Airbag" is present, complete variable "Airbag Deployment."
- Evidence of the use of safety equipment may be reported or observed.
- Lap Belt should be used to include those patients that are restrained, but not further specified.
- If chart indicates "3-point-restraint", choose 2. Lap Belt and 10. Shoulder Belt

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical

Associated Edit Checks

Rule ID	Level	Message
2501	1	Value is not a valid menu option
2502	2	Field cannot be blank
2505	3	Protective Device should be 6 (Child Restraint) when Child Specific Restraint is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
2506	3	Protective Device should be 8 (Airbag Present) when Airbag Deployment is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
2507	2	Field cannot be Not Applicable

I_18

CHILD SPECIFIC RESTRAINT

Definition

Protective child restraint devices used by patient at the time of injury.

Field Values

1. Child Car Seat
2. Infant Car Seat
3. Child Booster Seat

Additional Information

- Evidence of the use of child restraint may be reported or observed.
- Only completed when Protective Devices include "Child Restraint."

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical

Associated Edit Checks

Rule ID	Level	Message
2601	1	Value is not a valid menu option
2603	2	Field cannot be blank

AIRBAG DEPLOYMENT

Definition

Indication of airbag deployment during a motor vehicle crash.

Field Values

1. Airbag Not Deployed
2. Airbag Deployed Front
3. Airbag Deployed Side
4. Airbag Deployed Other (knee, airbelt, curtain, etc.)

Additional Information

- Check all that apply.
- Evidence of the use of airbag deployment may be reported or observed.
- Only completed when Protective Devices include "Airbag."
- Airbag Deployed Front should be used for patients with documented airbag deployments, but are not further specified.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical

Associated Edit Checks

Rule ID	Level	Message
2701	1	Value is not a valid menu option
2703	2	Field cannot be blank

I_20

REPORT OF PHYSICAL ABUSE

Definition

A report of suspected physical abuse was made to law enforcement and/or protective services.

Field Values

1. Yes
2. No

Additional Information

- This includes, but is not limited to, a report of child, elder, spouse or intimate partner physical abuse.

Data Source Hierarchy Guide

1. Case Management/Social Service Notes
2. ED Records
3. Progress Notes
4. Discharge Summary
5. History & Physical
6. Nursing Notes/Flow Sheet
7. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
9201	1	Value is not a valid menu option
9202	2	Field cannot be Not Applicable
9203	2	Field cannot be blank

I_21

INVESTIGATION OF PHYSICAL ABUSE

Definition

An investigation by law enforcement and/or protective services was initiated because of the suspected physical abuse.

Field Values

1. Yes
2. No

Additional Information

- This includes, but is not limited to, a report of child, elder, spouse or intimate partner physical abuse.
- Only complete when Report of Physical Abuse is 1. Yes.
- The null value "Not Applicable" should be used for patients where Report of Physical Abuse is 2. No.

Data Source Hierarchy Guide

1. Case Management/Social Service Notes
2. ED Records
3. Progress Notes
4. Discharge Summary
5. History & Physical
6. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
9301	1	Value is not a valid menu option
9302	2	Field cannot be blank
9303	3	Field should not be Not Applicable when Report of Physical Abuse = 1 (Yes)

CAREGIVER AT DISCHARGE

I_22

Definition

The patient was discharged to a caregiver different than the caregiver at admission due to suspected physical abuse.

Field Values

1. Yes
2. No

Additional Information

- Only complete when Report of Physical Abuse is 1. Yes.
- Only complete for minors as determined by state/local definition, excluding emancipated minors.
- The null value "Not Applicable" should be used for patients where Report of Physical Abuse is 2. No or where older than the state/local age definition of a minor.
- The null value “Not Applicable” should be used if the patient expires prior to discharge.

Data Source Hierarchy Guide

1. Case Management/Social Services Notes
2. Discharge Summary
3. Nursing Notes/Flow Sheet
4. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
9401	1	Value is not a valid menu option
9402	2	Field cannot be blank

Pre-hospital Information

P_01

EMS DISPATCH DATE

Definition

The date the unit transporting to your hospital was notified by dispatch.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Used to auto-generate an additional calculated field: Total EMS Time (elapsed time from EMS dispatch to hospital arrival).
- For inter-facility transfer patients, this is the date on which the unit transporting the patient to your facility from the transferring facility was notified by dispatch or assigned to this transport.
- For patients transported from the scene of injury to your hospital, this is the date on which the unit transporting the patient to your facility from the scene was dispatched.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
2801	1	Date is not valid
2802	1	Date out of range
2803	3	EMS Dispatch Date is earlier than Date of Birth
2804	4	EMS Dispatch Date is later than EMS Unit Arrival on Scene Date
2805	4	EMS Dispatch Date is later than EMS Unit Scene Departure Date
2806	3	EMS Dispatch Date is later than ED/Hospital Arrival Date
2807	4	EMS Dispatch Date is later than ED Discharge Date
2808	3	EMS Dispatch Date is later than Hospital Discharge Date
2809	2	Field cannot be blank

P_02

EMS DISPATCH TIME

Definition

The time the unit transporting to your hospital was notified by dispatch.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Used to auto-generate an additional calculated field: Total EMS Time (elapsed time from EMS dispatch to hospital arrival).
- For inter-facility transfer patients, this is the time at which the unit transporting the patient to your facility from the transferring facility was notified by dispatch.
- For patients transported from the scene of injury to your hospital, this is the time at which the unit transporting the patient to your facility from the scene was dispatched.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
2901	1	Time is not valid
2902	1	Time out of range
2903	4	EMS Dispatch Time is later than EMS Unit Arrival on Scene Time
2904	4	EMS Dispatch Time is later than EMS Unit Scene Departure Time
2905	4	EMS Dispatch Time is later than ED/Hospital Arrival Time
2906	4	EMS Dispatch Time is later than ED Discharge Time
2907	4	EMS Dispatch Time is later than Hospital Discharge Time
2908	2	Field cannot be blank

EMS UNIT ARRIVAL DATE AT SCENE OR TRANSFERRING FACILITY

P_03

Definition

The date the unit transporting to your hospital arrived on the scene/transferring facility.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Used to auto-generate two additional calculated fields: Total EMS Response Time (elapsed time from EMS dispatch to scene arrival) and Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).
- For inter-facility transfer patients, this is the date on which the unit transporting the patient to your facility from the transferring facility arrived at the transferring facility (arrival is defined at date/time when the vehicle stopped moving).
- For patients transported from the scene of injury to your hospital, this is the date on which the unit transporting the patient to your facility from the scene arrived at the scene (arrival is defined at date/time when the vehicle stopped moving).

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3001	1	Date is not valid
3002	1	Date out of range
3003	3	EMS Unit Arrival on Scene Date is earlier than Date of Birth
3004	4	EMS Unit Arrival on Scene Date is earlier than EMS Dispatch Date
3005	4	EMS Unit Arrival on Scene Date is later than EMS Unit Scene Departure Date
3006	3	EMS Unit Arrival on Scene Date is later than ED/Hospital Arrival Date
3007	4	EMS Unit Arrival on Scene Date is later than ED Discharge Date
3008	3	EMS Unit Arrival on Scene Date is later than Hospital Discharge Date
3009	3	EMS Unit Arrival on Scene Date minus EMS Dispatch Date is greater than 7 days
3010	2	Field cannot be blank

EMS UNIT ARRIVAL TIME AT SCENE OR TRANSFERRING FACILITY

P_04

Definition

The time the unit transporting to your hospital arrived on the scene.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Used to auto-generate two additional calculated fields: Total EMS Response Time (elapsed time from EMS dispatch to scene arrival) and Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).
- For inter-facility transfer patients, this is the time at which the unit transporting the patient to your facility from the transferring facility arrived at the transferring facility (arrival is defined at date/time when the vehicle stopped moving).
- For patients transported from the scene of injury to your hospital, this is the time at which the unit transporting the patient to your facility from the scene arrived at the scene (arrival is defined at date/time when the vehicle stopped moving).

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3101	1	Time is not valid
3102	1	Time out of range
3103	4	EMS Unit Arrival on Scene Time is earlier than EMS Dispatch Time
3104	4	EMS Unit Arrival on Scene Time is later than EMS Unit Scene Departure Time
3105	4	EMS Unit Arrival on Scene Time is later than ED/Hospital Arrival Time
3106	4	EMS Unit Arrival on Scene Time is later than ED Discharge Time
3107	4	EMS Unit Arrival on Scene Time is later than Hospital Discharge Time
3108	2	Field cannot be blank

EMS UNIT DEPARTURE DATE FROM SCENE OR TRANSFERRING FACILITY

P_05

Definition

The date the unit transporting to your hospital left the scene.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Used to auto-generate an additional calculated field: Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).
- For inter-facility transfer patients, this is the date on which the unit transporting the patient to your facility from the transferring facility departed from the transferring facility (departure is defined at date/time when the vehicle started moving).
- For patients transported from the scene of injury to your hospital, this is the date on which the unit transporting the patient to your facility from the scene departed from the scene (departure is defined at date/time when the vehicle started moving).

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3201	1	Date is not valid
3202	1	Date out of range
3203	3	EMS Unit Scene Departure Date is earlier than Date of Birth
3204	4	EMS Unit Scene Departure Date is earlier than EMS Dispatch Date
3205	4	EMS Unit Scene Departure Date is earlier than EMS Unit Arrival on Scene Date
3206	3	EMS Unit Scene Departure Date is later than ED/Hospital Arrival Date
3207	4	EMS Unit Scene Departure Date is later than ED Discharge Date
3208	3	EMS Unit Scene Departure Date is later than Hospital Discharge Date
3209	3	EMS Unit Scene Departure Date minus EMS Unit Arrival on Scene Date is greater than 7 days
3210	2	Field cannot be blank

EMS UNIT DEPARTURE TIME FROM SCENE OR TRANSFERRING FACILITY

P_06

Definition

The time the unit transporting to your hospital left the scene.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Used to auto-generate an additional calculated field: Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).
- For inter-facility transfer patients, this is the time at which the unit transporting the patient to your facility from the transferring facility departed from the transferring facility (departure is defined at date/time when the vehicle started moving).
- For patients transported from the scene of injury to your hospital, this is the time at which the unit transporting the patient to your facility from the scene departed from the scene (departure is defined at date/time when the vehicle started moving).

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3301	1	Time is not valid
3302	1	Time out of range
3303	4	EMS Unit Scene Departure Time is earlier than EMS Dispatch Time
3304	4	EMS Unit Scene Departure Time is earlier than EMS Unit Arrival on Scene Time
3305	4	EMS Unit Scene Departure Time is later than ED/Hospital Arrival Time
3306	4	EMS Unit Scene Departure Time is later than the ED Discharge Time
3307	4	EMS Unit Scene Departure Time is later than Hospital Discharge Time
3308	2	Field cannot be blank

P_07

TRANSPORT MODE

Definition

The mode of transport delivering the patient to your hospital.

Field Values

1. Ground Ambulance
2. Helicopter Ambulance
3. Fixed-wing Ambulance
4. Private/Public Vehicle/Walk-in
5. Police
6. Other

Additional Information

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3401	1	Value is not a valid menu option
3402	2	Field cannot be blank
3403	4	Transport Mode should not be 4 (Private/Public Vehicle/Walk-in) when EMS response times are not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

P_08

OTHER TRANSPORT MODE

Definition

All other modes of transport used during patient care event (prior to arrival at your hospital), except the mode delivering the patient to the hospital.

Field Values

1. Ground Ambulance
2. Helicopter Ambulance
3. Fixed-wing Ambulance
4. Private/Public Vehicle/Walk-in
5. Police
6. Other

Additional Information

- Include in "Other" unspecified modes of transport.
- The null value "Not Applicable" is used to indicate that a patient had a single mode of transport and therefore this field does not apply to the patient.
- Check all that apply with a maximum of 5.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3501	1	Value is not a valid menu option
3502	2	Field cannot be blank

INITIAL FIELD SYSTOLIC BLOOD PRESSURE

P_09

Definition

First recorded systolic blood pressure measured at the scene of injury.

Field Values

- Relevant value for data element

Additional Information

- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- Measurement recorded must be without the assistance of CPR or any type of mechanical chest compression device. For those patients who are receiving CPR or any type of mechanical chest compressions, report the value obtained while compressions are paused.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3601	1	Invalid value
3602	2	Field cannot be blank
3603	3	SBP exceeds the max of 300

P_10

INITIAL FIELD PULSE RATE

Definition

First recorded pulse measured at the scene of injury (palpated or auscultated), expressed as a number per minute.

Field Values

- Relevant value for data element

Additional Information

- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- Measurement recorded must be without the assistance of CPR or any type of mechanical chest compression device. For those patients who are receiving CPR or any type of mechanical chest compressions, report the value obtained while compressions are paused.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3701	1	Invalid value
3702	2	Field cannot be blank
3703	3	Pulse rate exceeds the max of 299

P_11

INITIAL FIELD RESPIRATORY RATE

Definition

First recorded respiratory rate measured at the scene of injury (expressed as a number per minute).

Field Values

- Relevant value for data element.

Additional Information

- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3801	1	Invalid value. RR cannot be > 99 for age in years >= 6 OR RR cannot be > 120 for age in years < 6. If age and age units are not valued, RR cannot be > 120.
3802	2	Field cannot be blank
3803	3	Invalid, out of range. RR cannot be > 99 and <=120 for age in years < 6. If age and age units are not valued, RR cannot be > 99.

P_12

INITIAL FIELD OXYGEN SATURATION

Definition

First recorded oxygen saturation measured at the scene of injury (expressed as a percentage).

Field Values

- Relevant value for data element

Additional Information

- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- Value should be based upon assessment before administration of supplemental oxygen.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
3901	1	Pulse oximetry is outside the valid range of 0 - 100
3902	2	Field cannot be blank

P_13

INITIAL FIELD GCS - EYE

Definition

First recorded Glasgow Coma Score (Eye) measured at the scene of injury.

Field Values

1. No eye movement when assessed
2. Opens eyes in response to painful stimulation
3. Opens eyes in response to verbal stimulation
4. Opens eyes spontaneously

Additional Information

- Used to calculate Overall GCS - EMS Score.
- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
4001	1	Value is not a valid menu option
4003	2	Field cannot be blank

P_14

INITIAL FIELD GCS - VERBAL

Definition

First recorded Glasgow Coma Score (Verbal) measured at the scene of injury.

Field Values

Pediatric (≤ 2 years):

1. No vocal response
2. Inconsolable, agitated
3. Inconsistently consolable, moaning
4. Cries but is consolable, inappropriate interactions
5. Smiles, oriented to sounds, follows objects, interacts

Adult

1. No verbal response
2. Incomprehensible sounds
3. Inappropriate words
4. Confused
5. Oriented

Additional Information

- Used to calculate Overall GCS - EMS Score.
- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- If patient is intubated then the GCS Verbal score is equal to 1.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
4101	1	Value is not a valid menu option
4103	2	Field cannot be blank

INITIAL FIELD GCS - MOTOR

Definition

First recorded Glasgow Coma Score (Motor) measured at the scene of injury.

Field Values

Pediatric (≤ 2 years):

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Appropriate response to stimulation

Adult

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Obeys commands

Additional Information

- Used to calculate Overall GCS - EMS Score.
- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
4201	1	Value is not a valid menu option
4203	2	Field cannot be blank

P_16

INITIAL FIELD GCS - TOTAL

Definition

First recorded Glasgow Coma Score (total) measured at the scene of injury.

Field Values

- Relevant value for data element

Additional Information

- The null value "Not Known/Not Recorded" is used if the patient is transferred to your facility with no EMS Run Report from the scene of injury.
- If a patient does not have a numeric GCS recorded, but there is documentation related to their level of consciousness such as "AAOx3," "awake alert and oriented," or "patient with normal mental status," interpret this as GCS of 15 IF there is no other contradicting documentation.
- The null value "Not Applicable" is used for patients who arrive by 4. Private/Public Vehicle/Walk-in.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
4301	1	GCS Total is outside the valid range of 3 - 15
4303	4	Initial Field GCS - Total does not equal the sum of Initial Field GCS - Eye, Initial Field GCS - Verbal, and Initial Field GCS - Motor
4304	2	Field cannot be blank

P_17

INTER-FACILITY TRANSFER

Definition

Was the patient transferred to your facility from another acute care facility?

Field Values

1. Yes
2. No

Additional Information

- Patients transferred from a private doctor's office, stand-alone ambulatory surgery center, or delivered to your hospital by a non-EMS transport are not considered an inter-facility transfers.
- Outlying facilities purporting to provide emergency care services or utilized to stabilize a patient are considered acute care facilities.

Data Source Hierarchy Guide

1. EMS Run Report
2. Triage/Trauma Flow Sheet
3. History & Physical

Associated Edit Checks

Rule ID	Level	Message
4401	2	Field cannot be blank
4402	1	Value is not a valid menu option
4404	3	Field should not be Not Known/Not Recorded
4405	2	Field cannot be Not Applicable

TRAUMA CENTER CRITERIA

Definition

Physiologic and anatomic EMS trauma triage criteria for transport to a trauma center as defined by the Centers for Disease Control and Prevention and the American College of Surgeons-Committee on Trauma. This information must be found on the scene of injury EMS Run Report.

Field Values

1. Glasgow Coma Score <= 13
2. Systolic blood pressure < 90 mmHg
3. Respiratory rate < 10 or > 29 breaths per minute (< 20 in infants aged < 1 year) or need for ventilatory support
4. All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee
5. Chest wall instability or deformity (e.g., flail chest)
6. Two or more proximal long-bone fractures
7. Crushed, degloved, mangled, or pulseless extremity
8. Amputation proximal to wrist or ankle
9. Pelvic fracture
10. Open or depressed skull fracture
11. Paralysis

Additional Information

- The null value "Not Applicable" should be used to indicate that the patient did not arrive by EMS.
- The null value "Not Applicable" should be used if EMS Run Report indicates patient did not meet any Trauma Center Criteria.
- The null value "Not Known/Not Recorded" should be used if this information is not indicated, as an identical response choice, on the EMS Run Report or if the EMS Run Report is not available.
- Check all that apply.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
9501	1	Value is not a valid menu option
9502	2	Field cannot be blank

VEHICULAR, PEDESTRIAN, OTHER RISK INJURY

Definition

EMS trauma triage mechanism of injury criteria for transport to a trauma center as defined by the Centers for Disease Control and Prevention and the American College of Surgeons-Committee on Trauma. This information must be found on the scene of injury EMS Run Report.

Field Values

1. Fall adults: > 20 ft. (one story is equal to 10 ft.)
2. Fall children: > 10 ft. or 2-3 times the height of the child
3. Crash intrusion, including roof: > 12 in. occupant site; > 18 in. any site
4. Crash ejection (partial or complete) from automobile
5. Crash death in same passenger compartment
6. Crash vehicle telemetry data (AACN) consistent with high risk injury
7. Auto v. pedestrian/bicyclist thrown, run over, or > 20 MPH impact
8. Motorcycle crash > 20 mph
9. For adults > 65; SBP < 110
10. Patients on anticoagulants and bleeding disorders
11. Pregnancy > 20 weeks
12. EMS provider judgment
13. Burns
14. Burns with Trauma

Additional Information

- The null value "Not Applicable" should be used to indicate that the patient did not arrive by EMS.
- The null value "Not Applicable" should be used if EMS Run Report indicates patient did not meet any Vehicular, Pedestrian, Other Risk Injury criteria.
- The null value "Not Known/Not Recorded" should be used if this information is not indicated, as an identical response choice, on the EMS Run Report or if the EMS Run Report is not available.
- Check all that apply.

Data Source Hierarchy Guide

1. EMS Run Report

Associated Edit Checks

Rule ID	Level	Message
9601	1	Value is not a valid menu option
9602	2	Field cannot be blank

P_20

PRE-HOSPITAL CARDIAC ARREST

Definition

Indication of whether patient experienced cardiac arrest prior to ED/Hospital arrival.

Field Values

1. Yes
2. No

Additional Information

- A patient who experienced a sudden cessation of cardiac activity. The patient was unresponsive with no normal breathing and no signs of circulation.
- The event must have occurred outside of the reporting hospital, prior to admission at the center in which the registry is maintained. Pre-hospital cardiac arrest could occur at a transferring institution.
- Any component of basic and/or advanced cardiac life support must have been initiated by a health care provider.

Data Source Hierarchy Guide

1. EMS Run Report
2. Nursing Notes/Flow Sheet
3. History & Physical
4. Transfer Notes

Associated Edit Checks

Rule ID	Level	Message
9701	1	Value is not a valid menu option
9702	2	Field cannot be blank
9703	2	Field cannot be Not Applicable

Emergency Department Information

ED_01

ED/HOSPITAL ARRIVAL DATE

Definition

The date the patient arrived to the ED/hospital.

Field Values

- Relevant value for data element

Additional Information

- If the patient was brought to the ED, enter date patient arrived at ED. If patient was directly admitted to the hospital, enter date patient was admitted to the hospital.
- Collected as YYYY-MM-DD.
- Used to auto-generate two additional calculated fields: Total EMS Time: (elapsed time from EMS dispatch to hospital arrival) and Total Length of Hospital Stay (elapsed time from ED/Hospital Arrival to ED/Hospital Discharge).

Data Source Hierarchy Guide

1. Triage/Trauma Flow Sheet
2. ED Record
3. Face Sheet
4. Billing Sheet
5. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
4501	1	Date is not valid
4502	1	Date out of range
4503	2	Field cannot be blank
4505	2	Field cannot be Not Known/Not Recorded
4506	3	ED/Hospital Arrival Date is earlier than EMS Dispatch Date
4507	3	ED/Hospital Arrival Date is earlier than EMS Unit Arrival on Scene Date
4508	3	ED/Hospital Arrival Date is earlier than EMS Unit Scene Departure Date
4509	2	ED/Hospital Arrival Date is later than ED Discharge Date
4510	2	ED/Hospital Arrival Date is later than Hospital Discharge Date
4511	3	ED/Hospital Arrival Date is earlier than Date of Birth
4512	3	ED/Hospital Arrival Date should be after 1993
4513	3	ED/Hospital Arrival Date minus Injury Incident Date should be less than 30 days
4514	3	ED/Hospital Arrival Date minus EMS Dispatch Date is greater than 7 days
4515	2	Field cannot be Not Applicable

ED_02

ED/HOSPITAL ARRIVAL TIME

Definition

The time the patient arrived to the ED/hospital.

Field Values

- Relevant value for data element

Additional Information

- If the patient was brought to the ED, enter time patient arrived at ED. If patient was directly admitted to the hospital, enter time patient was admitted to the hospital.
- Collected as HH:MM military time.
- Used to auto-generate two additional calculated fields: Total EMS Time (elapsed time from EMS dispatch to hospital arrival) and Total Length of Hospital Stay (elapsed time from ED/Hospital Arrival to ED/Hospital Discharge).

Data Source Hierarchy Guide

1. Triage/Trauma Flow Sheet
2. ED Record
3. Face Sheet
4. Billing Sheet
5. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
4601	1	Time is not valid
4602	1	Time out of range
4603	2	Field cannot be blank
4604	4	ED/Hospital Arrival Time is earlier than EMS Dispatch Time
4605	4	ED/Hospital Arrival Time is earlier than EMS Unit Arrival on Scene Time
4606	4	ED/Hospital Arrival Time is earlier than EMS Unit Scene Departure Time
4607	4	ED/Hospital Arrival Time is later than ED Discharge Time
4608	4	ED/Hospital Arrival Time is later than Hospital Discharge Time

ED_03

INITIAL ED/HOSPITAL SYSTOLIC BLOOD PRESSURE

Definition

First recorded systolic blood pressure in the ED/hospital within 30 minutes or less of ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Please note that first recorded/hospital vitals do not need to be from the same assessment.
- Measurement recorded must be without the assistance of CPR or any type of mechanical chest compression device. For those patients who are receiving CPR or any type of mechanical chest compressions, report the value obtained while compressions are paused.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Physician Notes
4. History & Physical

Associated Edit Checks

Rule ID	Level	Message
4701	1	Invalid value
4702	2	Field cannot be blank
4704	3	SBP value exceeds the max of 300

ED_04

INITIAL ED/HOSPITAL PULSE RATE

Definition

First recorded pulse in the ED/hospital (palpated or auscultated) within 30 minutes or less of ED/hospital arrival (expressed as a number per minute).

Field Values

- Relevant value for data element

Additional Information

- Please note that first recorded/hospital vitals do not need to be from the same assessment.
- Measurement recorded must be without the assistance of CPR or any type of mechanical chest compression device. For those patients who are receiving CPR or any type of mechanical chest compressions, report the value obtained while compressions are paused.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
4801	1	Invalid value
4802	2	Field cannot be blank
4804	3	Pulse rate exceeds the max of 299

ED_05

INITIAL ED/HOSPITAL TEMPERATURE

Definition

First recorded temperature (in degrees Celsius [centigrade]) in the ED/hospital within 30 minutes or less of ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

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

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
4901	1	Invalid value
4902	2	Field cannot be blank
4903	3	Temperature exceeds the max of 45.0 Celsius

ED_06

INITIAL ED/HOSPITAL RESPIRATORY RATE

Definition

First recorded respiratory rate in the ED/hospital within 30 minutes or less of ED/hospital arrival (expressed as a number per minute).

Field Values

- Relevant value for data element

Additional Information

- If available, complete additional field: Initial ED/Hospital Respiratory Assistance.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Respiratory Therapy Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5001	1	Invalid value. RR cannot be > 99 for age in years >= 6 OR RR cannot be > 120 for age in years < 6. If age and age units are not valued, RR cannot be > 120.
5002	2	Field cannot be blank
5005	3	Invalid, out of range. RR cannot be > 99 and <=120 for age in years < 6. If age and age units are not valued, RR cannot be > 99.

ED_07

INITIAL ED/HOSPITAL RESPIRATORY ASSISTANCE

Definition

Determination of respiratory assistance associated with the initial ED/hospital respiratory rate within 30 minutes or less of ED/hospital arrival.

Field Values

1. Unassisted Respiratory Rate
2. Assisted Respiratory Rate

Additional Information

- Only completed if a value is provided for Initial ED/Hospital Respiratory Rate.
- Respiratory Assistance is defined as mechanical and/or external support of respiration.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Respiratory Therapy Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5101	1	Value is not a valid menu option
5102	2	Field cannot be blank

ED_08

INITIAL ED/HOSPITAL OXYGEN SATURATION

Definition

First recorded oxygen saturation in the ED/hospital within 30 minutes or less of ED/hospital arrival (expressed as a percentage).

Field Values

- Relevant value for data element

Additional Information

- If available, complete additional field: Initial ED/Hospital Supplemental Oxygen.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Respiratory Therapy Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5201	1	Pulse oximetry is outside the valid range of 0 - 100
5202	2	Field cannot be blank

INITIAL ED/HOSPITAL SUPPLEMENTAL OXYGEN

ED_09

Definition

Determination of the presence of supplemental oxygen during assessment of initial ED/hospital oxygen saturation level within 30 minutes or less of ED/hospital arrival.

Field Values

1. No Supplemental Oxygen
2. Supplemental Oxygen

Additional Information

- Only completed if a value is provided for Initial ED/Hospital Oxygen Saturation, otherwise report as "Not Applicable".
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5301	1	Value is not a valid menu option
5303	2	Field cannot be blank

ED_10

INITIAL ED/HOSPITAL GCS - EYE

Definition

First recorded Glasgow Coma Score (Eye) in the ED/hospital within 30 minutes or less of ED/hospital arrival.

Field Values

1. No eye movement when assessed
2. Opens eyes in response to painful stimulation
3. Opens eyes in response to verbal stimulation
4. Opens eyes spontaneously

Additional Information

- Used to calculate Overall GCS - ED Score.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Physician Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5401	1	Value is not a valid menu option
5403	2	Field cannot be blank

ED_11

INITIAL ED/HOSPITAL GCS - VERBAL

Definition

First recorded Glasgow Coma Score (Verbal) within 30 minutes or less of ED/hospital arrival.

Field Values

Pediatric (≤ 2 years):

1. No vocal response
2. Inconsolable, agitated
3. Inconsistently consolable, moaning
4. Cries but is consolable, inappropriate interactions
5. Smiles, oriented to sounds, follows objects, interacts

Adult

1. No verbal response
2. Incomprehensible sounds
3. Inappropriate words
4. Confused
5. Oriented

Additional Information

- Used to calculate Overall GCS - ED Score.
- If patient is intubated then the GCS Verbal score is equal to 1.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Physician Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5501	1	Value is not a valid menu option
5503	2	Field cannot be blank

ED_12

INITIAL ED/HOSPITAL GCS - MOTOR

Definition

First recorded Glasgow Coma Score (Motor) within 30 minutes or less of ED/hospital arrival.

Field Values

Pediatric (≤ 2 years):

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Appropriate response to stimulation

Adult

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Obeys commands

Additional Information

- Used to calculate Overall GCS – ED Score.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Physician Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5601	1	Value is not a valid menu option
5603	2	Field cannot be blank

ED_13

INITIAL ED/HOSPITAL GCS - TOTAL

Definition

First recorded Glasgow Coma Score (total) within 30 minutes or less of ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- If a patient does not have a numeric GCS recorded, but there is documentation related to their level of consciousness such as "AAOx3," "awake alert and oriented," or "patient with normal mental status," interpret this as GCS of 15 IF there is no other contradicting documentation.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Physician Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5701	1	GCS Total is outside the valid range of 3 - 15
5703	4	Initial ED/Hospital GCS - Total does not equal the sum of Initial ED/Hospital GCS - Eye, Initial ED/Hospital GCS - Verbal, and Initial ED/Hospital GCS - Motor
5704	4	ONE of the following: Initial ED/Hospital GCS - Eye, Initial ED/Hospital GCS - Verbal, or Initial ED/Hospital GCS - Motor is blank but Initial ED/Hospital GCS - Total is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
5705	2	Field cannot be blank

ED_14

INITIAL ED/HOSPITAL GCS ASSESSMENT QUALIFIERS

Definition

Documentation of factors potentially affecting the first assessment of GCS within 30 minutes or less of ED/hospital arrival.

Field Values

1. Patient Chemically Sedated or Paralyzed
2. Obstruction to the Patient's Eye
3. Patient Intubated
4. Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to the eye

Additional Information

- Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.).
- If an intubated patient has recently received an agent that results in neuromuscular blockade such that a motor or eye response is not possible, then the patient should be considered to have an exam that is not reflective of their neurologic status and the chemical sedation modifier should be selected.
- Neuromuscular blockade is typically induced following the administration of agent like succinylcholine, mivacurium, rocuronium, (cis)atracurium, vecuronium, or pancuronium. While these are the most common agents, please review what might be typically used in your center so it can be identified in the medical record.
- Each of these agents has a slightly different duration of action, so their effect on the GCS depends on when they were given. For example, succinylcholine's effects last for only 5-10 minutes.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.
- Check all that apply.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Physician Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
5801	1	Value is not a valid menu option
5802	2	Field cannot be blank

ED_15

INITIAL ED/HOSPITAL HEIGHT

Definition

First recorded height upon ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Recorded in centimeters.
- May be based on family or self-report.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Pharmacy Record

Associated Edit Checks

Rule ID	Level	Message
8501	1	Invalid value
8502	2	Field cannot be blank
8503	3	Height exceeds the max of 244 (cm)

ED_16

INITIAL ED/HOSPITAL WEIGHT

Definition

Measured or estimated baseline weight.

Field Values

- Relevant value for data element

Additional Information

- Recorded in kilograms.
- May be based on family or self-report.
- Please note that first recorded/hospital vitals do not need to be from the same assessment.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Nurses Notes/Flow Sheet
3. Pharmacy Record

Associated Edit Checks

Rule ID	Level	Message
8601	1	Invalid value
8602	2	Field cannot be blank
8603	3	Weight exceeds the max of 907 (kg)

ED_17

ALCOHOL USE INDICATOR

Definition

Use of alcohol by the patient.

Field Values

1. No (not tested)
2. No (confirmed by test)
3. Yes (confirmed by test [trace levels])
4. Yes (confirmed by test [beyond legal limit])

Additional Information

- Blood alcohol concentration (BAC) may be documented at any facility, unit, or setting treating this patient event.
- "Trace levels" is defined as any alcohol level below the legal limit, but not zero.
- "Beyond legal limit" is defined as a blood alcohol concentration above the legal limit for the state in which the treating institution is located. Above any legal limit, DUI, DWI or DWAI, would apply here.
- If alcohol use is suspected, but not confirmed by test, record null value "Not Known/Not Recorded."

Data Source Hierarchy Guide

1. Lab Results
2. Triage/Trauma/Hospital Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical

Associated Edit Checks

Rule ID	Level	Message
5901	1	Value is not a valid menu option
5902	2	Field cannot be blank

ED_18

DRUG USE INDICATOR

Definition

Use of drugs by the patient.

Field Values

1. No (not tested)
2. No (confirmed by test)
3. Yes (confirmed by test [prescription drug])
4. Yes (confirmed by test [illegal use drug])

Additional Information

- Drug use may be documented at any facility, unit, or setting treating this patient event.
- "Illegal use drug" includes illegal use of prescription drugs.
- If drug use is suspected, but not confirmed by test, record null value "Not Known/Not Recorded."
- This data element refers to drug use by the patient and does not include medical treatment.
- Check all that apply.

Data Source Hierarchy Guide

1. Lab Results
2. Triage/Trauma/Hospital Flow Sheet
3. Nursing Notes/Flow Sheet
4. History & Physical

Associated Edit Checks

Rule ID	Level	Message
6001	1	Value is not a valid menu option
6002	2	Field cannot be blank

ED_19

ED DISCHARGE DISPOSITION

Definition

The disposition of the patient at the time of discharge from the ED.

Field Values

1. Floor bed (general admission, non-specialty unit bed)
2. Observation unit (unit that provides < 24 hour stays)
3. Telemetry/step-down unit (less acuity than ICU)
4. Home with services
5. Deceased/expired
6. Other (jail, institutional care, mental health, etc.)
7. Operating Room
8. Intensive Care Unit (ICU)
9. Home without services
10. Left against medical advice
11. Transferred to another hospital

Additional Information

- The null value "Not Applicable" is used if the patient is directly admitted to the hospital.
- If ED Discharge Disposition is 4, 5, 6, 9, 10, 11, then Hospital Discharge Date, Time, and Disposition should be "Not Applicable".

Data Source Hierarchy Guide

1. Discharge Summary
2. Nursing Notes/Flow Sheet
3. Case Management/Social Services Notes
4. ED Record
5. History & Physical

Associated Edit Checks

Rule ID	Level	Message
6101	1	Value is not a valid menu option
6102	2	Field cannot be blank
6104	2	Field cannot be Not Known/Not Recorded
6106	2	Field cannot not be Not Applicable when Hospital Discharge Date is Not Applicable
6107	2	Field cannot not be Not Applicable when Hospital Discharge Date is Not Known/Not Recorded
6108	2	Field cannot not be Not Applicable when Hospital Discharge Disposition is Not Applicable
6109	2	Field cannot not be Not Applicable when Hospital Discharge Disposition is Not Known/Not Recorded

ED_20

SIGNS OF LIFE

Definition

Indication of whether patient arrived at ED/Hospital with signs of life.

Field Values

1. Arrived with NO signs of life
2. Arrived with signs of life

Additional Information

- A patient with no signs of life is defined as having none of the following: organized EKG activity, pupillary responses, spontaneous respiratory attempts or movement, and unassisted blood pressure. This usually implies the patient was brought to the ED with CPR in progress.

Data Source Hierarchy Guide

1. Triage/Trauma/Hospital Flow Sheet
2. Progress Notes
3. Nursing Notes/Flow Sheet
4. EMS Run Report
5. History & Physical

Associated Edit Checks

Rule ID	Level	Message
6201	1	Value is not a valid menu option
6202	2	Field cannot be blank
6206	3	Field should not be Not Known/Not Recorded
6207	2	Field cannot be Not Applicable
6208	3	Field is 1 (Arrived with NO signs of life) when Initial ED/Hospital SBP > 0, Pulse > 0, OR GCS Motor > 1. Please verify.
6209	3	Field is 2 (Arrived with signs of life) when Initial ED/Hospital SBP = 0, Pulse = 0, AND GCS Motor = 1. Please verify.

ED_21

ED DISCHARGE DATE

Definition

The date the order was written for the patient to be discharged from the ED.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Used to auto-generate an additional calculated field: Total ED Time: (elapsed time from ED admit to ED discharge).
- The null value "Not Applicable" is used if the patient is directly admitted to the hospital.
- If ED Discharge Disposition is 5 Deceased/Expired, then ED Discharge Date is the date of death as indicated on the patient's death certificate.

Data Source Hierarchy Guide

1. ED Record
2. Triage/Trauma/Hospital Flow Sheet
3. Nursing Notes/Flow Sheet
4. Discharge Summary
5. Billing Sheet
6. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
6301	1	Date is not valid
6302	1	Date out of range
6303	2	Field cannot be blank
6304	4	ED Discharge Date is earlier than EMS Dispatch Date
6305	4	ED Discharge Date is earlier than EMS Unit Arrival on Scene Date
6306	4	ED Discharge Date is earlier than EMS Unit Scene Departure Date
6307	2	ED Discharge Date is earlier than ED/Hospital Arrival Date
6308	2	ED Discharge Date is later than Hospital Discharge Date
6309	3	ED Discharge Date is earlier than Date of Birth
6310	3	ED Discharge Date minus ED/Hospital Arrival Date is greater than 365 days

ED_22

ED DISCHARGE TIME

Definition

The time the order was written for the patient to be discharged from the ED.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Used to auto-generate an additional calculated field: Total ED Time (elapsed time from ED admit to ED discharge).
- The null value "Not Applicable" is used if the patient is directly admitted to the hospital.
- If ED Discharge Disposition is 5 Deceased/Expired, then ED Discharge Time is the time of death as indicated on the patient's death certificate.

Data Source Hierarchy Guide

1. ED Record
2. Triage/Trauma/Hospital Flow Sheet
3. Nursing Notes/Flow Sheet
4. Discharge Summary
5. Billing Sheet
6. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
6401	1	Time is not valid
6402	1	Time out of range
6403	2	Field cannot be blank
6404	4	ED Discharge Time is earlier than EMS Dispatch Time
6405	4	ED Discharge Time is earlier than EMS Unit Arrival on Scene Time
6406	4	ED Discharge Time is earlier than EMS Unit Scene Departure Time
6407	4	ED Discharge Time is earlier than ED/Hospital Arrival Time
6408	4	ED Discharge Time is later than Hospital Discharge Time

Hospital Procedure Information

ICD-9 HOSPITAL PROCEDURES

Definition

Operative and selected non-operative procedures conducted during hospital stay. Operative and selected non-operative procedures are those that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or complications. The list of procedures below should be used as a guide to non-operative procedures that should be provided to NTDB. This list is based on procedures sent to NTDB with a high frequency. Not all hospitals capture all procedures listed below. Please transmit those procedures that you capture to NTDB.

Field Values

- Major and minor procedure ICD-9-CM procedure codes.
- The maximum number of procedures that may be reported for a patient is 200.

Additional Information

- The null value "Not Applicable" is used if the patient did not have procedures.
- The null value “Not Applicable” is used if not coding ICD-9.
- Include only procedures performed at your institution.
- Capture all procedures performed in the operating room.
- Capture all procedures in the ED, ICU, ward, or radiology department that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or their complications.
- Procedures with an asterisk have the potential to be performed multiple times during one episode of hospitalization. In this case, capture only the first event. If there is no asterisk, capture each event even if there is more than one.
- Note that the hospital may capture additional procedures.

Diagnostic and Therapeutic Imaging

Computerized tomographic studies *

Diagnostic ultrasound (includes FAST) *

Doppler ultrasound of extremities *

Angiography

Angioembolization

Echocardiography

Cystogram

IVC filter

Urethrogram

Cardiovascular

Central venous catheter *

Pulmonary artery catheter *

Cardiac output monitoring *

Genitourinary

Ureteric catheterization (i.e. Ureteric stent)

Suprapubic cystostomy

Transfusion

The following blood products should be captured over first 24 hours after hospital arrival:

Transfusion of red cells *

Transfusion of platelets *

Transfusion of plasma *

Respiratory

Insertion of endotracheal tube*

Continuous mechanical ventilation *

Chest tube *

Bronchoscopy *

Open cardiac massage

CPR

CNS

Insertion of ICP monitor *

Ventriculostomy *

Cerebral oxygen monitoring *

Musculoskeletal

Soft tissue/bony debridements *

Closed reduction of fractures

Skeletal and halo traction

Fasciotomy

Tracheostomy

Gastrointestinal

Endoscopy (includes gastroscopy, sigmoidoscopy, colonoscopy)

Gastrostomy/jejunostomy (percutaneous or endoscopic)

Percutaneous (endoscopic) gastrojejunoscopy

Other

Hyperbaric oxygen

Decompression chamber

TPN *

Data Source Hierarchy Guide

1. Operative Reports
2. Procedure Notes
3. Trauma Flow Sheet
4. ED Record
5. Nursing Notes/Flow Sheet
6. Radiology Reports
7. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
6501	1	Invalid value
6502	1	Procedures with the same code cannot have the same Hospital Procedure Start Date and Time.
6503	2	Field cannot be blank
6504	4	Field should not be Not Applicable unless patient had no procedures performed or if not coding ICD-9

ICD-10 HOSPITAL PROCEDURES

Definition

Operative and selected non-operative procedures conducted during hospital stay. Operative and selected non-operative procedures are those that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or complications. The list of procedures below should be used as a guide to non-operative procedures that should be provided to NTDB. This list is based on procedures sent to NTDB with a high frequency. Not all hospitals capture all procedures listed below. Please transmit those procedures that you capture to NTDB.

Field Values

- Major and minor procedure ICD-10-CM procedure codes.
- The maximum number of procedures that may be reported for a patient is 200.

Additional Information

- The null value "Not Applicable" is used if the patient did not have procedures.
- The null value “Not Applicable” is used if not coding ICD-10.
- Include only procedures performed at your institution.
- Capture all procedures performed in the operating room.
- Capture all procedures in the ED, ICU, ward, or radiology department that were essential to the diagnosis, stabilization, or treatment of the patient's specific injuries or their complications.
- Procedures with an asterisk have the potential to be performed multiple times during one episode of hospitalization. In this case, capture only the first event. If there is no asterisk, capture each event even if there is more than one.
- Note that the hospital may capture additional procedures.

Diagnostic and Therapeutic Imaging

Computerized tomographic studies *

Diagnostic ultrasound (includes FAST) *

Doppler ultrasound of extremities *

Angiography

Angioembolization

Echocardiography

Cystogram

IVC filter

Urethrogram

Cardiovascular

Central venous catheter *

Pulmonary artery catheter *

Cardiac output monitoring *

Genitourinary

Ureteric catheterization (i.e. Ureteric stent)

Suprapubic cystostomy

Transfusion

The following blood products should be captured over first 24 hours after hospital arrival:

Transfusion of red cells *

Transfusion of platelets *

Transfusion of plasma *

Respiratory

Insertion of endotracheal tube*

Continuous mechanical ventilation *

Chest tube *

Bronchoscopy *

Open cardiac massage

CPR

CNS

Insertion of ICP monitor *

Ventriculostomy *

Cerebral oxygen monitoring *

Musculoskeletal

Soft tissue/bony debridements *

Closed reduction of fractures

Skeletal and halo traction

Fasciotomy

Tracheostomy

Gastrointestinal

Endoscopy (includes gastroscopy, sigmoidoscopy, colonoscopy)

Gastrostomy/jejunostomy (percutaneous or endoscopic)

Percutaneous (endoscopic) gastrojejunoscopy

Other

Hyperbaric oxygen

Decompression chamber

TPN *

Data Source Hierarchy Guide

1. Operative Reports
2. Procedure Notes
3. Trauma Flow Sheet
4. ED Record
5. Nursing Notes/Flow Sheet
6. Radiology Reports
7. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
8801	1	Invalid value (ICD-10 CM only)
8802	1	Procedures with the same code cannot have the same Hospital Procedure Start Date and Time
8803	2	Field cannot be blank
8804	4	Field should not be Not Applicable unless patient had no procedures performed or if not coding ICD-10
8805	1	Invalid value (ICD-10 CA only)

HP_03

HOSPITAL PROCEDURE START DATE

Definition

The date operative and selected non-operative procedures were performed.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.

Data Source Hierarchy Guide

1. Operative Reports
2. Procedure Notes
3. Trauma Flow Sheet
4. ED Record
5. Nursing Notes/Flow Sheet
6. Radiology Reports
7. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
6601	1	Date is not valid
6602	1	Date out of range
6603	4	Hospital Procedure Start Date is earlier than EMS Dispatch Date
6604	4	Hospital Procedure Start Date is earlier than EMS Unit Arrival on Scene Date
6605	4	Hospital Procedure Start Date is earlier than EMS Unit Scene Departure Date
6606	4	Hospital Procedure Start Date is earlier than ED/Hospital Arrival Date
6607	4	Hospital Procedure Start Date is later than Hospital Discharge Date
6608	4	Hospital Procedure Start Date is earlier than Date of Birth
6609	2	Field cannot be blank

HOSPITAL PROCEDURE START TIME

HP_04

Definition

The time operative and selected non-operative procedures were performed.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Procedure start time is defined as the time the incision was made (or the procedure started).
- If distinct procedures with the same procedure code are performed, their start times must be different.

Data Source Hierarchy Guide

1. Operative Reports
2. Anesthesia Reports
3. Procedure Notes
4. Trauma Flow Sheet
5. ED Record
6. Nursing Notes/Flow Sheet
7. Radiology Reports
8. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
6701	1	Time is not valid
6702	1	Time out of range
6703	4	Hospital Procedure Start Time is earlier than EMS Dispatch Time
6704	4	Hospital Procedure Start Time is earlier than EMS Unit Arrival on Scene Time
6705	4	Hospital Procedure Start Time is earlier than EMS Unit Scene Departure Time
6706	4	Hospital Procedure Start Time is earlier than ED/Hospital Arrival Time
6707	4	Hospital Procedure Start Time is later than Hospital Discharge Time
6708	2	Field cannot be blank

Diagnosis Information

DG_01

CO-MORBID CONDITIONS

Definition

Pre-existing co-morbid factors present before patient arrival at the ED/hospital.

Field Values

1. Other
2. Alcohol Use Disorder
3. ~~RETIRED 2015 Ascites within 30 days~~
4. Bleeding disorder
5. Currently receiving chemotherapy for cancer
6. Congenital anomalies
7. Congestive heart failure
8. Current smoker
9. Chronic renal failure
10. Cerebrovascular Accident (CVA)
11. Diabetes mellitus
12. Disseminated cancer
13. Advanced directive limiting care
14. ~~RETIRED 2015 Esophageal varices~~
15. Functionally dependent health status
16. History of angina within 30 days
17. History of myocardial infarction
18. History of Peripheral Vascular Disease (PVD)
19. Hypertension requiring medication
20. ~~RETIRED 2012 Impaired sensorium~~
21. Prematurity
22. ~~RETIRED 2015 Obesity~~
23. Chronic Obstructive Pulmonary Disease (COPD)
24. Steroid use
25. Cirrhosis
26. Dementia
27. Major psychiatric illness
28. Drug use disorder
29. ~~RETIRED 2015 Pre-hospital cardiac arrest with resuscitative efforts by healthcare provider~~
30. Attention deficit disorder/attention deficit hyperactivity disorder (ADD/ADHD)

Additional Information

- The null value "Not Applicable" is used for patients with no known co-morbid conditions.
- For any Co-Morbid Condition to be valid, there must be a diagnosis noted in the patient medical record that meets the definition noted in Appendix 3: Glossary of Terms.
- Check all that apply.

Data Source Hierarchy Guide

1. History & Physical
2. Physician's Notes
3. Progress Notes
4. Case Management/Social Services
5. Nursing Notes/Flow Sheet
6. Triage/Trauma Flow Sheet
7. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
6801	1	Value is not a valid menu option

6802	2	Field cannot be blank

DG_02

ICD-9 INJURY DIAGNOSES

Definition

Diagnoses related to all identified injuries.

Field Values

- Injury diagnoses as defined by ICD-9-CM code range: 800-959.9, except for 905 – 909.9, 910 – 924.9, 930 – 939.9. The maximum number of diagnoses that may be reported for an individual patient is 50.

Additional Information

- ICD-9-CM codes pertaining to other medical conditions (e.g., CVA, MI, co-morbidities, etc.) may also be included in this field.
- Used to auto-generate additional calculated fields: Abbreviated Injury Scale (six body regions) and Injury Severity Score.
- The null value "Not Applicable" is used if not coding ICD-9.

Data Source Hierarchy Guide

1. Autopsy/Medical Examiner Report
2. Operative Reports
3. Radiology Reports
4. Physician's Notes
5. Trauma Flow Sheet
6. History & Physical
7. Nursing Notes/Flow Sheet
8. Progress Notes
9. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
6901	1	Invalid value
6902	2	Field cannot be blank, must either (1) contain a valid ICD-9 code or (2) be Not Applicable if not coding ICD-9
6903	2	If coding with ICD-9, then at least one diagnosis must be provided and meet inclusion criteria (800 - 959.9, except for 905 - 909.9, 910 - 924.9, 930 - 939.9)
6904	4	Field should not be Not Known/Not Recorded

ICD-10 INJURY DIAGNOSES

Definition

Diagnoses related to all identified injuries.

Field Values

- Injury diagnoses as defined by ICD-10-CM code range S00-S99, T07, T14, T20-T28 and T30-T32.
- The maximum number of diagnoses that may be reported for an individual patient is 50.

Additional Information

- ICD-10-CM codes pertaining to other medical conditions (e.g., CVA, MI, co-morbidities, etc.) may also be included in this field.
- Used to auto-generate additional calculated fields: Abbreviated Injury Scale (six body regions) and Injury Severity Score.
- The null value "Not Applicable" is used if not coding ICD-10.

Data Source Hierarchy Guide

1. Autopsy/Medical Examiner Report
2. Operative Reports
3. Radiology Reports
4. Physician's Notes
5. Trauma Flow Sheet
6. History & Physical
7. Nursing Notes/Flow Sheet
8. Progress Notes
9. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
8701	1	Invalid value (ICD-10 CM only)
8702	2	Field cannot be blank, must either (1) contain a valid ICD-10 code or (2) be Not Applicable if not coding ICD-10
8703	2	If coding with ICD-10, then at least one diagnosis must be provided and meet inclusion criteria. (ICD-10 CM only)
8704	4	Field should not be Not Known/Not Recorded
8705	1	Invalid value (ICD-10 CA only)
8706	2	If coding with ICD-10, then at least one diagnosis must be provided and meet inclusion criteria. (ICD-10 CA only)

Injury Severity Information

IS_01

AIS PREDOT CODE

Definition

The Abbreviated Injury Scale (AIS) PreDot codes that reflect the patient's injuries.

Field Values

- The predot code is the 6 digits preceding the decimal point in an associated AIS code

Additional Information

Data Source Hierarchy Guide

Associated Edit Checks

Rule ID	Level	Message
7001	1	Invalid value
7004	3	AIS codes submitted are not valid AIS 05, Update 08 codes
7007	2	Field cannot be blank

IS_02

AIS SEVERITY

Definition

The Abbreviated Injury Scale (AIS) severity codes that reflect the patient's injuries.

Field Values

1. Minor Injury
2. Moderate Injury
3. Serious Injury
4. Severe Injury
5. Critical Injury
6. Maximum Injury, Virtually Unsurvivable
9. Not Possible to Assign

Additional Information

- The field value (9) "Not Possible to Assign" would be chosen if it is not possible to assign a severity to an injury.

Data Source Hierarchy Guide

Associated Edit Checks

Rule ID	Level	Message
7101	1	Value is not a valid menu option
7103	2	Field cannot be blank

IS_03

AIS VERSION

Definition

The software (and version) used to calculate Abbreviated Injury Scale (AIS) severity codes.

Field Values

~~1. RETIRED 2016 AIS 80~~

~~2. RETIRED 2016 AIS 85~~

~~3. RETIRED 2016 AIS 90~~

~~4. RETIRED 2016 AIS 95~~

~~5. RETIRED 2016 AIS 98~~

6. AIS 05, Update 08

Additional Information

Data Source Hierarchy Guide

Associated Edit Checks

Rule ID	Level	Message
7301	1	Value is not a valid menu option
7302	2	Field cannot be blank

Outcome Information

O_01

TOTAL ICU LENGTH OF STAY

Definition

The cumulative amount of time spent in the ICU. Each partial or full day should be measured as one calendar day.

Field Values

- Relevant value for data element

Additional Information

- Recorded in full day increments with any partial calendar day counted as a full calendar day.
- The calculation assumes that the date and time of starting and stopping an ICU episode are recorded in the patient's chart.
- If any dates are missing then a LOS cannot be calculated.
- If patient has multiple ICU episodes on the same calendar day, count that day as one calendar day.
- At no time should the ICU LOS exceed the Hospital LOS.
- The null value "Not Applicable" is used if the patient had no ICU days according to the above definition.

Example #	Start Date	Start Time	Stop Date	Stop Time	LOS
A.	01/01/11	01:00	01/01/11	04:00	1 day (one calendar day)
B.	01/01/11	01:00	01/01/11	04:00	
	01/01/11	16:00	01/01/11	18:00	1 day (2 episodes within one calendar day)
C.	01/01/11	01:00	01/01/11	04:00	
	01/02/11	16:00	01/02/11	18:00	2 days (episodes on 2 separate calendar days)
D.	01/01/11	01:00	01/01/11	16:00	
	01/02/11	09:00	01/02/11	18:00	2 days (episodes on 2 separate calendar days)
E.	01/01/11	01:00	01/01/11	16:00	
	01/02/11	09:00	01/02/11	21:00	2 days (episodes on 2 separate calendar days)
F.	01/01/11	Unknown	01/01/11	16:00	1 day
G.	01/01/11	Unknown	01/02/11	16:00	2 days (patient was in ICU on 2 separate calendar days)
H.	01/01/11	Unknown	01/02/11	16:00	
	01/02/11	18:00	01/02/11	Unknown	2 days (patient was in ICU on 2 separate calendar days)
I.	01/01/11	Unknown	01/02/11	16:00	
	01/02/11	18:00	01/02/11	20:00	2 days (patient was in ICU on 2 separate calendar days)
J.	01/01/11	Unknown	01/02/11	16:00	
	01/03/11	18:00	01/03/11	20:00	3 days (patient was in ICU on 3 separate calendar days)
K.	Unknown	Unknown	01/02/11	16:00	
	01/03/11	18:00	01/03/11	20:00	Unknown (can’t compute total)

Data Source Hierarchy Guide

1. ICU Flow Sheet
2. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
7501	1	Total ICU Length of Stay is outside the valid range of 1 - 575
7502	2	Field cannot be blank
7503	3	Total ICU Length of Stay is greater than the difference between ED/Hospital Arrival Date and Hospital Discharge Date
7504	3	Value is greater than 365, please verify this is correct

O_02

TOTAL VENTILATOR DAYS

Definition

The cumulative amount of time spent on the ventilator. Each partial or full day should be measured as one calendar day.

Field Values

- Relevant value for data element

Additional Information

- Excludes mechanical ventilation time associated with OR procedures.
- Non-invasive means of ventilatory support (CPAP or BIPAP) should not be considered in the calculation of ventilator days.
- Recorded in full day increments with any partial calendar day counted as a full calendar day.
- The calculation assumes that the date and time of starting and stopping Ventilator episode are recorded in the patient's chart.
- If any dates are missing then a Total Vent Days cannot be calculated.
- At no time should the Total Vent Days exceed the Hospital LOS.
- The null value "Not Applicable" is used if the patient was not on the ventilator according to the above definition.

Example #	Start Date	Start Time	Stop Date	Stop Time	LOS
A.	01/01/11	01:00	01/01/11	04:00	1 day (one calendar day)
B.	01/01/11	01:00	01/01/11	04:00	
	01/01/11	16:00	01/01/11	18:00	1 day (2 episodes within one calendar day)
C.	01/01/11	01:00	01/01/11	04:00	
	01/02/11	16:00	01/02/11	18:00	2 days (episodes on 2 separate calendar days)
D.	01/01/11	01:00	01/01/11	16:00	
	01/02/11	09:00	01/02/11	18:00	2 days (episodes on 2 separate calendar days)
E.	01/01/11	01:00	01/01/11	16:00	
	01/02/11	09:00	01/02/11	21:00	2 days (episodes on 2 separate calendar days)
F.	01/01/11	Unknown	01/01/11	16:00	1 day
G.	01/01/11	Unknown	01/02/11	16:00	2 days (patient was on Vent on 2 separate calendar days)
H.	01/01/11	Unknown	01/02/11	16:00	
	01/02/11	18:00	01/02/11	Unknown	2 days (patient was on Vent on 2 separate calendar days)
I.	01/01/11	Unknown	01/02/11	16:00	
	01/02/11	18:00	01/02/11	20:00	2 days (patient was in on Vent on 2 separate calendar days)

J.	01/01/11	Unknown	01/02/11	16:00	
	01/03/11	18:00	01/03/11	20:00	3 days (patient was on Vent on 3 separate calendar days)

Data Source Hierarchy Guide

1. Respiratory Therapy Notes/Flow Sheet
2. ICU Flow Sheet
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
7601	1	Total Ventilator Days is outside the valid range of 1 - 575
7602	2	Field cannot be blank
7603	4	Total Ventilator Days should not be greater than the difference between ED/Hospital Arrival Date and Hospital Discharge Date
7604	4	Value is greater than 365, please verify this is correct

O_03

HOSPITAL DISCHARGE DATE

Definition

The date the order was written for the patient to be discharged from the hospital.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Used to auto-generate an additional calculated field: Total Length of Hospital Stay (elapsed time from ED/hospital arrival to hospital discharge).
- The null value "Not Applicable" is used if ED Discharge Disposition = 5 Deceased/Expired.
- The null value "Not Applicable" is used if ED Discharge Disposition = 4,6,9,10, or 11.
- If Hospital Discharge Disposition is 5 Deceased/Expired, then Hospital Discharge Date is the date of death as indicated on the patient's death certificate.

Data Source Hierarchy Guide

1. Discharge Instructions
2. Nursing Notes/Flow Sheet
3. Case Management/Social Services Notes
4. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
7701	1	Date is not valid
7702	1	Date out of range
7703	2	Field cannot be blank
7704	3	Hospital Discharge Date is earlier than EMS Dispatch Date
7705	3	Hospital Discharge Date is earlier than EMS Unit Arrival on Scene Date
7706	3	Hospital Discharge Date is earlier than EMS Unit Scene Departure Date
7707	2	Hospital Discharge Date is earlier than ED/Hospital Arrival Date
7708	2	Hospital Discharge Date is earlier than ED Discharge Date
7709	3	Hospital Discharge Date is earlier than Date of Birth
7710	3	Hospital Discharge Date minus Injury Incident Date is greater than 365 days, please verify this is correct
7711	3	Hospital Discharge Date minus ED/Hospital Arrival Date is greater than 365 days, please verify this is correct
7712	2	Field must be Not Applicable when ED Discharge Disposition = 4,6,9,10, or 11
7713	2	Field must be Not Applicable when ED Discharge Disposition = 5 (Died)

HOSPITAL DISCHARGE TIME

O_04

Definition

The time the order was written for the patient to be discharged from the hospital.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Used to auto-generate an additional calculated field: Total Length of Hospital Stay (elapsed time from ED/hospital arrival to hospital discharge).
- The null value "Not Applicable" is used if ED Discharge Disposition = 5 (Deceased/expired).
- The null value "Not Applicable" is used if ED Discharge Disposition = 4,6,9,10, or 11.
- If Hospital Discharge Disposition is 5 Deceased/Expired, then Hospital Discharge Time is the time of death as indicated on the patient's death certificate.

Data Source Hierarchy Guide

1. Discharge Instructions
2. Nursing Notes/Flow Sheet
3. Case Management/Social Services Notes
4. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
7801	1	Time is not valid
7802	1	Time out of range
7803	2	Field cannot be blank
7804	4	Hospital Discharge Time is earlier than EMS Dispatch Time
7805	4	Hospital Discharge Time is earlier than EMS Unit Arrival on Scene Time
7806	4	Hospital Discharge Time is earlier than EMS Unit Scene Departure Time
7807	4	Hospital Discharge Time is earlier than ED/Hospital Arrival Time
7808	4	Hospital Discharge Time is earlier than ED Discharge Time
7809	2	Field must be Not Applicable when ED Discharge Disposition = 4,6,9,10, or 11
7810	2	Field must be Not Applicable when ED Discharge Disposition = 5 (Died)

O_05

HOSPITAL DISCHARGE DISPOSITION

Definition

The disposition of the patient when discharged from the hospital.

Field Values

1. Discharged/Transferred to a short-term general hospital for inpatient care	8. Discharged/ Transferred to hospice care
2. Discharged/Transferred to an Intermediate Care Facility (ICF)	~~9. RETIRED 2014 Discharged/Transferred to another type of rehabilitation or long-term care facility~~
3. Discharge/Transferred to home under care of organized home health service	10. Discharged/Transferred to court/law enforcement.
4. Left against medical advice or discontinued care	11. Discharged/Transferred to inpatient rehab or designated unit
5. Deceased/expired	12. Discharged/Transferred to Long Term Care Hospital (LTCH)
6. Discharged to home or self-care (routine discharge)	13. Discharged/Transferred to a psychiatric hospital or psychiatric distinct part unit of a hospital
7. Discharged/Transferred to Skilled Nursing Facility (SNF)	14. Discharged/Transferred to another type of institution not defined elsewhere

Additional Information

- Field value = 6, "home" refers to the patient's current place of residence (e.g., prison, Child Protective Services etc.)
- Field values based upon UB-04 disposition coding.
- Disposition to any other non-medical facility should be coded as 6.
- Disposition to any other medical facility should be coded as 14.
- The null value "Not Applicable" is used if ED Discharge Disposition = 5 (Deceased/expired).
- The null value "Not Applicable" is used if ED Discharge Disposition = 4,6,9,10, or 11.

Data Source Hierarchy Guide

1. Discharge Instructions
2. Case Management/Social Services Notes
3. Nursing Notes/Flow Sheet
4. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
7901	1	Value is not a valid menu option
7902	2	Field cannot be blank
7903	2	Field must be Not Applicable when ED Discharge Disposition = 5 (Died)

7907	2	Field must be Not Applicable when ED Discharge Disposition = 4,6,9,10, or 11
7908	2	Field cannot be Not Applicable
7909	2	Field cannot be Not Known/Not Recorded when Hospital Arrival Date and Hospital Discharge Date are not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

Financial Information

F_01

PRIMARY METHOD OF PAYMENT

Definition

Primary source of payment for hospital care.

Field Values

1. Medicaid
2. Not Billed (for any reason)
3. Self-Pay
4. Private/Commercial Insurance
5. ~~RETIRED 2015 No Fault Automobile~~
6. Medicare
7. Other Government
8. ~~RETIRED 2015 Workers Compensation~~
9. ~~RETIRED 2015 Blue Cross/Blue Shield~~
10. Other

Additional Information

- No Fault Automobile, Workers Compensation, and Blue Cross/Blue Shield should be captured as Private/Commercial Insurance.

Data Source Hierarchy Guide

1. Billing Sheet
2. Admission Form
3. Face Sheet

Associated Edit Checks

Rule ID	Level	Message
8001	1	Value is not a valid menu option
8002	2	Field cannot be blank

Quality Assurance Information

Q_01

HOSPITAL COMPLICATIONS

Definition

Any medical complication that occurred during the patient's stay at your hospital.

Field Values

1. Other
~~2. RETIRED 2011 Abdominal compartment syndrome~~
~~3. RETIRED 2011 Abdominal fascia left open~~
4. Acute kidney injury
5. Adult respiratory distress syndrome (ARDS)
~~6. RETIRED 2011 Base deficit~~
~~7. RETIRED 2011 Bleeding~~
8. Cardiac arrest with CPR
~~9. RETIRED 2011 Coagulopathy~~
~~10. RETIRED 2011 Coma~~
11. Decubitus ulcer
12. Deep surgical site infection
13. Drug or alcohol withdrawal syndrome
14. Deep vein thrombosis (DVT)
15. Extremity compartment syndrome
~~16. RETIRED 2016 Graft/prosthesis/flap failure~~
~~17. RETIRED 2011 Intracranial pressure~~
18. Myocardial infarction
19. Organ/space surgical site infection
~~20. RETIRED 2016 Pneumonia~~
21. Pulmonary embolism
22. Stroke / CVA
23. Superficial surgical site infection
~~24. RETIRED 2011 Systemic sepsis~~
25. Unplanned intubation
~~26. RETIRED 2011 Wound disruption~~
~~27. RETIRED 2016 Urinary tract infection~~
~~28. RETIRED 2016 Catheter-related blood stream infection~~
29. Osteomyelitis
30. Unplanned return to the OR
31. Unplanned admission to the ICU
32. Severe sepsis
33. Catheter-associated urinary tract infection (CAUTI)
34. Central line-associated bloodstream infection (CLABSI)
35. Ventilator-associated pneumonia (VAP)

Additional Information

- The null value "Not Applicable" should be used for patients with no complications.
- For any Hospital Complication to be valid, there must be a diagnosis noted in the patient medical record that meets the definition noted in Appendix 3: Glossary of Terms.
- For all Hospital Complications that follow the CDC definition [e.g., VAP, CAUTI, CLABSI, Osteomyelitis] always use the most recent definition provided by the CDC.
- Check all that apply.

Data Source Hierarchy Guide

1. Physician Notes
2. Operative Report
3. Progress Notes
4. Radiology Report

5. Respiratory Notes
6. Lab Reports
7. Nursing Notes/Flow Sheet
8. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
8101	1	Value is not a valid menu option
8102	2	Field cannot be blank
8103	3	Hospital Complications include Ventilator-associated pneumonia although Total Ventilator Days is 0. Please verify.

TRAUMA QUALITY IMPROVEMENT PROGRAM
Measures for Processes of Care

The fields in this section should be collected and transmitted by TQIP participating centers only. Please contact us at tqip@facs.org for information about joining TQIP.

PM_01

HIGHEST GCS TOTAL

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

Highest total GCS within 24 hours of ED/Hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to highest total GCS within 24 hours after ED Hospital/Arrival to index hospital, where index hospital is the hospital abstracting the data.
- Requires review of all data sources to obtain the highest GCS total. In many cases, the highest GCS may occur after ED discharge.
- If patient is intubated then the GCS Verbal score is equal to 1.
- Best obtained when sedatives or paralytics are withheld as part of sedation holiday.
- If a patient does not have a numeric GCS recorded, but there is documentation related to their level of consciousness such as "AAOx3," "awake alert and oriented," or "patient with normal mental status," interpret this as GCS of 15 IF there is no other contradicting documentation.
- The null value "Not Applicable" is used for patients that do not meet collection criteria.

Data Source Hierarchy Guide

1. Neuro Assessment Flow Sheet
2. Triage/Trauma/ICU Flow Sheet
3. Nursing Notes/Flow Sheet
4. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
10001	1	GCS Total is outside the valid range of 3 - 15
10002	2	Field cannot be blank
10003	2	Highest GCS Total is less than GCS Motor Component of Highest GCS Total
10004	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
10005	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

PM_02

HIGHEST GCS MOTOR

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

Highest motor GCS within 24 hours of ED/Hospital arrival.

Field Values

Pediatric (≤ 2 years):

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Appropriate response to stimulation

Adult

1. No motor response
2. Extension to pain
3. Flexion to pain
4. Withdrawal from pain
5. Localizing pain
6. Obeys commands

Additional Information

- Refers to highest GCS motor score within 24 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- Requires review of all data sources to obtain the highest GCS motor score. In many cases, the highest GCS motor score might occur after ED discharge.
- Best obtained when sedatives or paralytics are withheld as part of sedation holiday.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. the chart indicates: "patient withdraws from a painful stimulus," a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy Guide

1. Neuro Assessment Flow Sheet
2. Triage/Trauma/ICU Flow Sheet
3. Nursing Notes/Flow Sheet
4. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
10101	1	Value is not a valid menu option
10102	2	Field cannot be blank
10104	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria

10105	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

PM_03

GCS ASSESSMENT QUALIFIER COMPONENT OF HIGHEST GCS TOTAL

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

Documentation of factors potentially affecting the highest GCS within 24 hours of ED/hospital arrival.

Field Values

1. Patient chemically sedated or paralyzed
2. Obstruction to the patient's eye
3. Patient intubated
4. Valid GCS: patient was not sedated, not intubated, and did not have obstruction to the eye

Additional Information

- Refers to highest GCS assessment qualifier score after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- Requires review of all data sources to obtain the highest GCS motor score which might occur after the ED phase of care.
- Identifies medical treatments given to the patient that may affect the best assessment of GCS. This field does not apply to self-medication the patient may have administered (i.e. ETOH, prescriptions, etc.).
- Must be the assessment qualifier for the Highest GCS Total.
- If an intubated patient has recently received an agent that results in neuromuscular blockade such that a motor or eye response is not possible, then the patient should be considered to have an exam that is not reflective of their neurologic status and the chemical sedation modifier should be selected.
- Neuromuscular blockade is typically induced following the administration of agent like succinylcholine, mivacurium, rocuronium, (cis)atracurium, vecuronium, or pancuronium. While these are the most common agents, please review what might be typically used in your center so it can be identified in the medical record.
- Each of these agents has a slightly different duration of action, so their effect on the GCS depends on when they were given. For example, succinylcholine's effects last for only 5-10 minutes.
- Check all that apply.

Data Source Hierarchy Guide

1. Neuro Assessment Flow Sheet
2. Triage/Trauma/ICU Flow Sheet
3. Nursing Notes/Flow Sheet
4. Progress Notes
5. Medication Summary

Associated Edit Checks

Rule ID	Level	Message
10201	1	Value is not a valid menu option
10202	2	Field cannot be blank

10203	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
10204	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

PM_04

INITIAL ED/HOSPITAL PUPILLARY RESPONSE

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

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

Field Values

1. Both reactive
2. One reactive
3. Neither reactive

Additional Information

- Please note that first recorded hospital vitals do not need to be from the same assessment.
- If a patient does not have a listed field value recorded, but there is documentation related to their pupillary response such as PERRL "Pupils Equal Round Reactive to Light" submit field value 1. Both reactive IF there is no other contradicting documentation.
- The null value “Not Known/Not Recorded” should be submitted if this information is not documented or if assessment is unable to be obtained due to facial trauma and/or foreign object in the eye.
- Field value 2. One reactive should be reported for patients who have a prosthetic eye.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.

Data Source Hierarchy Guide

1. ED Nurses' Notes/Trauma Flow Sheet
2. Physician's Progress Notes
3. H & P

Associated Edit Checks

Rule ID	Level	Message
13601	1	Value is not a valid menu option
13602	2	Field cannot be blank
13603	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
13604	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

PM_05

MIDLINE SHIFT

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

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

Field Values

1. Yes
2. No
3. Not Imaged (e.g. CT Scan, MRI)

Additional Information

- If there is documentation of "massive" midline shift in lieu of >5mm shift measurement, submit field value 1. Yes.
- Radiological and surgical documentation from transferring facilities should be considered for this data field.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Known/Not Recorded" is used if both the injury date and injury time are unknown.
- If the injury time is unknown, but there is supporting documentation that the injury occurred within 24-hours of any CT measuring a >5mm shift, report the field value "1. Yes" if there is no other contradicting documentation.
- If the patient was not imaged within 24 hours from the time of injury, report the field value "3. Not Imaged (e.g. CT Scan, MRI)".

Data Source Hierarchy Guide

1. Radiology Report
2. OP Report
3. Physican's Progress Notes
4. Nurse's Notes
5. Hospital Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
13701	1	Value is not a valid menu option
13702	2	Field cannot be blank
13703	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
13704	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

PM_06

CEREBRAL MONITOR

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

Indicate all cerebral monitors that were placed, including any of the following: ventriculostomy, subarachnoid bolt, camino bolt, external ventricular drain (EVD), licox monitor, jugular venous bulb.

Field Values

1. Intraventricular drain/catheter (e.g. ventriculostomy, external ventricular drain)
2. Intraparenchymal pressure monitor (e.g. Camino bolt, subarachnoid bolt, intraparenchymal catheter)
3. Intraparenchymal oxygen monitor (e.g. Licox)
4. Jugular venous bulb
5. None

Additional Information

- Refers to insertion of an intracranial pressure (ICP) monitor (or other measures of cerebral perfusion) for the purposes of managing severe TBI.
- Cerebral monitor placed at a referring facility would be acceptable if such a monitor was used by receiving facility to monitor the patient.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- Check all that apply.

Data Source Hierarchy Guide

1. Operative Report
2. Procedure Notes
3. Triage/Trauma/ICU Flow Sheet
4. Nursing Notes/Flow Sheet
5. Progress Notes
6. Anesthesia Record

Associated Edit Checks

Rule ID	Level	Message
10301	1	Value is not a valid menu option
10302	2	Field cannot be blank
10304	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
10305	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

PM_07

CEREBRAL MONITOR DATE

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

Date of first cerebral monitor placement.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- The null value "Not Applicable" is used if the patient did not have a cerebral monitor.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- If the cerebral monitor was placed at the referring facility, cerebral monitor date must be the date of insertion at the referring facility.

Data Source Hierarchy Guide

1. Operative Report
2. Procedure Notes
3. Triage/Trauma/ICU Flow Sheet
4. Nursing Notes/Flow Sheet
5. Progress Notes
6. Anesthesia Record

Associated Edit Checks

Rule ID	Level	Message
10401	1	Date is not valid
10402	2	Field cannot be blank
10403	1	Date out of range
10404	2	Field cannot be Not Applicable when Cerebral Monitor is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded, or (4) None
10405	3	Field should not be Not Known/Not Recorded when Cerebral Monitor is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
10407	4	Cerebral Monitor Date should not be earlier than ED/Hospital Arrival Date unless placed at referring facility and used for monitoring
10408	4	Cerebral Monitor Date should not be later than Hospital Discharge Date
10409	2	Field should be Not Applicable when Cerebral Monitor is Not Applicable or None

PM_08

CEREBRAL MONITOR TIME

Collection Criterion: Collect on patients with at least one injury in AIS head region

Definition

Time of first cerebral monitor placement.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- The null value "Not Applicable" is used if the patient did not have a cerebral monitor.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- If the cerebral monitor was placed at the referring facility, cerebral monitor time must be the time of insertion at the referring facility.

Data Source Hierarchy Guide

1. Operative Report
2. Procedure Notes
3. Triage/Trauma/ICU Flow Sheet
4. Nursing Notes/Flow Sheet
5. Progress Notes
6. Anesthesia Record

Associated Edit Checks

Rule ID	Level	Message
10501	1	Time is not valid
10502	1	Time out of range
10503	2	Field cannot be blank
10504	2	Field cannot be Not Applicable when Cerebral Monitor is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded, or (4) None
10505	3	Field should not be Not Known/Not Recorded whe Cerebral Monitor is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
10506	4	Cerebral Monitor Time should not be earlier than ED/Hospital Arrival Time unless placed at referring facility and used for monitoring
10507	4	Cerebral Monitor Time should not be later than Hospital Discharge Time
10508	2	Field should be Not Applicable when Cerebral Monitor is Not Applicable or None

PM_09

VENOUS THROMBOEMBOLISM PROPHYLAXIS TYPE

Collection Criterion: Collect on all patients

Definition

Type of first dose of VTE prophylaxis administered to patient at your hospital.

Field Values

1. Heparin
~~2. RETIRED 2013 Lovenox (Enoxaparin)~~
~~3. RETIRED 2013 Fragmin (Dalteparin)~~
~~4. RETIRED 2013 Other low molecular weight heparins (including but not limited to Tinzaparin (Innohep, Logiparin); Nadroparin (Fraxiparin).~~
5. None
6. LMWH (Dalteparin, Enoxaparin, etc.)
7. Direct Thrombin Inhibitor (Dabigatran, etc.)
8. Oral Xa Inhibitor (Rivaroxaban, etc.)
9. Coumadin
10. Other

Additional Information

Data Source Hierarchy Guide

1. Medication Summary
2. Nursing Notes/Flow Sheet
3. Pharmacy Record

Associated Edit Checks

Rule ID	Level	Message
10601	1	Value is not a valid menu option
10602	2	Field cannot be blank
10603	2	Field cannot be Not Applicable

PM_10

VENOUS THROMBOEMBOLISM PROPHYLAXIS DATE

Collection Criterion: Collect on all patients

Definition

Date of administration to patient of first prophylactic dose of heparin or other anticoagulants at your hospital.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- Refers to date upon which patient first received the prophylactic agent indicated in VTE Prophylaxis Type field.
- The null value "Not Applicable" is used if Venous Thromboembolism Prophylaxis Type is 5. None.

Data Source Hierarchy Guide

1. Medication Summary
2. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
10701	1	Date is not valid
10702	1	Date out of range
10703	2	Field cannot be blank
10705	2	Field cannot be Not Applicable when VTE Prophylaxis is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
10706	2	VTE Prophylaxis Date is earlier than ED/Hospital Arrival Date
10707	2	VTE Prophylaxis Date is later than Hospital Discharge Date
10708	2	Field should be Not Applicable when VTE Prophylaxis is 'None'

PM_11

VENOUS THROMBOEMBOLISM PROPHYLAXIS TIME

Collection Criterion: Collect on all patients

Definition

Time of administration to patient of first prophylactic dose of heparin or other anticoagulants at your hospital.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- Refers to time at which patient first received the prophylactic agent indicated in VTE Prophylaxis Type field.
- The null value "Not Applicable" is used if Venous Thromboembolism Prophylaxis Type is 5. None.

Data Source Hierarchy Guide

1. Medication Summary
2. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
10801	1	Time is not valid
10802	1	Time out of range
10803	2	Field cannot be blank
10805	2	Field cannot be Not Applicable when VTE Prophylaxis is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
10806	2	VTE Prophylaxis Time is earlier than ED/Hospital Arrival Time
10807	2	VTE Prophylaxis Time is later than Hospital Discharge Time
10808	2	Field should be Not Applicable when VTE Prophylaxis is 'None'

PM_12

TRANSFUSION BLOOD (4 HOURS)

Collection Criterion: Collect on all patients

Definition

Volume of packed red blood cells transfused (units or CCs) within first 4 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused packed red blood cells (units or CCs) within first 4 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- If no blood given, then volume should be 0 (zero).
- If packed red blood cells are transfusing upon patient arrival, count as 1-unit. Or, if reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Transfusion Blood Measurement and Transfusion Blood Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11001	1	Invalid value
11002	2	Field cannot be blank
11003	2	Field cannot be Not Applicable
11004	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.

PM_13

TRANSFUSION BLOOD (24 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of packed red blood cell transfusion (units or CCs) within first 24 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused packed red blood cells (units or CCs) within first 24 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value "Not Applicable" is used if no blood was given
- If the patient meets the collection criteria and packed red blood cells are transfusing upon patient arrival, count as 1-unit. Or, if reporting CCs, report the amount of CCs transfused at your center.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- Must also complete the fields Transfusion Blood Measurement and Transfusion Blood Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11401	1	Invalid value
11402	2	Field cannot be blank
11404	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
11405	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11406	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11407	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded
11408	2	Field cannot be less than Transfusion Blood (4 Hours)

PM_14

TRANSFUSION BLOOD MEASUREMENT

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The measurement used to document the patient's blood transfusion (Units, CCs [MLs]).

Field Values

1. Units
2. CCs (MLs)

Additional Information

- Complete if fields Transfusion Blood (4 Hours) or Transfusion Blood (24 Hours) are valued.
- Must also complete field Transfusion Blood Conversion.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if no packed red blood cells were transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
12801	1	Value is not a valid menu option
12802	2	Field cannot be blank

PM_15

TRANSFUSION BLOOD CONVERSION

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The quantity of CCs [MLs] constituting a ‘unit’ for blood transfusions at your hospital.

Field Values

- Relevant value for data element

Additional Information

- Complete if fields Transfusion Blood (4 Hours) or Transfusion Blood (24 Hours) are valued.
- Must also complete field Transfusion Blood Measurement.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if reporting transfusion blood measurements in CCs.
- The null value "Not Applicable" is used if no packed red blood cells were transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
12901	1	Value exceeds the max of 1000 (or is not a valid number)
12902	3	Warning: Value exceeds 500, please verify this is correct.
12903	2	Field cannot be blank

PM_16

TRANSFUSION PLASMA (4 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of fresh frozen or thawed plasma (units or CCs) transfused within first 4 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused fresh frozen or thawed plasma (units or CCs) within first 4 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- If the patient meets the collection criteria and plasma is transfusing upon patient arrival, count as 1-unit. If reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Transfusion Plasma Measurement and Transfusion Plasma Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11101	1	Invalid value
11102	2	Field cannot be blank
11104	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.
11105	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11106	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11107	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_17

TRANSFUSION PLASMA (24 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of fresh frozen or thawed plasma (units or CCs) transfused within first 24 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused fresh frozen or thawed plasma (units or CCs) within first 24 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- If the patient meets the collection criteria and plasma is transfusing upon patient arrival, count as 1-unit. If reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Transfusion Plasma Measurement and Transfusion Plasma Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11501	1	Invalid value
11502	2	Field cannot be blank
11504	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
11506	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11507	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11508	2	Field cannot be less than Transfusion Plasma (4 Hours)
11509	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_18

TRANSFUSION PLASMA MEASUREMENT

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The measurement used to document the patient's plasma transfusion (Units, CCs [MLs]).

Field Values

1. Units
2. CCs (MLs)

Additional Information

- Complete if fields Transfusion Plasma (4 Hours) or Transfusion Plasma (24 Hours) are valued.
- Must also complete field Transfusion Plasma Conversion.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if no plasma was transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
13001	1	Value is not a valid menu option
13002	2	Field cannot be blank

PM_19

TRANSFUSION PLASMA CONVERSION

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The quantity of CCs [MLs] constituting a ‘unit’ for plasma transfusions at your hospital.

Field Values

- Relevant value for data element

Additional Information

- Complete if fields Transfusion Plasma (4 Hours) or Transfusion Plasma (24 Hours) are valued.
- Must also complete field Transfusion Plasma Measurement.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if reporting transfusion plasma measurements in CCs.
- The null value "Not Applicable" is used if no plasma was transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
13101	1	Value exceeds the max of 1000 (or is not a valid number)
13102	3	Warning: Value exceeds 500, please verify this is correct.
13103	2	Field cannot be blank

PM_20

TRANSFUSION PLATELETS (4 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of platelets (units or CCs) transfused within first 4 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused platelets (units or CCs) within first 4 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- If the patient meets the collection criteria and platelets are transfusing upon patient arrival, count as 1-unit. If reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Transfusion Platelets Measurement and Transfusion Platelets Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11201	1	Invalid value
11202	2	Field cannot be blank
11204	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.
11205	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11206	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11207	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_21

TRANSFUSION PLATELETS (24 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of platelets (units or CCs) transfused within first 24 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused platelets (units or CCs) within first 24 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- If the patient meets the collection criteria and platelets are transfusing upon patient arrival, count as 1-unit. If reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Transfusion Platelets Measurement and Transfusion Platelets Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11601	1	Invalid value
11602	2	Field cannot be blank
11604	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
11605	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11606	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11607	2	Field cannot be less than Transfusion Platelets (4 Hours)
11608	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_22

TRANSFUSION PLATELETS MEASUREMENT

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The measurement used to document the patient's platelets transfusion (Units, CCs [MLs]).

Field Values

1. Units
2. CCs (MLs)

Additional Information

- Complete if fields Transfusion Platelets (4 Hours) or Transfusion Platelets (24 Hours) are valued.
- Must also complete field Transfusion Platelets Conversion.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if no platelets were transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
13201	1	Value is not a valid menu option
13202	2	Field cannot be blank

PM_23

TRANSFUSION PLATELETS CONVERSION

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The quantity of CCs [MLs] constituting a ‘unit’ for platelets transfusions at your hospital.

Field Values

- Relevant value for data element

Additional Information

- Complete if fields Transfusion Platelets (4 Hours) or Transfusion Platelets (24 Hours) are valued.
- Must also complete field Transfusion Platelets Measurement.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if reporting transfusion platelets measurements in CCs.
- The null value "Not Applicable" is used if no platelets were transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
13301	1	Value exceeds the max of 1000 (or is not a valid number)
13302	3	Warning: Value exceeds 500, please verify this is correct.
13303	2	Field cannot be blank

PM_24

CRYOPRECIPITATE (4 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of solution enriched with clotting factors transfused (units or CCs) within first 4 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused cryoprecipitate (units or CCs) within first 4 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- If the patient meets the collection criteria and cryoprecipitate is transfusing upon patient arrival, count as 1-unit. If reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Cryoprecipitate Measurement and Cryoprecipitate Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
11301	1	Invalid value
11302	2	Field cannot be blank
11304	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.
11305	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11306	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11307	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_25

CRYOPRECIPITATE (24 HOURS)

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Volume of solution enriched with clotting factors transfused (units or CCs) within first 24 hours after ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to amount of transfused cryoprecipitate (units or CCs) within first 24 hours after arrival to index hospital, where index hospital is the hospital abstracting the data.
- The null value “Not Applicable” is used for patients that do not meet the collection criterion.
- If the patient meets the collection criteria and cryoprecipitate is transfusing upon patient arrival, count as 1-unit. If reporting CCs, report the amount of CCs transfused at your center.
- Must also complete the fields Cryoprecipitate Measurement and Cryoprecipitate Conversion when product is transfused.

Data Source Hierarchy Guide

1. Trauma Flow Sheet
2. Anesthesia Report
3. Operative Report
4. Nursing Notes/Flow Sheet
5. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
12701	1	Invalid value
12702	2	Field cannot be blank
12704	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
12705	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
12706	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
12707	2	Field cannot be less than Transfusion Cryoprecipitate (4 Hours)
12708	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_26

CRYOPRECIPITATE MEASUREMENT

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The measurement used to document the patient's cryoprecipitate transfusion (Units, CCs [MLs]).

Field Values

1. Units
2. CCs (MLs)

Additional Information

- Complete if fields Cryoprecipitate (4 Hours) or Cryoprecipitate (24 Hours) are valued.
- Must also complete field Cryoprecipitate Conversion.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if no cryoprecipitate was transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
13401	1	Value is not a valid menu option
13402	2	Field cannot be blank

PM_27

CRYOPRECIPITATE CONVERSION

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

The quantity of CCs [MLs] constituting a ‘unit’ for cryoprecipitate transfusions at your hospital.

Field Values

- Relevant value for data element

Additional Information

- Complete if fields Cryoprecipitate (4 Hours) or Cryoprecipitate (24 Hours) are valued.
- Must also complete field Cryoprecipitate Measurement.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- The null value "Not Applicable" is used if reporting transfusion cryoprecipitate measurements in CCs.
- The null value "Not Applicable" is used if no cryoprecipitate was transfused.

Data Source Hierarchy Guide

1. Blood Bank

Associated Edit Checks

Rule ID	Level	Message
13501	1	Value exceeds the max of 1000 (or is not a valid number)
13502	3	Warning: Value exceeds 500, please verify this is correct.
13503	2	Field cannot be blank

PM_28

LOWEST ED/HOSPITAL SYSTOLIC BLOOD PRESSURE

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Lowest sustained (>5 min) systolic blood pressure measured within the first hour of ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Refers to lowest sustained (>5 min) SBP in the ED/hospital of the index hospital, where index hospital is the hospital abstracting the data.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.

Data Source Hierarchy Guide

1. Triage/Trauma/ICU Flow Sheet
2. Operative Report
3. Nursing Notes/Flow Sheet

Associated Edit Checks

Rule ID	Level	Message
10901	1	Invalid value
10902	2	Field cannot be blank
10903	3	Warning: SBP value exceeds the max of 300
10905	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
10906	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
10907	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_29

ANGIOGRAPHY

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

First interventional angiogram with or without embolization within first 24 hours of ED/Hospital arrival.

Field Values

1. None
2. Angiogram only
3. Angiogram with embolization

Additional Information

- Limit collection of angiography data to first 24 hours following ED/hospital arrival.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- Excludes CTA.

Data Source Hierarchy Guide

1. Radiology Report
2. Operative Report
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
11701	1	Value is not a valid menu option
11702	2	Field cannot be blank
11703	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11704	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11705	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_30

EMBOLIZATION SITE

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Organ / site of embolization for hemorrhage control.

Field Values

1. Liver
2. Spleen
3. Kidneys
4. Pelvic (iliac, gluteal, obturator)
5. Retroperitoneum (lumbar, sacral)
6. Peripheral vascular (neck, extremities)
7. Aorta (thoracic or abdominal)
8. Other

Additional Information

- The null value "Not Applicable" is used if the data field Angiography is 1. None or 2. Angiogram Only.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.
- Check all that apply.

Data Source Hierarchy Guide

1. Radiology Report
2. Operative Report
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
11801	1	Value is not a valid menu option
11802	2	Field cannot be blank
11803	2	Field cannot be Not Applicable when Angiography is 'Angiogram with embolization'
11804	2	Field should be Not Applicable when Angiography is 'None' or 'Angiogram only'

PM_31

ANGIOGRAPHY DATE

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Date the first angiogram with or without embolization was performed.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- The null value "Not Applicable" is used if the data field Angiography is 1. None.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.

Data Source Hierarchy Guide

1. Radiology Report
2. Operative Report
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
11901	1	Date is not valid
11902	1	Date out of range
11903	2	Field cannot be blank
11904	2	Field cannot be Not Applicable when Angiography is 'Angiogram only' or 'Angiogram with embolization'
11905	2	Field should be Not Applicable when Angiography is 'None'
11906	2	Angiography Date is earlier than ED/Hospital Arrival Date
11907	2	Angiography Date is later than Hospital Discharge Date
11908	3	Angiography Date/Time minus ED/Hospital Arrival Date/Time is greater than 24 hours

PM_32

ANGIOGRAPHY TIME

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Time the first angiogram with or without embolization was performed.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- The null value "Not Applicable" is used if the data field Angiography is 1. None.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.

Data Source Hierarchy Guide

1. Radiology Report
2. Operative Report
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
12001	1	Time is not valid
12002	1	Time out of range
12003	2	Field cannot be blank
12004	2	Field cannot be Not Applicable when Angiography is 'Angiogram only' or 'Angiogram with embolization'
12005	2	Field should be Not Applicable when Angiography is 'None'
12006	2	Angiography Time is earlier than ED/Hospital Arrival Time
12007	2	Angiography Time is later than Hospital Discharge Time
12008	3	Angiography Date/Time minus ED/Hospital Arrival Date/Time is greater than 24 hours

PM_33

SURGERY FOR HEMORRHAGE CONTROL TYPE

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

First type of surgery for hemorrhage control within the first 24 hours of ED/hospital arrival.

Field Values

1. None
2. Laparotomy
3. Thoracotomy
4. Sternotomy
5. Extremity (peripheral vascular)
6. Neck
7. Mangled extremity/traumatic amputation
8. Other skin/soft tissue

Additional Information

- If unclear if surgery was for hemorrhage control, then consult TMD or operating/consulting/relevant surgeon.
- The null value "Not Applicable" is used for patients that do not meet the collection criterion.

Data Source Hierarchy Guide

1. Operative Report
2. Procedure Notes
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
12101	1	Value is not a valid menu option
12102	2	Field cannot be blank
12103	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
12104	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
12105	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

PM_34

SURGERY FOR HEMORRHAGE CONTROL DATE

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Date of first surgery for hemorrhage control within first 24 hours of ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- If unclear if surgery was for hemorrhage control, then consult TMD or operating/consulting/relevant surgeon.
- The null value "Not Applicable" is used if the data field Surgery for Hemorrhage Control Type is 1. None.
- The null value "Not Applicable" is used for patients that do not meet the collection criteria.

Data Source Hierarchy Guide

1. Operative Report
2. Procedure Notes
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
12201	1	Date is not valid
12202	1	Date out of range
12203	2	Surgery For Hemorrhage Control Date is earlier than ED/Hospital Arrival Date
12204	2	Surgery For Hemorrhage Control Date is later than Hospital Discharge Date
12205	2	Field cannot be Not Applicable when Hemorrhage Control Surgery Type is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
12206	2	Field should be Not Applicable when Hemorrhage Control Surgery Type is 'None'
12207	2	Field cannot be blank

PM_35

SURGERY FOR HEMORRHAGE CONTROL TIME

Collection Criterion: Collect on all patients with transfused packed red blood cells within first 4 hours after ED/hospital arrival

Definition

Time of first surgery for hemorrhage control within first 24 hours of ED/hospital arrival.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- If unclear if surgery was for hemorrhage control, then consult TMD or operating/consulting/relevant surgeon.
- The null value "Not Applicable" is used if the data field Surgery for Hemorrhage Control Type is 1. None.
- The null value "Not Applicable" is used for patients that do not meet the collection criteria.

Data Source Hierarchy Guide

1. Operative Report
2. Procedure Notes
3. Progress Notes

Associated Edit Checks

Rule ID	Level	Message
12301	1	Time is not valid
12302	1	Time out of range
12303	2	Surgery For Hemorrhage Control Time is earlier than ED/Hospital Arrival Time
12304	2	Surgery For Hemorrhage Control Time is later than Hospital Discharge Time
12305	2	Field cannot be Not Applicable when Hemorrhage Control Surgery Type is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
12306	2	Field should be Not Applicable when Hemorrhage Control Surgery Type is 'None'
12307	2	Field cannot be blank

PM_36

WITHDRAWAL OF CARE

Collection Criterion: Collect on all patients

Definition

Care was withdrawn based on a decision to either remove or withhold further life sustaining intervention. This decision must be documented in the medical record and is often, but not always associated with a discussion with the legal next of kin.

Field Values

1. Yes
2. No

Additional Information

- DNR not a requirement.
- A note to limit escalation of care qualifies as a withdrawal of care. These interventions are limited to: ventilator support (with or without extubation), dialysis or other forms of renal support, institution of medications to support blood pressure or cardiac function, or a specific surgical, interventional or radiological procedure (e.g. decompressive craniectomy, operation for hemorrhage control, angiography). Note that this definition provides equal weight to the withdrawal of an intervention already in place (e.g. extubation) and a decision not to proceed with a life-saving intervention (e.g. intubation).
- Excludes the discontinuation of CPR and typically involves prior planning.
- DNR order is not the same as withdrawal of care.
- The field value 'No' should be used for patients whose time of death, according to your hospitals definition, was prior to the removal of any interventions or escalation of care.

Data Source Hierarchy Guide

1. Physician Order
2. Progress Notes
3. Case Manager/Social Services Notes
4. Nursing Notes/Flow Sheet
5. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
12401	1	Value is not a valid menu option
12402	2	Field cannot be blank
12403	2	Field cannot be Not Applicable

PM_37

WITHDRAWAL OF CARE DATE

Collection Criterion: Collect on all patients

Definition

The date care was withdrawn.

Field Values

- Relevant value for data element

Additional Information

- Collected as YYYY-MM-DD.
- The null value "Not Applicable" is used for patients where Withdrawal of Care is 2. No.
- Record the time the first of any existing life-sustaining intervention(s) is withdrawn (e.g. extubation). If no intervention(s) is in place, record the time the decision not to proceed with a life-saving intervention(s) occurs (e.g. intubation).

Data Source Hierarchy Guide

1. Physician Order
2. Progress Notes
3. Respiratory Therapy Notes/Flow Sheet
4. Case Manager/Social Services Notes
5. Nursing Notes/Flow Sheet
6. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
12501	1	Date is not valid
12502	1	Date out of range
12503	2	Withdrawal of Care Date is earlier than ED/Hospital Arrival Date
12504	2	Withdrawal of Care Date is later than Hospital Discharge Date
12505	2	Field cannot be Not Applicable when Withdrawal of Care is 'Yes'
12506	2	Field should be Not Applicable when Withdrawal of Care is 'No'
12507	2	Field cannot be blank

PM_38

WITHDRAWAL OF CARE TIME

Collection Criterion: Collect on all patients

Definition

The time care was withdrawn.

Field Values

- Relevant value for data element

Additional Information

- Collected as HH:MM military time.
- The null value "Not Applicable" is used for patients where Withdrawal of Care is 2. No.
- Record the time the first of any existing life-sustaining intervention(s) is withdrawn (e.g. extubation). If no intervention(s) is in place, record the time the decision not to proceed with a life-saving intervention(s) occurs (e.g. intubation).

Data Source Hierarchy Guide

1. Physician Order
2. Progress Notes
3. Respiratory Therapy Notes/Flow Sheet
4. Case Manager/Social Services Notes
5. Nursing Notes/Flow Sheet
6. Discharge Summary

Associated Edit Checks

Rule ID	Level	Message
12601	1	Time is not valid
12602	1	Time out of range
12603	2	Withdrawal of Care Time is earlier than ED/Hospital Arrival Time
12604	2	Withdrawal of Care Time is later than Hospital Discharge Time
12605	2	Field cannot be Not Applicable when Withdrawal of Care is 'Yes'
12606	2	Field should be Not Applicable when Withdrawal of Care is 'No'
12607	2	Field cannot be blank

Appendix 1: Facility Dataset

Variables	Values
Hospital Information	
Facility Name	
Department Name	
Address	*Street; City; State; Country; ZIP*
Country Specification	*USA, Other*
Phone/Fax Number	*xxx-xxx-xxxx*
Phone Extension	*xxxx*
TQIP/NSP	*Yes/No*
Registry Type	*Hospital; Third Party; Both*
TQIP Report ID:	*For hospital review; populated by NTDB/TQIP*
Pediatric TQIP Report ID:	*For hospital review; populated by NTDB/TQIP*
Other Registries	
Other Registries Submitted	*State; County; Regional; Other; None*
Contacts	
Primary Contact Name	
Primary Contact Title	
Primary Contact Email Address	
Primary Contact Country Specification	*USA; Other*
Primary Contact Address	*Street; City; State; Other (Province); Country; ZIP*
Primary Contact Phone	*xxx-xxx-xxxx; Extension*
Primary Contact Fax	*xxx-xxx-xxxx*
Trauma Program Manager/Coordinator Contact Name	
TPM/Coord. Contact Title	
TPM/Coord. Contact Email Address	
TPM/Coord. Contact Country Specification	*USA; Other*
TPM/Coord. Contact Address	*Street; City; State; Other (Province); Country; ZIP*
TPM/Coord. Contact Phone	*xxx-xxx-xxxx; Extension*
TPM/Coord. Contact Fax	*xxx-xxx-xxxx*
Trauma Medical Director Contact Name	
TMD Contact Title	
TMD Contact Email Address	
TMD Contact Country Specification	*USA; Other*
TMD Contact Address	*Street; City; State; Other (Province); Country; ZIP*
TMD Contact Phone	*xxx-xxx-xxxx; Extension*
TMD Contact Fax	*xxx-xxx-xxxx*
Other Contact Name	
Other Contact Title	
Other Contact Email Address	
Other Contact Country Specification	*USA; Other*
Other Contact Address	*Street; City; State; Other (Province); Country; ZIP*
Other Contact Phone	*xxx-xxx-xxxx; Extension*
Other Contact Fax	*xxx-xxx-xxxx*
Facility Characteristics	
ACS Verification Level	*I; II; III; IV; Not applicable – for review. To modify, contact ACS*
ACS Pediatric Verification Level	*I; II; Not applicable– for review. To modify, contact ACS*
State Designation/Accreditation	*I; II; III; IV; V; Other; Not applicable*

State Pediatric Designation/Accreditation	*I; II; III; IV; Other; Not applicable*
Other Non-US Designation/Accreditation	*Specify using provided text box (for non-US hospitals)*
Number of Beds (for)	*Adult; Pediatric; Burn; ICU for trauma patients; ICU for burn patients*
Hospital Teaching Status	*University; Community; Non-teaching*
Hospital Type	*For Profit; Non-profit*
Number of Staff	*Core Trauma Surgeons; Neurosurgeons, Orthopaedic Surgeons; Trauma Registrars/Data Abstractors (FTEs); Certified Registrars*
Registry Software Type	*DI Collector; DI (ACS) NTRACS; Inspirionix Trauma Data Pro; DI (formerly Cales)Trauma!; Lancet / Trauma One; CDM Trauma Base; ImageTrend TraumaBridge; TriAnalytics Collector; Midas+; Hospital Mainframe; The San Diego Registry; Other*
Other Registry Software	*Specify using provided text box*
Trauma Registry Version Number	*Specify using provided text box*
AIS Coding	
AIS Coding	*AIS 05 (08 update)*
Patient Inclusion/Exclusion Criteria	
Length of Stay Included	*23 Hour Holds; > = 24 hours; > = 48 hours; > = 72 hours; All Admissions*
Hip Fractures Included	*None; Patients <=18 years; Patients <=50 years; Patients <=55 years; Patients <=60 years; Patients <=65 years; Patients <=70 years; All*
DOA's In ED Included	*Yes/No*
Deaths after receiving any evaluation/treatment (including died in ED) Included	*Yes/No*
Transfers Into Your Facility Included	*All transfers; within 4 hours; within 8 hours; within 12 hours; within 24 hours; within 48 hours; within 72 hours; none*
Transfers Out of Your Facilities Included	*Yes/No*
Do you have inclusion/exclusion criteria that are not fully described by your responses in this section?	*Yes/No*
Pediatric Care	
Are you associated with a pediatric hospital?	*Yes/No*
Do you have a pediatric ward?	*Yes/No*
Do you have a pediatric ICU?	*Yes/No*
Do you transfer the most severely injured children to other specialty centers?	*Yes/No*
If you transfer pediatric patients, how far is the closest verified pediatric trauma facility?	
Do you have a separate ED staffed by Pediatric trained ED physicians?	*Yes/No*
How do you provide care to injured children?	*No Children (not applicable); Provide all acute care services; Shared role with another center*
What is the oldest age for pediatric patients in your facility?	*10, 11, 12, …, 21, none*
State/System Characteristics (Only for Third Parties)	
Lead Agencies and Funding	

Does the lead agency for trauma in your state have authority to designate trauma centers?	*Yes/No*
Prehospital Care	
Do you have statewide EMS field triage criteria?	*No**;** Yes, we have implemented the CDC/ACS criteria; Yes, we use a modified version of the CDC/ACS criteria; Yes, we have implemented criteria that are largely different from the CDC/ACS's;*
Do you have statewide inter-facility transfer criteria?	*Yes/No*
Definitive Care Facilities	
Number of Adult Facilities Designated by State	*Level I, II, III, IV, V, Other*
Number of Adult Facilities Verified by ACS	*Level I, II, III*
Number of Pediatric Facilities Designated by State	*Level I; II; III; IV; V; Other*
Number of Pediatric Facilities Verified by ACS	*Level I; II*
Do you have a state trauma registry	*Yes/No*
Who contributes to state trauma registry?	*All hospitals; Trauma Centers only; Some other combination of hospitals*
If all hospitals, is reporting required by law?	*Yes/No*
If trauma centers only, is reporting required by law?	*Yes/No*
If some other combination, Is their participation voluntary?	*Yes/No*
Performance Improvement	
Do you have a system wide performance improvement program?	*Yes/No*
Authorization	
I hereby certify that the Facility information contained here is an accurate representation my Facility for this year's data submission:	
Name of user at the Facility who verified this information:	

Appendix 2: Edit Checks for the National Trauma Data Standard Data Elements

The flags described in this Appendix are those that are produced by the Validator when an NTDS XML file is checked. Each rule ID is assigned a flag level 1 – 4. Level 1 and 2 flags must be resolved or the entire file cannot be submitted to NTDB. Level 3 and 4 flags serve as recommendations to check data elements associated with the flags. However, level 3 and 4 flags do not necessarily indicate that data are incorrect.

The Flag Levels are defined as follows:

- **Level 1: Format / schema*** – any element that does not conform to the "rules" of the XSD. That is, these are errors that arise from XML data that cannot be parsed or would otherwise not be legal XML. Some errors in this Level do not have a Rule ID – for example: illegal tag, commingling of null values and actual data, out of range errors, etc.

- **Level 2: Inclusion criteria and/or critical to analyses*** – this level affects the fields needed to determine if the record meets the inclusion criteria for NTDB, or are required for critical analyses.

- **Level 3: Major logic** – data consistency checks related to variables commonly used for reporting. Examples include Arrival Date, E-code, etc.

- **Level 4: Minor logic** – data consistency checks (e.g. dates) and blank fields that are acceptable to create a "valid" XML record but may cause certain parts of the record to be excluded from analysis.

Important Notes:

- Any XML file submitted to NTDB that contains one or more Level 1 or 2 Flags will result in the entire file being rejected. These kinds of flags must be resolved before a submission will be accepted.

- *Facility ID, Patient ID* and *Last Modified Date/Time* are not described in the data dictionary and are only required in the XML file as control information for back-end NTDB processing. However, these fields are mandatory to provide in every XML record. Consult your Registry Vendor if one of these flags occurs.

Demographic Information

PATIENT'S HOME ZIP/POSTAL CODE

Rule ID	Level	Message
0001	1	Invalid value
0002	2	Field cannot be blank

PATIENT'S HOME COUNTRY

Rule ID	Level	Message
0101	1	Invalid value
0102	2	Field cannot be blank
0104	2	Field cannot be Not Applicable
0105	2	Field cannot be Not Known/Not Recorded when Home Zip is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

PATIENT'S HOME STATE

Rule ID	Level	Message
0201	1	Invalid value (US only)
0202	2	Field cannot be blank (US only)
0204	2	Field must be Not Applicable (Non-US)

PATIENT'S HOME COUNTY

Rule ID	Level	Message
0301	1	Invalid value (US only)
0302	2	Field cannot be blank (US only)
0304	2	Field must be Not Applicable (Non-US)

PATIENT'S HOME CITY

Rule ID	Level	Message
0401	1	Invalid value (US only)
0402	2	Field cannot be blank (US only)
0404	2	Field must be Not Applicable (Non-US)

ALTERNATE HOME RESIDENCE

Rule ID	Level	Message
0501	1	Value is not a valid menu option
0502	2	Field cannot be blank

DATE OF BIRTH

Rule ID	Level	Message
0601	1	Invalid value
0602	1	Date out of range
0603	2	Field cannot be blank
0605	3	Field should not be Not Known/Not Recorded
0606	2	Date of Birth is later than EMS Dispatch Date
0607	2	Date of Birth is later than EMS Unit Arrival on Scene Date
0608	2	Date of Birth is later than EMS Unit Scene Departure Date
0609	2	Date of Birth is later than ED/Hospital Arrival Date
0610	2	Date of Birth is later than ED Discharge Date
0611	2	Date of Birth is later than Hospital Discharge Date
0612	2	Date of Birth + 120 years must be less than ED/Hospital Arrival Date
0613	2	Field cannot be Not Applicable

AGE

Rule ID	Level	Message
0701	1	Age is outside the valid range of 0 - 120
0703	2	Field cannot be blank
0704	3	Injury Date minus Date of Birth should equal submitted Age as expressed in the Age Units specified.
0705	4	Age is greater than expected for the Age Units specified. Age should not exceed 60 minutes, 24 hours, 30 days, 24 months, or 120 years. Please verify this is correct.
0707	2	Field must be Not Applicable when Age Units is Not Applicable
0708	2	Field must be Not Known/Not Recorded when Age Units is Not Known/Not Recorded

AGE UNITS

Rule ID	Level	Message
0801	1	Value is not a valid menu option
0803	2	Field cannot be blank

0805	2	Field must be Not Applicable when Age is Not Applicable
0806	2	Field must be Not Known/Not Recorded when Age is Not Known/Not Recorded

RACE

Rule ID	Level	Message
0901	1	Value is not a valid menu option
0902	2	Field cannot be blank

ETHNICITY

Rule ID	Level	Message
1001	1	Value is not a valid menu option
1002	2	Field cannot be blank

SEX

Rule ID	Level	Message
1101	1	Value is not a valid menu option
1102	2	Field cannot be blank
1103	2	Field cannot be Not Applicable

Injury Information

INJURY INCIDENT DATE

Rule ID	Level	Message
1201	1	Date is not valid
1202	1	Date out of range
1203	2	Field cannot be blank
1204	4	Injury Incident Date is earlier than Date of Birth
1205	4	Injury Incident Date is later than EMS Dispatch Date
1206	4	Injury Incident Date is later than EMS Unit Arrival on Scene Date
1207	4	Injury Incident Date is later than EMS Unit Scene Departure Date
1208	4	Injury Incident Date is later than ED/Hospital Arrival Date
1209	4	Injury Incident Date is later than ED Discharge Date
1210	4	Injury Incident Date is later than Hospital Discharge Date

INJURY INCIDENT TIME

Rule ID	Level	Message

1301	1	Time is not valid
1302	1	Time out of range
1303	2	Field cannot be blank
1304	4	Injury Incident Time is later than EMS Dispatch Time
1305	4	Injury Incident Time is later than EMS Unit Arrival on Scene Time
1306	4	Injury Incident Time is later than EMS Unit Scene Departure Time
1307	4	Injury Incident Time is later than ED/Hospital Arrival Time
1308	4	Injury Incident Time is later than ED Discharge Time
1309	4	Injury Incident Time is later than Hospital Discharge Time

WORK-RELATED

Rule ID	Level	Message
1401	1	Value is not a valid menu option
1402	2	Field cannot be blank
1405	4	Work-Related should be 1 (Yes) when Patient's Occupation is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
1406	4	Work-Related should be 1 (Yes) when Patient's Occupational Industry is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

PATIENT'S OCCUPATIONAL INDUSTRY

Rule ID	Level	Message
1501	1	Value is not a valid menu option
1504	2	Field cannot be blank

PATIENT'S OCCUPATION

Rule ID	Level	Message
1601	1	Value is not a valid menu option
1604	2	Field cannot be blank

ICD-9 PRIMARY EXTERNAL CAUSE CODE

Rule ID	Level	Message
1701	1	E-Code is not a valid ICD-9-CM code
1702	2	Field cannot be blank
1703	4	External Cause Code should not be = (810.0, 811.0, 812.0, 813.0, 814.0, 815.0, 816.0, 817.0, 818.0, 819.0) and Age < 15

1704	2	Should not be 849.x (where x is 0-9)
1705	3	External Cause Code should not be an activity code. Primary External Cause Code should be within the range of E800-999.9

ICD-10 PRIMARY EXTERNAL CAUSE CODE

Rule ID	Level	Message
8901	1	E-Code is not a valid ICD-10-CM code (ICD-10 CM only)
8902	2	Field cannot be blank
8904	2	Should not be Y92.X/Y92.XX/Y92.XXX (where X is A-Z or 0-9) (ICD-10 CM only)
8905	3	ICD-10 External Cause Code should not be Y93.X/Y93.XX (where X is A-Z or 0-9) (ICD-10 CM only)
8906	1	E-Code is not a valid ICD-10-CA code (ICD-10 CA only)

ICD-9 PLACE OF OCCURRENCE EXTERNAL CAUSE CODE

Rule ID	Level	Message
1801	1	Value is not a valid menu option
1802	2	Field cannot be blank

ICD-10 PLACE OF OCCURRENCE EXTERNAL CAUSE CODE

Rule ID	Level	Message
9001	1	Invalid value (ICD-10 CM only)
9002	2	Field cannot be blank
9003	3	Place of Injury code should be Y92.X/Y92.XX/Y92.XXX (where X is A-Z [excluding I,O] or 0-9) (ICD-10 CM only)
9004	1	Invalid value (ICD-10 CA only)
9005	3	Place of Injury code should be U98X (where X is 0-9) (ICD-10 CA only)

ICD-9 ADDITIONAL EXTERNAL CAUSE CODE

Rule ID	Level	Message
1901	1	E-Code is not a valid ICD-9-CM code
1902	4	Additional External Cause Code should not be equal to Primary External Cause Code.
1903	2	Field cannot be blank

ICD-10 ADDITIONAL EXTERNAL CAUSE CODE

Rule ID	Level	Message

9101	1	E-Code is not a valid ICD-10-CM code (ICD-10 CM only)
9102	4	Additional External Cause Code ICD-10 should not be equal to Primary External Cause Code ICD-10
9103	2	Field cannot be blank
9104	1	E-Code is not a valid ICD-10-CA code (ICD-10 CA only)

INCIDENT LOCATION ZIP/POSTAL CODE

Rule ID	Level	Message
2001	1	Invalid value
2002	2	Field cannot be blank

INCIDENT COUNTRY

Rule ID	Level	Message
2101	1	Invalid value
2102	2	Field cannot be blank
2104	2	Field cannot be Not Applicable
2105	2	Field cannot be Not Known/Not Recorded when Home Zip is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

INCIDENT STATE

Rule ID	Level	Message
2201	1	Invalid value (US only)
2203	2	Field cannot be blank (US only)
2204	2	Field must be Not Applicable (Non-US)

INCIDENT COUNTY

Rule ID	Level	Message
2301	1	Invalid value (US only)
2303	2	Field cannot be blank (US only)
2304	2	Field must be Not Applicable (Non-US)

INCIDENT CITY

Rule ID	Level	Message
2401	1	Invalid value (US only)

2403	2	Field cannot be blank (US only)
2404	2	Field must be Not Applicable (Non-US)

PROTECTIVE DEVICES

Rule ID	Level	Message
2501	1	Value is not a valid menu option
2502	2	Field cannot be blank
2505	3	Protective Device should be 6 (Child Restraint) when Child Specific Restraint is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
2506	3	Protective Device should be 8 (Airbag Present) when Airbag Deployment is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
2507	2	Field cannot be Not Applicable

CHILD SPECIFIC RESTRAINT

Rule ID	Level	Message
2601	1	Value is not a valid menu option
2603	2	Field cannot be blank

AIRBAG DEPLOYMENT

Rule ID	Level	Message
2701	1	Value is not a valid menu option
2703	2	Field cannot be blank

REPORT OF PHYSICAL ABUSE

Rule ID	Level	Message
9201	1	Value is not a valid menu option
9202	2	Field cannot be Not Applicable
9203	2	Field cannot be blank

INVESTIGATION OF PHYSICAL ABUSE

Rule ID	Level	Message
9301	1	Value is not a valid menu option
9302	2	Field cannot be blank
9303	3	Field should not be Not Applicable when Report of Physical Abuse = 1 (Yes)

CAREGIVER AT DISCHARGE

Rule ID	Level	Message
9401	1	Value is not a valid menu option
9402	2	Field cannot be blank

Pre-hospital Information

EMS DISPATCH DATE

Rule ID	Level	Message
2801	1	Date is not valid
2802	1	Date out of range
2803	3	EMS Dispatch Date is earlier than Date of Birth
2804	4	EMS Dispatch Date is later than EMS Unit Arrival on Scene Date
2805	4	EMS Dispatch Date is later than EMS Unit Scene Departure Date
2806	3	EMS Dispatch Date is later than ED/Hospital Arrival Date
2807	4	EMS Dispatch Date is later than ED Discharge Date
2808	3	EMS Dispatch Date is later than Hospital Discharge Date
2809	2	Field cannot be blank

EMS DISPATCH TIME

Rule ID	Level	Message
2901	1	Time is not valid
2902	1	Time out of range
2903	4	EMS Dispatch Time is later than EMS Unit Arrival on Scene Time
2904	4	EMS Dispatch Time is later than EMS Unit Scene Departure Time
2905	4	EMS Dispatch Time is later than ED/Hospital Arrival Time
2906	4	EMS Dispatch Time is later than ED Discharge Time
2907	4	EMS Dispatch Time is later than Hospital Discharge Time
2908	2	Field cannot be blank

EMS UNIT ARRIVAL DATE AT SCENE OR TRANSFERRING FACILITY

Rule ID	Level	Message
3001	1	Date is not valid
3002	1	Date out of range
3003	3	EMS Unit Arrival on Scene Date is earlier than Date of Birth
3004	4	EMS Unit Arrival on Scene Date is earlier than EMS Dispatch Date

3005	4	EMS Unit Arrival on Scene Date is later than EMS Unit Scene Departure Date
3006	3	EMS Unit Arrival on Scene Date is later than ED/Hospital Arrival Date
3007	4	EMS Unit Arrival on Scene Date is later than ED Discharge Date
3008	3	EMS Unit Arrival on Scene Date is later than Hospital Discharge Date
3009	3	EMS Unit Arrival on Scene Date minus EMS Dispatch Date is greater than 7 days
3010	2	Field cannot be blank

EMS UNIT ARRIVAL TIME AT SCENE OR TRANSFERRING FACILITY

Rule ID	Level	Message
3101	1	Time is not valid
3102	1	Time out of range
3103	4	EMS Unit Arrival on Scene Time is earlier than EMS Dispatch Time
3104	4	EMS Unit Arrival on Scene Time is later than EMS Unit Scene Departure Time
3105	4	EMS Unit Arrival on Scene Time is later than ED/Hospital Arrival Time
3106	4	EMS Unit Arrival on Scene Time is later than ED Discharge Time
3107	4	EMS Unit Arrival on Scene Time is later than Hospital Discharge Time
3108	2	Field cannot be blank

EMS UNIT DEPARTURE DATE FROM SCENE OR TRANSFERRING FACILITY

Rule ID	Level	Message
3201	1	Date is not valid
3202	1	Date out of range
3203	3	EMS Unit Scene Departure Date is earlier than Date of Birth
3204	4	EMS Unit Scene Departure Date is earlier than EMS Dispatch Date
3205	4	EMS Unit Scene Departure Date is earlier than EMS Unit Arrival on Scene Date
3206	3	EMS Unit Scene Departure Date is later than ED/Hospital Arrival Date
3207	4	EMS Unit Scene Departure Date is later than ED Discharge Date
3208	3	EMS Unit Scene Departure Date is later than Hospital Discharge Date
3209	3	EMS Unit Scene Departure Date minus EMS Unit Arrival on Scene Date is greater than 7 days
3210	2	Field cannot be blank

EMS UNIT DEPARTURE TIME FROM SCENE OR TRANSFERRING FACILITY

Rule ID	Level	Message
3301	1	Time is not valid
3302	1	Time out of range

3303	4	EMS Unit Scene Departure Time is earlier than EMS Dispatch Time
3304	4	EMS Unit Scene Departure Time is earlier than EMS Unit Arrival on Scene Time
3305	4	EMS Unit Scene Departure Time is later than ED/Hospital Arrival Time
3306	4	EMS Unit Scene Departure Time is later than the ED Discharge Time
3307	4	EMS Unit Scene Departure Time is later than Hospital Discharge Time
3308	2	Field cannot be blank

TRANSPORT MODE

Rule ID	Level	Message
3401	1	Value is not a valid menu option
3402	2	Field cannot be blank
3403	4	Transport Mode should not be 4 (Private/Public Vehicle/Walk-in) when EMS response times are not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

OTHER TRANSPORT MODE

Rule ID	Level	Message
3501	1	Value is not a valid menu option
3502	2	Field cannot be blank

INITIAL FIELD SYSTOLIC BLOOD PRESSURE

Rule ID	Level	Message
3601	1	Invalid value
3602	2	Field cannot be blank
3603	3	SBP exceeds the max of 300

INITIAL FIELD PULSE RATE

Rule ID	Level	Message
3701	1	Invalid value
3702	2	Field cannot be blank
3703	3	Pulse rate exceeds the max of 299

INITIAL FIELD RESPIRATORY RATE

Rule ID	Level	Message
3801	1	Invalid value. RR cannot be > 99 for age in years >= 6 OR RR cannot be > 120 for age in years < 6. If age and age units are not valued, RR cannot be > 120.

3802	2	Field cannot be blank
3803	3	Invalid, out of range. RR cannot be > 99 and <=120 for age in years < 6. If age and age units are not valued, RR cannot be > 99.

INITIAL FIELD OXYGEN SATURATION

Rule ID	Level	Message
3901	1	Pulse oximetry is outside the valid range of 0 - 100
3902	2	Field cannot be blank

INITIAL FIELD GCS - EYE

Rule ID	Level	Message
4001	1	Value is not a valid menu option
4003	2	Field cannot be blank

INITIAL FIELD GCS - VERBAL

Rule ID	Level	Message
4101	1	Value is not a valid menu option
4103	2	Field cannot be blank

INITIAL FIELD GCS - MOTOR

Rule ID	Level	Message
4201	1	Value is not a valid menu option
4203	2	Field cannot be blank

INITIAL FIELD GCS - TOTAL

Rule ID	Level	Message
4301	1	GCS Total is outside the valid range of 3 - 15
4303	4	Initial Field GCS - Total does not equal the sum of Initial Field GCS - Eye, Initial Field GCS - Verbal, and Initial Field GCS - Motor
4304	2	Field cannot be blank

INTER-FACILITY TRANSFER

Rule ID	Level	Message
4401	2	Field cannot be blank
4402	1	Value is not a valid menu option

4404	3	Field should not be Not Known/Not Recorded
4405	2	Field cannot be Not Applicable

TRAUMA CENTER CRITERIA

Rule ID	Level	Message
9501	1	Value is not a valid menu option
9502	2	Field cannot be blank

VEHICULAR, PEDESTRIAN, OTHER RISK INJURY

Rule ID	Level	Message
9601	1	Value is not a valid menu option
9602	2	Field cannot be blank

PRE-HOSPITAL CARDIAC ARREST

Rule ID	Level	Message
9701	1	Value is not a valid menu option
9702	2	Field cannot be blank
9703	2	Field cannot be Not Applicable

Emergency Department Information

ED/HOSPITAL ARRIVAL DATE

Rule ID	Level	Message
4501	1	Date is not valid
4502	1	Date out of range
4503	2	Field cannot be blank
4505	2	Field cannot be Not Known/Not Recorded
4506	3	ED/Hospital Arrival Date is earlier than EMS Dispatch Date
4507	3	ED/Hospital Arrival Date is earlier than EMS Unit Arrival on Scene Date
4508	3	ED/Hospital Arrival Date is earlier than EMS Unit Scene Departure Date
4509	2	ED/Hospital Arrival Date is later than ED Discharge Date
4510	2	ED/Hospital Arrival Date is later than Hospital Discharge Date
4511	3	ED/Hospital Arrival Date is earlier than Date of Birth
4512	3	ED/Hospital Arrival Date should be after 1993
4513	3	ED/Hospital Arrival Date minus Injury Incident Date should be less than 30 days
4514	3	ED/Hospital Arrival Date minus EMS Dispatch Date is greater than 7 days

4515	2	Field cannot be Not Applicable

ED/HOSPITAL ARRIVAL TIME

Rule ID	Level	Message
4601	1	Time is not valid
4602	1	Time out of range
4603	2	Field cannot be blank
4604	4	ED/Hospital Arrival Time is earlier than EMS Dispatch Time
4605	4	ED/Hospital Arrival Time is earlier than EMS Unit Arrival on Scene Time
4606	4	ED/Hospital Arrival Time is earlier than EMS Unit Scene Departure Time
4607	4	ED/Hospital Arrival Time is later than ED Discharge Time
4608	4	ED/Hospital Arrival Time is later than Hospital Discharge Time

INITIAL ED/HOSPITAL SYSTOLIC BLOOD PRESSURE

Rule ID	Level	Message
4701	1	Invalid value
4702	2	Field cannot be blank
4704	3	SBP value exceeds the max of 300

INITIAL ED/HOSPITAL PULSE RATE

Rule ID	Level	Message
4801	1	Invalid value
4802	2	Field cannot be blank
4804	3	Pulse rate exceeds the max of 299

INITIAL ED/HOSPITAL TEMPERATURE

Rule ID	Level	Message
4901	1	Invalid value
4902	2	Field cannot be blank
4903	3	Temperature exceeds the max of 45.0 Celsius

INITIAL ED/HOSPITAL RESPIRATORY RATE

Rule ID	Level	Message
5001	1	Invalid value. RR cannot be > 99 for age in years >= 6 OR RR cannot be > 120 for age in years < 6. If age and age units are not valued, RR cannot be > 120.

5002	2	Field cannot be blank
5005	3	Invalid, out of range. RR cannot be > 99 and <=120 for age in years < 6. If age and age units are not valued, RR cannot be > 99.

INITIAL ED/HOSPITAL RESPIRATORY ASSISTANCE

Rule ID	Level	Message
5101	1	Value is not a valid menu option
5102	2	Field cannot be blank

INITIAL ED/HOSPITAL OXYGEN SATURATION

Rule ID	Level	Message
5201	1	Pulse oximetry is outside the valid range of 0 - 100
5202	2	Field cannot be blank

INITIAL ED/HOSPITAL SUPPLEMENTAL OXYGEN

Rule ID	Level	Message
5301	1	Value is not a valid menu option
5303	2	Field cannot be blank

INITIAL ED/HOSPITAL GCS - EYE

Rule ID	Level	Message
5401	1	Value is not a valid menu option
5403	2	Field cannot be blank

INITIAL ED/HOSPITAL GCS - VERBAL

Rule ID	Level	Message
5501	1	Value is not a valid menu option
5503	2	Field cannot be blank

INITIAL ED/HOSPITAL GCS - MOTOR

Rule ID	Level	Message
5601	1	Value is not a valid menu option
5603	2	Field cannot be blank

INITIAL ED/HOSPITAL GCS - TOTAL

Rule ID	Level	Message
5701	1	GCS Total is outside the valid range of 3 - 15
5703	4	Initial ED/Hospital GCS - Total does not equal the sum of Initial ED/Hospital GCS - Eye, Initial ED/Hospital GCS - Verbal, and Initial ED/Hospital GCS - Motor
5704	4	ONE of the following: Initial ED/Hospital GCS - Eye, Initial ED/Hospital GCS - Verbal, or Initial ED/Hospital GCS - Motor is blank but Initial ED/Hospital GCS - Total is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
5705	2	Field cannot be blank

INITIAL ED/HOSPITAL GCS ASSESSMENT QUALIFIERS

Rule ID	Level	Message
5801	1	Value is not a valid menu option
5802	2	Field cannot be blank

INITIAL ED/HOSPITAL HEIGHT

Rule ID	Level	Message
8501	1	Invalid value
8502	2	Field cannot be blank
8503	3	Height exceeds the max of 244 (cm)

INITIAL ED/HOSPITAL WEIGHT

Rule ID	Level	Message
8601	1	Invalid value
8602	2	Field cannot be blank
8603	3	Weight exceeds the max of 907 (kg)

ALCOHOL USE INDICATOR

Rule ID	Level	Message
5901	1	Value is not a valid menu option
5902	2	Field cannot be blank

DRUG USE INDICATOR

Rule ID	Level	Message
6001	1	Value is not a valid menu option
6002	2	Field cannot be blank

ED DISCHARGE DISPOSITION

Rule ID	Level	Message
6101	1	Value is not a valid menu option
6102	2	Field cannot be blank
6104	2	Field cannot be Not Known/Not Recorded
6106	2	Field cannot not be Not Applicable when Hospital Discharge Date is Not Applicable
6107	2	Field cannot not be Not Applicable when Hospital Discharge Date is Not Known/Not Recorded
6108	2	Field cannot not be Not Applicable when Hospital Discharge Disposition is Not Applicable
6109	2	Field cannot not be Not Applicable when Hospital Discharge Disposition is Not Known/Not Recorded

SIGNS OF LIFE

Rule ID	Level	Message
6201	1	Value is not a valid menu option
6202	2	Field cannot be blank
6206	3	Field should not be Not Known/Not Recorded
6207	2	Field cannot be Not Applicable
6208	3	Field is 1 (Arrived with NO signs of life) when Initial ED/Hospital SBP > 0, Pulse > 0, OR GCS Motor > 1. Please verify.
6209	3	Field is 2 (Arrived with signs of life) when Initial ED/Hospital SBP = 0, Pulse = 0, AND GCS Motor = 1. Please verify.

ED DISCHARGE DATE

Rule ID	Level	Message
6301	1	Date is not valid
6302	1	Date out of range
6303	2	Field cannot be blank
6304	4	ED Discharge Date is earlier than EMS Dispatch Date
6305	4	ED Discharge Date is earlier than EMS Unit Arrival on Scene Date
6306	4	ED Discharge Date is earlier than EMS Unit Scene Departure Date
6307	2	ED Discharge Date is earlier than ED/Hospital Arrival Date
6308	2	ED Discharge Date is later than Hospital Discharge Date
6309	3	ED Discharge Date is earlier than Date of Birth
6310	3	ED Discharge Date minus ED/Hospital Arrival Date is greater than 365 days

ED DISCHARGE TIME

Rule ID	Level	Message
6401	1	Time is not valid
6402	1	Time out of range
6403	2	Field cannot be blank
6404	4	ED Discharge Time is earlier than EMS Dispatch Time
6405	4	ED Discharge Time is earlier than EMS Unit Arrival on Scene Time
6406	4	ED Discharge Time is earlier than EMS Unit Scene Departure Time
6407	4	ED Discharge Time is earlier than ED/Hospital Arrival Time
6408	4	ED Discharge Time is later than Hospital Discharge Time

Hospital Procedure Information

ICD-9 HOSPITAL PROCEDURES

Rule ID	Level	Message
6501	1	Invalid value
6502	1	Procedures with the same code cannot have the same Hospital Procedure Start Date and Time.
6503	2	Field cannot be blank
6504	4	Field should not be Not Applicable unless patient had no procedures performed or if not coding ICD-9

ICD-10 HOSPITAL PROCEDURES

Rule ID	Level	Message
8801	1	Invalid value (ICD-10 CM only)
8802	1	Procedures with the same code cannot have the same Hospital Procedure Start Date and Time
8803	2	Field cannot be blank
8804	4	Field should not be Not Applicable unless patient had no procedures performed or if not coding ICD-10
8805	1	Invalid value (ICD-10 CA only)

HOSPITAL PROCEDURE START DATE

Rule ID	Level	Message
6601	1	Date is not valid
6602	1	Date out of range
6603	4	Hospital Procedure Start Date is earlier than EMS Dispatch Date
6604	4	Hospital Procedure Start Date is earlier than EMS Unit Arrival on Scene Date

6605	4	Hospital Procedure Start Date is earlier than EMS Unit Scene Departure Date
6606	4	Hospital Procedure Start Date is earlier than ED/Hospital Arrival Date
6607	4	Hospital Procedure Start Date is later than Hospital Discharge Date
6608	4	Hospital Procedure Start Date is earlier than Date of Birth
6609	2	Field cannot be blank

HOSPITAL PROCEDURE START TIME

Rule ID	Level	Message
6701	1	Time is not valid
6702	1	Time out of range
6703	4	Hospital Procedure Start Time is earlier than EMS Dispatch Time
6704	4	Hospital Procedure Start Time is earlier than EMS Unit Arrival on Scene Time
6705	4	Hospital Procedure Start Time is earlier than EMS Unit Scene Departure Time
6706	4	Hospital Procedure Start Time is earlier than ED/Hospital Arrival Time
6707	4	Hospital Procedure Start Time is later than Hospital Discharge Time
6708	2	Field cannot be blank

Diagnosis Information

CO-MORBID CONDITIONS

Rule ID	Level	Message
6801	1	Value is not a valid menu option
6802	2	Field cannot be blank

ICD-9 INJURY DIAGNOSES

Rule ID	Level	Message
6901	1	Invalid value
6902	2	Field cannot be blank, must either (1) contain a valid ICD-9 code or (2) be Not Applicable if not coding ICD-9
6903	2	If coding with ICD-9, then at least one diagnosis must be provided and meet inclusion criteria (800 - 959.9, except for 905 - 909.9, 910 - 924.9, 930 - 939.9)
6904	4	Field should not be Not Known/Not Recorded

ICD-10 INJURY DIAGNOSES

Rule ID	Level	Message
8701	1	Invalid value (ICD-10 CM only)
8702	2	Field cannot be blank, must either (1) contain a valid ICD-10 code or (2) be Not

		Applicable if not coding ICD-10
8703	2	If coding with ICD-10, then at least one diagnosis must be provided and meet inclusion criteria. (ICD-10 CM only)
8704	4	Field should not be Not Known/Not Recorded
8705	1	Invalid value (ICD-10 CA only)
8706	2	If coding with ICD-10, then at least one diagnosis must be provided and meet inclusion criteria. (ICD-10 CA only)

Injury Severity Information

AIS PREDOT CODE

Rule ID	Level	Message
7001	1	Invalid value
7004	3	AIS codes submitted are not valid AIS 05, Update 08 codes
7007	2	Field cannot be blank

AIS SEVERITY

Rule ID	Level	Message
7101	1	Value is not a valid menu option
7103	2	Field cannot be blank

AIS VERSION

Rule ID	Level	Message
7301	1	Value is not a valid menu option
7302	2	Field cannot be blank

Outcome Information

TOTAL ICU LENGTH OF STAY

Rule ID	Level	Message
7501	1	Total ICU Length of Stay is outside the valid range of 1 - 575
7502	2	Field cannot be blank
7503	3	Total ICU Length of Stay is greater than the difference between ED/Hospital Arrival Date and Hospital Discharge Date
7504	3	Value is greater than 365, please verify this is correct

TOTAL VENTILATOR DAYS

Rule ID	Level	Message
7601	1	Total Ventilator Days is outside the valid range of 1 - 575
7602	2	Field cannot be blank
7603	4	Total Ventilator Days should not be greater than the difference between ED/Hospital Arrival Date and Hospital Discharge Date
7604	4	Value is greater than 365, please verify this is correct

HOSPITAL DISCHARGE DATE

Rule ID	Level	Message
7701	1	Date is not valid
7702	1	Date out of range
7703	2	Field cannot be blank
7704	3	Hospital Discharge Date is earlier than EMS Dispatch Date
7705	3	Hospital Discharge Date is earlier than EMS Unit Arrival on Scene Date
7706	3	Hospital Discharge Date is earlier than EMS Unit Scene Departure Date
7707	2	Hospital Discharge Date is earlier than ED/Hospital Arrival Date
7708	2	Hospital Discharge Date is earlier than ED Discharge Date
7709	3	Hospital Discharge Date is earlier than Date of Birth
7710	3	Hospital Discharge Date minus Injury Incident Date is greater than 365 days, please verify this is correct
7711	3	Hospital Discharge Date minus ED/Hospital Arrival Date is greater than 365 days, please verify this is correct
7712	2	Field must be Not Applicable when ED Discharge Disposition = 4,6,9,10, or 11
7713	2	Field must be Not Applicable when ED Discharge Disposition = 5 (Died)

HOSPITAL DISCHARGE TIME

Rule ID	Level	Message
7801	1	Time is not valid
7802	1	Time out of range
7803	2	Field cannot be blank
7804	4	Hospital Discharge Time is earlier than EMS Dispatch Time
7805	4	Hospital Discharge Time is earlier than EMS Unit Arrival on Scene Time
7806	4	Hospital Discharge Time is earlier than EMS Unit Scene Departure Time
7807	4	Hospital Discharge Time is earlier than ED/Hospital Arrival Time
7808	4	Hospital Discharge Time is earlier than ED Discharge Time
7809	2	Field must be Not Applicable when ED Discharge Disposition = 4,6,9,10, or 11

7810	2	Field must be Not Applicable when ED Discharge Disposition = 5 (Died)

HOSPITAL DISCHARGE DISPOSITION

Rule ID	Level	Message
7901	1	Value is not a valid menu option
7902	2	Field cannot be blank
7903	2	Field must be Not Applicable when ED Discharge Disposition = 5 (Died)
7907	2	Field must be Not Applicable when ED Discharge Disposition = 4,6,9,10, or 11
7908	2	Field cannot be Not Applicable
7909	2	Field cannot be Not Known/Not Recorded when Hospital Arrival Date and Hospital Discharge Date are not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded

Financial Information

PRIMARY METHOD OF PAYMENT

Rule ID	Level	Message
8001	1	Value is not a valid menu option
8002	2	Field cannot be blank

Quality Assurance Information

HOSPITAL COMPLICATIONS

Rule ID	Level	Message
8101	1	Value is not a valid menu option
8102	2	Field cannot be blank
8103	3	Hospital Complications include Ventilator-associated pneumonia although Total Ventilator Days is 0. Please verify.

TQIP Measures for Processes of Care

HIGHEST GCS TOTAL

Rule ID	Level	Message
10001	1	GCS Total is outside the valid range of 3 - 15
10002	2	Field cannot be blank
10003	2	Highest GCS Total is less than GCS Motor Component of Highest GCS Total
10004	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria

10005	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

HIGHEST GCS MOTOR

Rule ID	Level	Message
10101	1	Value is not a valid menu option
10102	2	Field cannot be blank
10104	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
10105	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

GCS ASSESSMENT QUALIFIER COMPONENT OF HIGHEST GCS TOTAL

Rule ID	Level	Message
10201	1	Value is not a valid menu option
10202	2	Field cannot be blank
10203	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
10204	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

INITIAL ED/HOSPITAL PUPILLARY RESPONSE

Rule ID	Level	Message
13601	1	Value is not a valid menu option
13602	2	Field cannot be blank
13603	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
13604	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

MIDLINE SHIFT

Rule ID	Level	Message
13701	1	Value is not a valid menu option
13702	2	Field cannot be blank
13703	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
13704	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

CEREBRAL MONITOR

Rule ID	Level	Message
10301	1	Value is not a valid menu option
10302	2	Field cannot be blank
10304	2	Field should be Not Applicable as the AIS codes provided do not meet collection criteria
10305	2	Field should not be Not Applicable as the AIS codes provided meet the collection criteria

CEREBRAL MONITOR DATE

Rule ID	Level	Message
10401	1	Date is not valid
10402	2	Field cannot be blank
10403	1	Date out of range
10404	2	Field cannot be Not Applicable when Cerebral Monitor is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded, or (4) None
10405	3	Field should not be Not Known/Not Recorded when Cerebral Monitor is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
10407	4	Cerebral Monitor Date should not be earlier than ED/Hospital Arrival Date unless placed at referring facility and used for monitoring
10408	4	Cerebral Monitor Date should not be later than Hospital Discharge Date
10409	2	Field should be Not Applicable when Cerebral Monitor is Not Applicable or None

CEREBRAL MONITOR TIME

Rule ID	Level	Message
10501	1	Time is not valid
10502	1	Time out of range
10503	2	Field cannot be blank
10504	2	Field cannot be Not Applicable when Cerebral Monitor is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded, or (4) None
10505	3	Field should not be Not Known/Not Recorded whe Cerebral Monitor is not: (1) blank, (2) Not Applicable, or (3) Not Known/Not Recorded
10506	4	Cerebral Monitor Time should not be earlier than ED/Hospital Arrival Time unless placed at referring facility and used for monitoring
10507	4	Cerebral Monitor Time should not be later than Hospital Discharge Time
10508	2	Field should be Not Applicable when Cerebral Monitor is Not Applicable or None

VENOUS THROMBOEMBOLISM PROPHYLAXIS TYPE

Rule ID	Level	Message
10601	1	Value is not a valid menu option
10602	2	Field cannot be blank
10603	2	Field cannot be Not Applicable

VENOUS THROMBOEMBOLISM PROPHYLAXIS DATE

Rule ID	Level	Message
10701	1	Date is not valid
10702	1	Date out of range
10703	2	Field cannot be blank
10705	2	Field cannot be Not Applicable when VTE Prophylaxis is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
10706	2	VTE Prophylaxis Date is earlier than ED/Hospital Arrival Date
10707	2	VTE Prophylaxis Date is later than Hospital Discharge Date
10708	2	Field should be Not Applicable when VTE Prophylaxis is 'None'

VENOUS THROMBOEMBOLISM PROPHYLAXIS TIME

Rule ID	Level	Message
10801	1	Time is not valid
10802	1	Time out of range
10803	2	Field cannot be blank
10805	2	Field cannot be Not Applicable when VTE Prophylaxis is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
10806	2	VTE Prophylaxis Time is earlier than ED/Hospital Arrival Time
10807	2	VTE Prophylaxis Time is later than Hospital Discharge Time
10808	2	Field should be Not Applicable when VTE Prophylaxis is 'None'

TRANSFUSION BLOOD (4 HOURS)

Rule ID	Level	Message
11001	1	Invalid value
11002	2	Field cannot be blank
11003	2	Field cannot be Not Applicable
11004	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.

TRANSFUSION BLOOD (24 HOURS)

Rule ID	Level	Message
11401	1	Invalid value
11402	2	Field cannot be blank
11404	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
11405	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11406	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11407	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded
11408	2	Field cannot be less than Transfusion Blood (4 Hours)

TRANSFUSION BLOOD MEASUREMENT

Rule ID	Level	Message
12801	1	Value is not a valid menu option
12802	2	Field cannot be blank

TRANSFUSION BLOOD CONVERSION

Rule ID	Level	Message
12901	1	Value exceeds the max of 1000 (or is not a valid number)
12902	3	Warning: Value exceeds 500, please verify this is correct.
12903	2	Field cannot be blank

TRANSFUSION PLASMA (4 HOURS)

Rule ID	Level	Message
11101	1	Invalid value
11102	2	Field cannot be blank
11104	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.
11105	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11106	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11107	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

TRANSFUSION PLASMA (24 HOURS)

Rule ID	Level	Message
11501	1	Invalid value

11502	2	Field cannot be blank
11504	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
11506	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11507	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11508	2	Field cannot be less than Transfusion Plasma (4 Hours)
11509	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

TRANSFUSION PLASMA MEASUREMENT

Rule ID	Level	Message
13001	1	Value is not a valid menu option
13002	2	Field cannot be blank

TRANSFUSION PLASMA CONVERSION

Rule ID	Level	Message
13101	1	Value exceeds the max of 1000 (or is not a valid number)
13102	3	Warning: Value exceeds 500, please verify this is correct.
13103	2	Field cannot be blank

TRANSFUSION PLATELETS (4 HOURS)

Rule ID	Level	Message
11201	1	Invalid value
11202	2	Field cannot be blank
11204	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.
11205	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11206	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11207	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

TRANSFUSION PLATELETS (24 HOURS)

Rule ID	Level	Message
11601	1	Invalid value
11602	2	Field cannot be blank
11604	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.

11605	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11606	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11607	2	Field cannot be less than Transfusion Platelets (4 Hours)
11608	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

TRANSFUSION PLATELETS MEASUREMENT

Rule ID	Level	Message
13201	1	Value is not a valid menu option
13202	2	Field cannot be blank

TRANSFUSION PLATELETS CONVERSION

Rule ID	Level	Message
13301	1	Value exceeds the max of 1000 (or is not a valid number)
13302	3	Warning: Value exceeds 500, please verify this is correct.
13303	2	Field cannot be blank

CRYOPRECIPITATE (4 HOURS)

Rule ID	Level	Message
11301	1	Invalid value
11302	2	Field cannot be blank
11304	3	Warning: Value exceeds 80 for Units or 40,000 for CCs, please verify this is correct.
11305	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11306	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11307	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

CRYOPRECIPITATE (24 HOURS)

Rule ID	Level	Message
12701	1	Invalid value
12702	2	Field cannot be blank
12704	3	Warning: Value exceeds 120 for Units or 60,000 for CCs, please verify this is correct.
12705	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
12706	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
12707	2	Field cannot be less than Transfusion Cryoprecipitate (4 Hours)

12708	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

CRYOPRECIPITATE MEASUREMENT

Rule ID	Level	Message
13401	1	Value is not a valid menu option
13402	2	Field cannot be blank

CRYOPRECIPITATE CONVERSION

Rule ID	Level	Message
13501	1	Value exceeds the max of 1000 (or is not a valid number)
13502	3	Warning: Value exceeds 500, please verify this is correct.
13503	2	Field cannot be blank

LOWEST ED/HOSPITAL SYSTOLIC BLOOD PRESSURE

Rule ID	Level	Message
10901	1	Invalid value
10902	2	Field cannot be blank
10903	3	Warning: SBP value exceeds the max of 300
10905	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
10906	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
10907	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

ANGIOGRAPHY

Rule ID	Level	Message
11701	1	Value is not a valid menu option
11702	2	Field cannot be blank
11703	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
11704	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
11705	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not Known/Not Recorded

EMBOLIZATION SITE

Rule ID	Level	Message
11801	1	Value is not a valid menu option

11802	2	Field cannot be blank
11803	2	Field cannot be Not Applicable when Angiography is 'Angiogram with embolization'
11804	2	Field should be Not Applicable when Angiography is 'None' or 'Angiogram only'

ANGIOGRAPHY DATE

Rule ID	Level	Message
11901	1	Date is not valid
11902	1	Date out of range
11903	2	Field cannot be blank
11904	2	Field cannot be Not Applicable when Angiography is 'Angiogram only' or 'Angiogram with embolization'
11905	2	Field should be Not Applicable when Angiography is 'None'
11906	2	Angiography Date is earlier than ED/Hospital Arrival Date
11907	2	Angiography Date is later than Hospital Discharge Date
11908	3	Angiography Date/Time minus ED/Hospital Arrival Date/Time is greater than 24 hours

ANGIOGRAPHY TIME

Rule ID	Level	Message
12001	1	Time is not valid
12002	1	Time out of range
12003	2	Field cannot be blank
12004	2	Field cannot be Not Applicable when Angiography is 'Angiogram only' or 'Angiogram with embolization'
12005	2	Field should be Not Applicable when Angiography is 'None'
12006	2	Angiography Time is earlier than ED/Hospital Arrival Time
12007	2	Angiography Time is later than Hospital Discharge Time
12008	3	Angiography Date/Time minus ED/Hospital Arrival Date/Time is greater than 24 hours

SURGERY FOR HEMORRHAGE CONTROL TYPE

Rule ID	Level	Message
12101	1	Value is not a valid menu option
12102	2	Field cannot be blank
12103	2	Field cannot be Not Applicable when Transfusion Blood (4 Hours) is greater than 0
12104	2	Field must be Not Applicable when Transfusion Blood (4 Hours) is 0
12105	2	Field must be Not Known/Not Recorded when Transfusion Blood (4 Hours) is Not

Known/Not Recorded

SURGERY FOR HEMORRHAGE CONTROL DATE

Rule ID	Level	Message
12201	1	Date is not valid
12202	1	Date out of range
12203	2	Surgery For Hemorrhage Control Date is earlier than ED/Hospital Arrival Date
12204	2	Surgery For Hemorrhage Control Date is later than Hospital Discharge Date
12205	2	Field cannot be Not Applicable when Hemorrhage Control Surgery Type is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
12206	2	Field should be Not Applicable when Hemorrhage Control Surgery Type is 'None'
12207	2	Field cannot be blank

SURGERY FOR HEMORRHAGE CONTROL TIME

Rule ID	Level	Message
12301	1	Time is not valid
12302	1	Time out of range
12303	2	Surgery For Hemorrhage Control Time is earlier than ED/Hospital Arrival Time
12304	2	Surgery For Hemorrhage Control Time is later than Hospital Discharge Time
12305	2	Field cannot be Not Applicable when Hemorrhage Control Surgery Type is not: (1) blank, (2) Not Applicable, (3) Not Known/Not Recorded or (4) None
12306	2	Field should be Not Applicable when Hemorrhage Control Surgery Type is 'None'
12307	2	Field cannot be blank

WITHDRAWAL OF CARE

Rule ID	Level	Message
12401	1	Value is not a valid menu option
12402	2	Field cannot be blank
12403	2	Field cannot be Not Applicable

WITHDRAWAL OF CARE DATE

Rule ID	Level	Message
12501	1	Date is not valid
12502	1	Date out of range
12503	2	Withdrawal of Care Date is earlier than ED/Hospital Arrival Date
12504	2	Withdrawal of Care Date is later than Hospital Discharge Date

12505	2	Field cannot be Not Applicable when Withdrawal of Care is 'Yes'
12506	2	Field should be Not Applicable when Withdrawal of Care is 'No'
12507	2	Field cannot be blank

WITHDRAWAL OF CARE TIME

Rule ID	Level	Message
12601	1	Time is not valid
12602	1	Time out of range
12603	2	Withdrawal of Care Time is earlier than ED/Hospital Arrival Time
12604	2	Withdrawal of Care Time is later than Hospital Discharge Time
12605	2	Field cannot be Not Applicable when Withdrawal of Care is 'Yes'
12606	2	Field should be Not Applicable when Withdrawal of Care is 'No'
12607	2	Field cannot be blank

Control Information

LastModifiedDateTime

Rule ID	Level	Message
8201	1	Time is not valid
8202	2	Field cannot be blank

PatientId

Rule ID	Level	Message
8301	1	Invalid value
8302	2	Field cannot be blank

FacilityId

Rule ID	Level	Message
8401	1	Invalid value
8402	2	Field cannot be blank

Aggregate Information

Rule ID	Level	Message
9901	1	The Facility ID must be consistent throughout the file -- that is, only one Facility ID per file
9902	1	The ED/Hospital Arrival year must be consistent throughout the file -- that is, only one admission year per file
9903	1	There can only be one unique Facility ID / Patient ID / Last Modified Date

		combination per file
9904	4	More than one AIS Version has been used in the submission file
9905	3	More than one version of AIS coding has been detected in the submission file
9906	3	The version of AIS codes entered in the submission file have been identified as 05. However, the AisVersion(s) submitted throughout the file do NOT contain 05 Full Code.
9907	3	The version of AIS codes entered in the submission file have been identified as 90/95/98. However, the only AisVersion submitted throughout the file is 05 Full Code.
9908	3	Greater than 10% of your patients have been submitted with unknown complication information.

Appendix 3: Glossary of Terms

CO-MORBID CONDITIONS

Advanced directive limiting care: The patient had a Do Not Resuscitate (DNR) document or similar advanced directive recorded prior to injury.

Alcohol use disorder (Consistent with APA DSM 5)**:** Diagnosis of alcohol use disorder documented in the patient medical record.

Attention deficit disorder/Attention deficit hyperactivity disorder (ADD/ADHD): History of a disorder involving inattention, hyperactivity or impulsivity requiring medication for treatment.

Bleeding disorder: Any condition that places the patient at risk for bleeding in which there is a problem with the body's blood clotting process (e.g., vitamin K deficiency, hemophilia, thrombocytopenia, chronic anticoagulation therapy with Coumadin, Plavix, or similar medications.) Do not include patients on chronic aspirin therapy.

Cerebrovascular accident (CVA): A history prior to injury of a cerebrovascular accident (embolic, thrombotic, or hemorrhagic) with persistent residual motor sensory or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory.)

Chronic Obstructive Pulmonary Disease (COPD): Severe chronic lung disease, chronic obstructive pulmonary disease (COPD) such as emphysema and/or chronic bronchitis resulting in any one or more of the following:

- Functional disability from COPD (e.g., dyspnea, inability to perform activities of daily living [ADLs].)
- Hospitalization in the past for treatment of COPD.
- Requires chronic bronchodialator therapy with oral or inhaled agents.
- A Forced Expiratory Volume in 1 second (FEV1) of <75% of predicted on pulmonary function testing.
- Do not include patients whose only pulmonary disease is acute asthma. Do not include patients with diffuse interstitial fibrosis or sarcoidosis.

Chronic renal failure: Acute or chronic renal failure prior to injury that was requiring periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration.

Cirrhosis: Documentation in the medical record of cirrhosis, which might also be referred to as end stage liver disease. If there is documentation of prior or present esophageal or gastric varices, portal hypertension, previous hepatic encephalopathy, or ascites with notation of liver disease, then cirrhosis should be considered present. Cirrhosis should also be considered present if documented by diagnostic imaging studies or a laparotomy/laparoscopy.

Congenital Anomalies: Documentation of a cardiac, pulmonary, body wall, CNS/spinal, GI, renal, orthopedic, or metabolic congenital anomaly.

Congestive Heart Failure: The inability of the heart to pump a sufficient quantity of blood to meet the metabolic needs of the body or can do so only at an increased ventricular filling pressure. To be included, this condition must be noted in the medical record as CHF, congestive heart failure, or pulmonary edema with onset of increasing symptoms within 30 days prior to injury. Common manifestations are:

- Abnormal limitation in exercise tolerance due to dyspnea or fatigue
- Orthopnea (dyspnea on lying supine)
- Paroxysmal nocturnal dyspnea (awakening from sleep with dyspnea)
- Increased jugular venous pressure
- Pulmonary rales on physical examination
- Cardiomegaly
- Pulmonary vascular engorgement

Currently receiving chemotherapy for cancer: A patient who is currently receiving any chemotherapy treatment for cancer prior to admission. Chemotherapy may include, but is not restricted to, oral and parenteral treatment with chemotherapeutic agents for malignancies such as colon, breast, lung, head and neck, and gastrointestinal solid tumors as well as lymphatic and hematopoietic malignancies such as lymphoma, leukemia, and multiple myeloma.

Current Smoker: A patient who reports smoking cigarettes every day or some days within the last 12 months. Exclude patients who smoke cigars or pipes or use smokeless tobacco (chewing tobacco or snuff.)

Dementia: Documentation in the patient's medical record of dementia including senile or vascular dementia (e.g., Alzheimer's.)

Diabetes mellitus: Diabetes mellitus prior to injury that required exogenous parenteral insulin or an oral hypoglycemic agent.

Disseminated cancer: Patients who have cancer that has spread to one site or more sites in addition to the primary site. AND in whom the presence of multiple metastases indicates the cancer is widespread, fulminant, or near terminal. Other terms describing disseminated cancer include: "diffuse," "widely metastatic," "widespread," or "carcinomatosis." Common sites of metastases include major organs, (e.g., brain, lung, liver, meninges, abdomen, peritoneum, pleura, bone.)

Drug use disorder (Consistent with APA DSM 5)**:** Diagnosis of drug use disorder documented in the patient medical record.

Functionally Dependent health status: Pre-injury functional status may be represented by the ability of the patient to complete age appropriate activities of daily living (ADL) including: bathing, feeding, dressing, toileting, and walking. This item is marked YES if the patient, prior to injury, and as a result of cognitive or physical limitations relating to a pre-existing medical condition, was partially dependent or completely dependent upon equipment, devices or another person to complete some or all activities of daily living.

History of angina within 30 days: Documentation of chest pain or pressure, jaw pain, arm pain, or other equivalent discomfort suggestive of cardiac ischemia present within the last 30 days from hospital arrival date.

History of myocardial infarction: The history of a non-Q wave, or a Q wave infarction in the six months prior to injury and diagnosed in the patient's medical record.

History of Peripheral Vascular disease (PVD): Any type of operative (open) or interventional radiology angioplasty or revascularization procedure for atherosclerotic PVD (e.g., aorta-femoral, femoral-femoral, femoral-popliteal, balloon angioplasty, stenting, etc.) Patients who have had amputation from trauma or resection/repair of abdominal aortic aneurysms, including Endovascular Repair of Abdominal Aortic Aneurysm (EVAR,) would not be included.

Hypertension requiring medication: History of a persistent elevation of systolic blood pressure >140mm Hg and a diastolic blood pressure >90mm Hg requiring an antihypertensive treatment (e.g., diuretics, beta blockers, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers.)

Major psychiatric illness: Documentation of the presence of pre-injury major depressive disorder, bipolar disorder, schizophrenia, anxiety/panic disorder, borderline or antisocial personality disorder, and/or adjustment disorder/post-traumatic stress disorder.

Prematurity: Documentation of premature birth, a history of bronchopulmonary dysplasia, or ventilator support for greater than 7 days after birth. Premature birth is defined as infants delivered before 37 weeks from the first day of the last menstrual period.

Steroid use: Patients that required the regular administration of oral or parenteral corticosteroid medications (e.g., prednisone, dexamethasone in the 30 days prior to injury for a chronic medical condition (e.g., COPD, asthma, rheumatologic disease, rheumatoid arthritis, inflammatory bowel disease.) Do not include topical corticosteroids applied to the skin or corticosteroids administered by inhalation or rectally.

HOSPITAL COMPLICATIONS

Acute Kidney Injury: Acute kidney injury, AKI (stage 3), is an abrupt reduction of kidney function defined as:

Increase in serum creatinine (SCr) of more than or equal to 3x baseline

or;

Increase in SCr to ≥ 4mg/dl (≥ 353.3µmol/l)

or;

Patients >18 years with a decrease in $_{e}$ GFR to < 35 ml/min per 1.73 m²

or;

Reduction in urine output of < 0.3 ml/kg/hr for ≥ 24 hrs.

or;

Anuria for ≥ 12 hrs.

or;

Requiring renal replacement therapy (e.g. continuous renal replacement therapy (CRRT) or

periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration).

NOTE: If the patient or family refuses treatment (e.g., dialysis,) the condition is still considered to be present if a combination of oliguria and creatinine are present.

EXCLUDE patients with renal failure that were requiring chronic renal replacement therapy such as periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration prior to injury.

Adult respiratory distress syndrome (ARDS):

Timing:	Within 1 week of known clinical insult or new or worsening respiratory symptoms.
Chest imaging:	Bilateral opacities – not fully explained by effusions, lobar/lung collage, or nodules
Origin of edema:	Respiratory failure not fully explained by cardiac failure of fluid overload. Need objective assessment (e.g., echocardiography) to exclude hydrostatic edema if no risk factor present
Oxygenation:	200<Pa02/Fi02 ≤ 300
(at a minimum)	With PEEP or CPAP ≥ 5 cmH20c

Cardiac arrest with CPR: Cardiac arrest is the sudden cessation of cardiac activity after hospital arrival. The patient becomes unresponsive with no normal breathing and no signs of circulation. If corrective measures are not taken rapidly, this condition progresses to sudden death.

INCLUDE patients who have had an episode of cardiac arrest evaluated by hospital personnel, and received compressions or defibrillation or cardioversion or cardiac pacing to restore circulation.

Catheter-associated Urinary Tract Infection (*Consistent with the January 2015 CDC defined CAUTI*): A UTI where an indwelling urinary catheter was in place for >2 calendar days on the date of event, with day of device placement being Day 1,

AND

An indwelling urinary catheter was in place on the date of event or the day before. If an indwelling urinary catheter was in place for >2 calendar days and then removed, the date of event for the UTI must be the day of discontinuation or the next day for the UTI to be catheter-associated.

CAUTI Criterion SUTI 1a:

Patient must meet 1, 2, **and** 3 below:

1. Patient has an indwelling urinary catheter in place for the entire day on the date of event and such catheter had been in place for >2 calendar days, on that date (day of device placement = Day 1)
2. Patient has at least **one** of the following signs or symptoms:
    - Fever (>38^{o}C)
    - Suprapubic tenderness with no other recognized cause
    - Costovertebral angle pain or tenderness with no other recognized cause
3. Patient has a urine culture with no more than two species of organisms, at least one of which is a bacteria >10^{5} CFU/ml.

OR

Patient must meet 1, 2, **and** 3 below:

1. Patient had an indwelling urinary catheter in place for >2 calendar days wich was removed on the day of, or day before the date of event.
2. Patient has at least **one** of the following signs or symptoms:
    - fever (>38^{o}C)
    - suprapubic tenderness with no other recognized cause
    - costovertebral angle pain or tenderness with no other recognized cause
    - urinary urgency with no other recognized cause
    - urinary frequency with no other recognized cause
    - dysuria with no other recognized cause
3. Patient has a urine culture with no more than two species of organisms, at least one of which is a bacteria >10^{5} CFU/ml.

CAUTI Criterion SUTI 2:

Patient must meet 1, 2 **and** 3 below:

1. Patient is ≤1 year of age
2. Patient has at least **one** of the following signs or symptoms:
    - fever (>38.0^{o}C)
    - hypothermia (<36.0^{o}C)
    - apnea with no other recognized cause
    - bradycardia with no other recognized cause
    - lethargy with no other recognized cause

- vomiting with no other recognized cause
- suprapubic tenderness with no other recognized cause

3. Patient has a urine culture with no more than two species of organisms, at least one of which is bacteria of $\geq 10^5$ CFU/ml.

Central line-associated bloodstream infection (*Consistent with the January 2014 CDC Defined CLABSI*): A laboratory-confirmed bloodstream infection (LCBI) where central line (CL) or umbilical catheter (UC) was in place for >2 calendar days on the date of event, with day of device placement being Day 1,

AND

A CL or UC was in place on the date of event or the day before. If a CL or UC was in place for >2 calendar days and then removed, the LCBI criteria must be fully met on the day of discontinuation or the next day. If the patient is admitted or transferred into a facility with a central line in place (e.g., tunneled or implanted central line), and that is the patient's only central line, day of first access as an inpatient is considered Day 1. "Access" is defined as line placement, infusion or withdrawal through the line.

January 2014 CDC Criterion LCBI 1:

Patient has a recognized pathogen cultured from one or more blood cultures

AND

Organism cultured from blood is not related to an infection at another site

OR

January 2014 CDC Criterion LCBI 2:

Patient has at least one of the following signs or symptoms: fever (>38ºC), chills, or hypotension

AND

positive laboratory results are not related to an infection at another site

AND

the same common commensal (i.e., diphtheroids [Corynebacterium spp. not C. diphtheriae], Bacillus spp. [not B. anthracis], Propionibacterium spp., coagulase-negative staphylococci [including S. epidermidis], viridans group streptococci, Aerococcus spp., and Micrococcus spp.) is cultured from two or more blood cultures drawn on separate occasions. Criterion elements must occur within a timeframe that does not exceed a gap of 1 calendar day between two adjacent elements

OR

January 2014 CDC Criterion LCBI 3:

Patient ≤ 1 year of age has at least one of the following signs or symptoms: fever (>38º C core), hypothermia (<36ºC core), apnea, or bradycardia

AND

positive laboratory results are not related to an infection at another site

AND

the same common commensal (i.e., diphtheroids [Corynebacterium spp. not C. diphtheriae], Bacillus spp. [not B. anthracis], Propionibacterium spp., coagulase-negative staphylococci [including S. epidermidis], viridans group streptococci, Aerococcus spp., Micrococcus spp.) is cultured from two or more blood cultures drawn on the same or consecutive days and separate occasions. Criterion elements must occur within a timeframe that does not exceed a gap of 1 calendar day between two adjacent elements.

Decubitus ulcer: Any partial or full thickness loss of dermis resulting from pressure exerted by the patient's weight against a surface. Deeper tissues may or may not be involved. Equivalent to NPUAP Stages II – IV and NPUAP "unstageable" ulcers. EXCLUDES intact skin with non-blanching redness (NPUAP Stage I,) which is considered reversible tissue injury.

Deep surgical site infection: A deep incisional SSI must meet one of the following criteria:

Infection occurs within 30 days after the operative procedure if no implant is left in place or within one year if implant is in place and the infection appears to be related to the operative procedure and involves deep soft tissues (e.g., fascial and muscle layers) of the incision; AND patient has at least one of the following:

- Purulent drainage from the deep incision but not from the organ/space component of the surgical site of the following:
- A deep incision spontaneously dehisces or is deliberately opened by a surgeon and is culture-positive or not cultured when the patient has at least one of the following signs or symptoms: fever (>38C,) or localized pain or tenderness. A culture negative finding does not meet this criterion.
- An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
- Diagnosis of a deep incisional SSI by a surgeon or attending physician.

NOTE: There are two specific types of deep incisional SSIs:

- Deep Incisional Primary (DIP): a deep incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions (e.g., C-section incision or chest incision for CBGB)
- Deep Incisional Secondary (DIS): a deep incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (e.g., donor site [leg] incision for CBGB.)

REPORTING INSTRUCTION: Classify infection that involves both superficial and deep incision sites as deep incisional SSI.

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

Drug or alcohol withdrawal syndrome: A set of symptoms that may occur when a person who has been habitually drinking too much alcohol or habitually using certain drugs (e.g., narcotics, benzodiazepine) experiences physical symptoms upon suddenly stopping consumption. Symptoms may include: activation syndrome (i.e., tremulousness, agitation, rapid heartbeat and high blood pressure,) seizures, hallucinations or delirium tremens.

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

Myocardial infarction: A new acute myocardial infarction occurring during hospitalization (within 30 days of injury.)

Organ/space surgical site infection: An infection that occurs within 30 days after an operation and infection involves any part of the anatomy (e.g., organs or spaces) other than the incision, which was opened or manipulated during a procedure; and at least one of the following, including:

- Purulent drainage from a drain that is placed through a stab wound or puncture into the organ/space.
- Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space.
- An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination
- Diagnosis of an organ/space SSI by a surgeon or attending physician.

Osteomyelitis (Consistent with the *January 2015 CDC definition of Bone and Joint infection*): Bone and Joint infection that meets at least **one** of the following criteria:

- Patient has organisms cultured from bone.
- Patient has evidence of osteomyelitis on gross anatomic or histopathologic exam
- Patient has at least **two** of the following localized signs or symptoms with no other recognized cause:
    - Fever (38^0 C)
    - swelling
    - pain or tenderness
    - Heat
    - Drainage

  AND at least **one** of the following:

    - Organisms cultured from blood in a patient with imaging test evidence of infection
    - Positive non-cultured diagnostic lab test on blood (e.g., antigen test, PCR)
    - Imaging test evidence of infection (e.g., x-ray, CT scan, MRI, radiolabel scan [gallium, technetium, etc.])

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

Severe sepsis: Sepsis and/or Severe Sepsis defined as an obvious source of infection with bacteremia and two or more of the following:

- Temp >38^0 C or <36^0 C
- WBC count >12,000/mm^3, or > 20%immature (source of infection)
- Hypotension – (Severe Sepsis)
- Evidence of hypo perfusion: (Severe Sepsis)
- Anion gap or lactic acidosis or Oliguria, or Altered mental status.

Stroke/CVA: A focal or global neurological deficit of rapid onset and NOT present on admission. The patient must have at least one of the following symptoms:

- Change in level of consciousness
- Hemiplegia
- Hemiparesis
- Numbness or sensory loss affecting on side of the body
- Dysphasia or aphasia
- Hemianopia
- Amaurosis fugax
- Other neurological signs or symptoms consistent with stroke

AND:

- Duration of neurological deficit ≥24 h

OR:

- Duration of deficit <24 h, if neuroimaging (MR, CT, or cerebral angiography) documents a new hemorrhage or infact consistent with stroke, or therapeutic intervention(s) were performed for stroke, or the neurological deficit results in death

AND:

- No other readily identifiable non-stroke cause, e.g., progression of existing traumatic brain injury, seizure, tumor, metabolic or pharmacologic etiologies, is identified

AND:

- Diagnosis is confirmed by neurology or neurosurgical specialist or neuroimaging procedure (MR, CT, angiography,) or lumbar puncture (CSF demonstrating intracranial hemorrhage that was not present on admission.)

Although the neurologic deficit must not present on admission, risk factors predisposing to stroke (e.g., blunt cerebrovascular injury, dysrhythmia) may be present on admission.

Superficial surgical site infection: An infection that occurs within 30 days after an operation and infection involves only skin or subcutaneous tissue of the incision and at least one of the following:

- Purulent drainage, with or without laboratory confirmation, from the superficial incision.
- Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision.
- At least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, redness, or heat and superficial incision is deliberately opened by the surgeon, unless incision is culture-negative.
- Diagnosis of superficial incisional surgical site infection by the surgeon or attending physician.

Do not report the following conditions as superficial surgical site infection:

- Stitch abscess (minimal inflammation and discharge confined to the points of suture penetration.)
- Infected burn wound.
- Incisional SSI that extends into the fascial and muscle layers (see deep surgical site infection.)

Unplanned admission to ICU:
INCLUDE:

- Patients admitted to the ICU after initial transfer to the floor.
- Patients with an unplanned return to the ICU after initial ICU discharge.

EXCLUDE:

- Patients in which ICU care was required for postoperative care of a planned surgical procedure

Unplanned intubation: Patient requires placement of an endotracheal tube and mechanical or assisted ventilation because of the onset of respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis. In patients who were intubated in the field or Emergency Department, or those intubated for surgery, unplanned intubation occurs if they require reintubation > 24 hours after extubation.

Unplanned return to the OR: Unplanned return to the operating room after initial operation management for a similar or related previous procedure.

Ventilator-associated Pneumonia (*Consistent with the January 2015 CDC Defined VAP*): A pneumonia where the patient is on mechanical ventilation for >2 calendar days on the date of event, with day of ventilator placement being Day 1,

AND

The ventilator was in place on the date of event or the day before. If the patient is admitted or transferred into a facility on a ventilator, the day of admission is considered Day 1.

VAP Algorithm (PNU2 Bacterial or Filamentous Fungal Pathogens):

RADIOLOGY	SIGNS/SYMPTOMS	LABORATORY
Two or more serial chest radiographs with at least **one** of the following: • New or progressive **and** persistent infiltrate • Consolidation • Cavitation • Pneumatoceles, in infants ≤1 year old NOTE: In patients **without** underlying pulmonary or cardiac disease (e.g., respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), **one definitive** chest radiograph is acceptable.	At least **one** of the following: • Fever (>38ºC or >100.4ºF) • Leukopenia (<4000 WBC/mm³) or leukocytosis (≥12,000 WBC/mm³) • For adults ≥70 years old, altered mental status with no other recognized cause AND at least two of the following: • New onset of purulent sputum, or change in character of sputum, or increased respiratory secretions, or increased suctioning requirements • New onset or worsening cough, or syspnea, or tachypnea • Rales or bronchial breath sounds • Worsening gas exchange (e.g., 0_2 desaturations (e.g., $PaO_2/FiO_2 \leq 240$), increased oxygen requirements, or increased ventilator demand)	At least **one** of the following: • Positive growth in blood culture not related to another source of infection • Positive growth in culture of pleural fluid • Positive quantitative culture from minimally-contaminated LRT specimen (e.g., BAL or protected specimen brushing) • ≥5% BAL-obtained cells contain intracellular bacteria on direct microscopic exam (e.g., Gram's stain) • Positive quantitative culture of lung tissue • Histopathologic exam shows at least **one** of the following evidences of pneumonia: o Abscess formation or foci of consolidation with intense PMN accumulation in bronchioles and alveoli o Evidence of lung parenchyma invasion by fungal hyphae or pseudohyphae

VAP Algorithm (PNU2 Viral, Legionnella, and other Bacterial Pneumonias):

RADIOLOGY	SIGNS/SYMPTOMS	LABORATORY
Two or more serial chest radiographs with at least **one** of the following: • New or progressive **and** persistent infiltrate • Consolidation • Cavitation • Pneumatoceles, in infants ≤1 year old NOTE: In patients **without** underlying pulmonary or cardiac disease (e.g., respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic	At least **one** of the following: • Fever (>38ºC or >100.4ºF) • Leukopenia (<4000 WBC/mm³) or leukocytosis (≥12,000 WBC/mm³) • For adults ≥70 years old, altered mental status with no other recognized cause AND at least two of the following: • New onset of purulent sputum, or change in character of sputum, or increased respiratory secretions, or increased suctioning requirements • New onset or worsening cough,	At least **one** of the following: • Positive culture of virus, Legionella or Chlamydia from respiratory secretions • Positive non culture diagnostic laboratory test of respiratory secretions or tissue for virus, Bordetella, Chylamydia, Mycoplasma, Legionella (e.g., EIA< FAMA< shell vial assay, PCR, micro-IF) • Fourfold rise in pared sera (IgG) for pathogen (e.g., influenza viruses, Chlamydia) • Fourfold rise in L. pneumophila serogroup 1 antibody titer to ≥1:128 in pared acute and convalescent sera by indirect IFA. • Detection of Legionella pneumophila serogroup 1 antigens in urine by RIA or EIA

obstructive pulmonary disease), **one definitive** chest radiograph is acceptable.	or syspnea, or tachypnea • Rales or bronchial breath sounds • Worsening gas exchange (e.g., 0_2 desaturations (e.g., $PaO_2/FiO_2 \leq 240$), increased oxygen requirements, or increased ventilator demand)	

VAP Algorithm ALTERNATE CRITERIA (PNU1), for infant's ≤1 year old:

RADIOLOGY	SIGNS/SYMPTOMS
Two or more serial chest radiographs with at least **one** of the following: • New or progressive **and** persistent infiltrate • Consolidation • Cavitation • Pneumatoceles, in infants ≤1 year old NOTE: In patients without underlying pulmonary or cardiac disease (e.g., respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), **one definitive** chest radiograph is acceptable.	Worsening gas exchange (e.g., O_2 desaturation [e.g. pulse oximetry <94%], increased oxygen requirements, or increased ventilator demand) **AND** at least **three** of the following: • Temperature instability • Leukopenia (<4000 WBC/mm³) **or** leukocytosis (≥15,000 WBC/mm³) and left shift (≥10% band forms) • New onset of purulent sputum, or change in character of sputum, or increased respiratory secretions, or increased suctioning requirements • Apnea, tachypnea, nasal flaring with retraction of chest wall, or nasal flaring with grunting • Wheezing, rales, or rhonchi • Cough • Bradycardia (<100 beats/min) or tachycardia (>170 beats/min)

VAP Algorithm ALTERNATE CRITERIA (PNU1), for children >1 year old or ≤12 years old:

RADIOLOGY	SIGNS/SYMPTOMS/LABORATORY
Two or more serial chest radiographs with at least **one** of the following: • New or progressive **and** persistent infiltrate • Consolidation • Cavitation • Pneumatoceles, in infants ≤1 year old NOTE: In patients without underlying pulmonary or cardiac disease (e.g., respiratory distress syndrome, bronchopulmonary dysplasia, pulmonary edema, or chronic obstructive pulmonary disease), **one definitive** chest radiograph is acceptable.	At least **three** of the following: • Fever (>38.0ºC or >100.4ºF) or hypothermia (<36.0ºC or <96.8ºF) • Leukopenia (<4000 WBC/mm³) **or** leukocytosis (≥15,000 WBC/mm³) • New onset of purulent sputum, or change in character of sputum, or increased respiratory secretions, or increased suctioning requirements • New onset or worsening cough, or dyspnea, apnea, or tachypnea • Rales or bronchial breath sounds • Worsening gas exchange (e.g., O_2 desaturations [e.g., pulse oximetry <94%], increased oxygen requirements, or increased ventilator demand)

Multiple Cause Coding Hierarchy: If two or more events cause separate injuries, an external cause code should be assigned for each cause. The first-listed external cause code will be selected in the following order:

1. External cause codes for child and adult abuse take priority over all other external cause codes
2. External cause codes for terrorism events take priority over all other external cause codes except child and adult abuse.
3. External cause codes for cataclysmic events take priority over all other external cause codes except child and adult abuse, and terrorism.
4. External cause codes for transport accidents take priority over all other external cause codes except cataclysmic events, and child and adult abuse, and terrorism.
5. The first listed external cause code should correspond to the cause of the most serious diagnosis due to an assault, accident or self-harm, following the order of hierarchy listed above.

Appendix 4: Acknowledgements

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All participating board members

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All Children's Hospital	St. Petersburg	FL
Aurora Medical Center - Summit	Summit	WI
C. S. Mott Children's Hospital	Ann Arbor	MI
Carolinas Medical Center	Charlotte	NC
Children's Medical Center Dallas	Dallas	TX
Conroe Regional Medical Center	Conroe	TX
Cox Health	Springfield	MO
Eastern Maine Medical Center	Bangor	ME
Geisinger Medical Center	Danville	PA
Geisinger Wyoming Valley	Wilkes-Barre	PA
Hahnemann University Hospital	Philadelphia	PA
Henry Ford Hospital	Detroit	MI
Henry Ford Macomb	Clinton Township	MI
Highline Medical Center	Burien	WA
Maine Medical Center	Portland	ME
Mayo Clinic Rochester Trauma Centers	Rochester	MN
Meritus Medical Center	Hagerstown	MD
Oakwood Southshore Medical Center	Trenton	MI
Oregon Health and Science University	Portland	OR
Phoenix Children's Hospital	Phoenix	AZ
Pikeville Medical Center	Pikeville	KY
Regions Hospital/Gillette Children's Hospital	Saint Paul	MN
St. Louis University Hospital	St. Louis	MO
Staten Island University Hospital	Staten Island	NY
Stony Brook Medicine	Stony Brook	NY
Sutter Roseville Medical Center	Roseville	CA
Terre Haute Regional Hospital	Terre Haute	IN
Texas Health Harris Methodist HEB	Bedford	TX
Truman Medical Center	Kansas City	MO
UCSF Benioff Children's Hospital and Research Center Oakland	Oakland	CA
University Health System - San Antonio	San Antonio	TX
University of Kansas Hospital	Kansas City	KS
University of Michigan Trauma Burn Center	Ann Arbor	MI
West Virginia University Hospitals	Morgantown	WV