

National Trauma Data Standard Change Log 2007-2012

- 1/24/2007 During a recent NTDB National Trauma Data Set (NTDS) Meeting held January 18, 2007 at ACS Headquarters, it was decided to revise the name of the "National Trauma Registry Project (NTR) to the National Trauma Data Standard Project (NTDS). Thus, the revised national data dictionary now reads: National Trauma Data Standard Data Dictionary (version 1.0).
- 1/24/2007 A typographical error was identified under XSD Data Type for Patient's Home Zip Code (D_01). The data type was changed from integer to string.
- 1/24/2007 A revision to the dictionary and associated XML was made for Patient's Home Country (D_02). The Minimum Constraint was changed from 3 to 2. The Maximum Constraint was changed from 3 to 2.
- 1/24/2007 A revision to the dictionary and associated XML was made for Patient's Occupational Industry (I_04). The field value "Wholesale and Retail Trade" was changed to "Wholesale Trade".
- 1/24/2007 A revision to the dictionary and associated XML was made for Location E-Code (I_07). The Minimum Constraint was changed from 3 to 1. The Maximum Constraint was changed from 5 to 1.
- 1/24/2007 A typographical error was identified under XSD Data Type for Incident Location Zip Code (I_09). The data type was changed from integer to string.
- 1/24/2007 A revision to the dictionary and associated XML was made for Protective Devices (I_13). The field value "Airbag" was changed to "Airbag Present."
- 1/24/2007 A revision to the dictionary and associated XML was made for Airbag Deployment (I_15). The field value "No Airbag Deployed" was changed to "Airbag Not Deployed."
- 1/24/2007 A revision to the dictionary and associated XML was made for Co-Morbid conditions (DG_01). The field value "No Co-Morbid Condition Present" was changed to "No NTDS Co-Morbidities are Present." A note was added to the data dictionary indicating: "The field value (1) "No NTDS co-morbidities are present" would be chosen if none of the pre-existing co-morbid factors listed above are present in the patient. This particular field value is available since individual state or hospital registries may track additional co-morbid factors not listed here."
- 1/24/2007 A revision to the dictionary and associated XML was made for Total ICU Length of Stay (O_01). The Maximum Constraint was changed from 100 to 400.
- 1/24/2007 A revision to the dictionary and associated XML was made for Total Ventilator Days (O_02). The Maximum Constraint was changed from 100 to 400.
- 1/24/2007 A typographical error was identified in variable Hospital Discharge Time (O_04). The minimum and maximum constraints were removed.
- 1/24/2007 A revision to the dictionary and associated XML was made for Hospital Complications (Q_01). The field value "No Medical Complications Occurred" was changed to "No NTDS listed Medical Complications Occurred". A note was added to the data dictionary indicating: "The field value (1) "No NTDS listed medical complications occurred" would be chosen if none of the hospital complications listed above are present in the patient. This particular field value is

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available since individual state or hospital registries may track additional hospital complications not listed here.”

- 1/24/2007 A revision to the dictionary and associated XML was made for Co-Morbid Conditions (DG_01). The following two field values were added: “Prematurity” and “Congenital Anomalies”. Additional documentation was added to Appendix 7 to define these terms.
- 1/24/2007 A revision to the dictionary and associated XML was made for Co-Morbid Conditions (DG_01). The field value “History of Severe COPD” was replaced with “Respiratory Disease”. Appropriate changes to Appendix 7 were made.
- 1/24/2007 A revision to the dictionary was made to the field value “Impaired Sensorium” associated with the variable Co-Morbid Conditions (DG_01). Additional language was included to describe pediatric conditions.
- 4/12/2007 Revised the NTDS Data Dictionary 1.0 to version 1.1. The revision is associated with a re-working of Appendix 2. Version 1.0 included a description of variables (and accompanying XSDs) included in the NTDS XML to describe hospital characteristics (i.e., H_01 through H_05). These variables were to be collected by vendors (on an annual basis) in such a way that the resulting values could be attached to each case submitted to the NTDB during that year. In reality, the NTDB chose to collect these data via a web entry form at the time hospitals submit data to the NTDB. Thus, the variables listed in version 1.0 (and additional variables) are captured by the ACS at the time of data submission by the hospital. No modification to the XML (or XSDs) is required at this time. Vendors may allow these variables to sit dormant within the NTDS XML. If vendors have additional questions, please contact Dr. Clay Mann at (801) 585-9161.
- 5/11/2007 Revised the NTDS Data Dictionary 1.1 to version 1.1.1. A clarification was made to variable “Hospital Discharge Disposition” (0_05). For field value = 6, “home” refers to any place of residence (jail, institutional care, etc). Also, the CDC Injury Intentionality Matrix (Table 2.) was updated to the latest version (Feb. 1, 2007).
- 5/18/2007 The NTDS XSDs were updated to reflect the name change of the dataset from NTR to NTDS. These changes were made to ensure the Validator contained in the new SDK would not hiccup. The changes made were:
Element: NtrRecords to NtdsRecords
Element: NtrRecord to NtdsRecord
Attribute: NTRVersion to NtdsVersion (and the fixed value to v1.0.0).
- 10/18/2007 **Revisions listed under 10/18/2007 change the NTDS 1.1.1 version to the NTDS 1.2 version**
- 10/18/2007 Age (D_08): XSD Minimum and Maximum Constraints changed from 1 and 120 to 0 and 120, respectively.
- 10/18/2007 GCS – Total (P_16) and Initial ED/Hospital GCS – Total (ED_13): XSD Minimum and Maximum Constraints changed from 1 and 15 to 3 and 15, respectively.
- 10/18/2007 Location E-Code (I_07): XSD Minimum and Maximum Constraints changed from 1 and 1 to 0 and 9, respectively.
- 10/18/2007 Patient’s Home Country (D_02): XSD changed from string (size =2) with pattern limited to [0-9] to 2 character string with pattern A - Z.

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- 10/18/2007 Patient's Home State (D_03): XSD had no restrictions other than string. Changed to 2 character string with pattern 0 - 9.
- 10/18/2007 Incident State (I-10): XSD was string restricted to length between 2 and 3 characters. Changed to 2 character string with pattern 0-9.
- 10/18/2007 Patient's Home County (D_04): XSD was an integer restriction of 2 or 3 places. Changed to 3 character string with pattern 0 – 9.
- 10/18/2007 Incident County (I_11): XSD was a string restriction of 2 or 3 digits. Changed to 3 character string with pattern 0 – 9.
- 10/18/2007 Patient's Home City (D_05): XSD was an integer restriction of 2 or 3 places. Changed to 5 character string with pattern 0 – 9.
- 10/18/2007 Incident City (I-12): XSD was a string restriction of 2 or 3 digits. Changed to 5 character string with pattern 0 – 9.
- 10/18/2007 Incident Country (I_09) was added to the database. The XML pattern is 2 character string with pattern 0 – 9. This additional variable reorders Incident Location Zip Code from (I_09) to I_13), Protective Devices (I_13) to (I_14), Child Specific Restraint (I_14) to (I_15), and Airbag Deployment (I_15) to (I_16) in the data dictionary.
- 10/18/2007 Co-morbid Conditions (DG_01), Patient's Occupational Industry (I_04), ED Discharge (ED_17), Hospital Discharge Disposition (O_05), ED Death (ED_18) and Hospital Complications (Q_01): XSDs were string with values enumerated as integers. All were changed to type integer with restriction of 2.
- 10/18/2007 Primary E-Code (I_06), Location E-Code (I_07) and Additional E-Code (I_08): XSD was type string with minimum 3 maximum 6 characters. Changed to type string with minimum 3 maximum 5 characters.
- 10/18/2007 Hospital Procedures (HP_01) and Injury Diagnoses (DG_02): XSD was type string with minimum 3 maximum 6 characters. Changed to type string with minimum 3 maximum 5 characters.
- 10/18/2007 Initial ED/Hospital Respiratory Assistance (ED_07): Type was declared at the bottom of the XSD but the element was not in the XSD, not making use of the Type. Initial ED/Hospital Respiratory Assistance was added to the XSD.
- 10/18/2007 Other Transport Mode (P_08): XSD allowed for unlimited entries. XSD set to a maximum of 5 entries.
- 10/18/2007 The definition for "coma" as a value under Hospital Complications (Q_01) was clarified to read: Defined as significantly impaired level of consciousness (exclude transient disorientation or psychosis) for greater than 24 hours. The patient should be unconscious, or postures to painful stimuli, or is unresponsive to all stimuli. Does not include drug-induced coma.
- 10/18/2007 The minimum and maximum constraints for Initial Field Systolic Blood Pressure (P_09) and Initial ED/Hospital Systolic Blood Pressure (ED_03) were revised from 0 and 400 to 0 and 299.

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- 10/18/2007 The minimum and maximum constraints for Initial Field Pulse Rate (P-10) and Initial ED/Hospital Pulse Rate (ED_04) were revised from 0 and 400 to 0 and 299.
- 10/18/2007 The minimum and maximum constraints for Initial Field Respiratory Rate (P-11) and Initial ED/Hospital Respiratory Rate (ED_06) were revised from 0 and 100 to 0 and 59.
- 10/18/2007 Two value labels listed for Patient's Occupational Industry (I-04) were correct. 11 was changed from "Other Services" to "Information Services" and 14 was changed from "Transportation and Utilities" to "Other Services". The appropriate change was also made to the XSD.
- 10/18/2007 The minimum and maximum constraint for Initial ED/Hospital Temperature (ED_05) was revised from 0 and 400 to 0 and 120.
- 10/18/2007 The following clarifications have been added to the dictionary regarding Alcohol Use Indicator (ED_15):
Blood alcohol concentration (BAC) may be documented at any facility (or setting) treating the patient.
"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.
- 10/18/2007 Hospital Procedures (HP_01): XSD allowed for unlimited entries. XSD set to a maximum of 200 entries.
- 10/18/2007 Injury Diagnoses (DG_02): XSD allowed for unlimited entries. XSD set to a maximum of 50 entries.
- 10/18/2007 Value labels associated with the variable Drug Use Indicator (ED_16) were revised to harmonize with value labels associated with Alcohol Use Indicator (ED_15). The value label "No (by test or not suspected)" was revised to "No (not suspected)". The value label "Yes (suspected)" was revised to "No (confirmed by test)." The appropriated XSD revisions were made.
- 10/18/2007 The following clarifications have been added to the dictionary regarding Drug Use Indicator (ED_16):
Drug use may be documented at any facility (or setting) treating this patient event.
"Illegal use drug" includes illegal use of prescription drugs.
- 10/18/2007 The following clarification has been added to the dictionary regarding ED Death (ED_18):
Patients treated in accordance with a "Do Not Resuscitate" (DNR) order should be coded under "Died in ED (other than failed resuscitation attempt)".
- 10/18/2007 An additional section was added to the NTDS Data Dictionary. This section, entitled "Injury Severity", was added to accommodate variables related to AIS that may be reported by hospitals. These variables are considered *optional* and are not required by the NTDS. The variables added include:
1. AIS PREDOT Code (IS_01)

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2. AIS Severity (IS_02)
3. ISS Body Region (IS_03)
4. AIS Version (IS_04)
5. Locally Calculated ISS (IS_05)

- 10/18/2007 Race (D_10): XSD allowed for unlimited entries. XSD set to a maximum of 2 entries.
- 10/18/2007 Ethnicity (D_11): XSD allowed for unlimited entries. XSD set to a maximum of 1 entry.
- 10/18/2007 An additional heading was added to each variable description called "Data Source Hierarchy". The information under this heading is designed to indicate where (in order) an abstractor should look to find the associated information for each variable. The purpose of this information is to aid in the standardization of data recorded in the NTDB.
- 10/18/2007 Value labels associated with the variable Drug Use Indicator (ED_16) were revised to harmonize with value labels associated with Alcohol Use Indicator (ED_15). The value label "No (by test or not suspected)" was revised to "No (not suspected)". The value label "Yes (suspected)" was revised to "No (confirmed by test)". The appropriate XSD revisions were made.
- 11/26/2007 Patient's Home Zip Code (D_01): Changed XSD Data Type from xs:string to xs:zip.
- 11/26/2007 Location E-Code (I_07): Changed XSD Data Type from xs:string to xs:integer. Added minimum and maximum constraints of 0 to 9.
- 11/26/2007 Incident Country (I_09): Corrected the definition (had the Home Country definition)
- 11/26/2007 Incident Location Zip Code (I_13): Changed XSD Data Type from xs:string to xs:zip.
- 11/26/2007 Protective Devices (I_14): Changed the Multiple Entry Configuration from unbounded to max 10.
- 11/26/2007 Airbag Deployment (I_16): Added max 4 to the Multiple Entry Configuration.
- 11/26/2007 Other Transport Mode (P_08): Added max 5 to the Multiple Entry Configuration.
- 11/26/2007 Hospital Procedures (HP_01): Added max 200 to the Multiple Entry Configuration.
- 11/26/2007 Hospital Procedure Start Date (HP_02): Changed the element name to match that of the XSD.
Changed from *ProcedureDate* to *HospitalProcedureStartDate*.
Added max 200 to the Multiple Entry Configuration.
- 11/26/2007 Hospital Procedure Start Time (HP_03): Changed the element name to match that of the XSD. Changed from *ProcedureTime* to *HospitalProcedureStartTime*.
Added max 200 to the Multiple Entry Configuration.

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- 11/26/2007 AIS Predot Code (IS_01): Changed element name from AISPredot to AisPredot. Added max 50 to the Multiple Entry Configuration.
- 11/26/2007 AIS Severity (IS_02): Changed element name from AISSeverity to AisSeverity. Added max 50 to the Multiple Entry Configuration.
- 11/26/2007 ISS Body Region (IS_03): Changed element name from ISSRegion to IssRegion. Added max 50 to the Multiple Entry Configuration.
- 11/26/2007 AIS Version (IS_04): Changed element name from AISVersion to AisVersion.
- 11/26/2007 Locally Calculated ISS (IS_05): Changed element name from ISSLocal to IssLocal.
- 11/26/2007 Primary Method of Payment (F_01): Changed XSD Data Type from xs:string to xs:integer. Removed the minimum and maximum constraints.
- 11/26/2007 Hospital Complications (Q_01): Added max 10 to the Multiple Entry Configuration.
- 11/26/2007 FIPS Code (Appendix 1): Corrected County FIPS from 2-digit to 3-digit.
- 11/29/2007 INCIDENT LOCATION ZIP CODE (I_13): Added Incident Country to *"If "Not Applicable", "Not Recorded", or "Not Known" complete variables: Incident State; Incident County; Incident City; and Incident Country."*
- 11/29/2007 Appendix 5: Added Incident Country to the Injury Variables
- 11/29/2007 Appendix 5: Added new section for Injury Severity Variables, which includes: AIS Predot Code, AIS Severity, ISS Body Region, AIS Version, and Locally Calculated ISS
- 01/25/2008 Appendix 7 - Hospital Complications: Abdominal Compartment Syndrome. Added ICD-9-CM code 958.93
- 01/25/2008 Appendix 7 - Hospital Complications: Acute Renal Failure. Added ICD-9-CM codes 584.5 through 584.9 and 958.5.
- 01/25/2008 Appendix 7 - Hospital Complications: Coagulopathy. Added ICD-9-CM code 286.6
- 01/25/2008 Appendix 7 - Hospital Complications: Deep Vein Thrombosis (DVT)/thrombophlebitis. Changed variable definition to read: 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.
- 01/25/2008 Appendix 7 - Hospital Complications: Cardiac Arrest with CPR. Changed variable definition to read: The absence of a cardiac rhythm or presence of chaotic cardiac rhythm that results in loss of consciousness requiring the initiation of any component of basic and/or advanced cardiac life support. Excludes patients that arrive at the hospital in full arrest.

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- 01/25/2008 Appendix 7 - Hospital Complications: Deep Surgical Site Infection. Changed associated note to read: Report infections that involve both superficial and deep incision sites as deep surgical site infection. If wound spontaneously opens as a result of infection, code for Deep Surgical Site Infection and Wound Disruption.
- 01/25/2008 Appendix 7 - Hospital Complications: Deep Vein Thrombosis (DVT)/thrombophlebitis. Added ICD-9-CM codes 451.0, 451.1, 451.11, 451.19, 451.8, 451.81- 451.84, 451.89, 451.9
- 01/25/2008 Appendix 7 - Hospital Complications: Myocardial Infarction. Changed variable definition to read: A new acute myocardial infarction occurring during hospitalization (within 30 days of injury).
- 01/25/2008 Appendix 7 - Hospital Complications: Pneumonia. Added ICD-9-CM codes 480, 480.0-480.3, 482.3, 482.30, 482.4, 482.8, 482.82, 482.83, 483.0, 483.1, 484, 484.1, 484.3, 484.5-484.8
- 01/25/2008 Total Ventilator Days (Q_02): Added note under Additional Information: Includes mechanical ventilation time associated with OR procedures.
- 01/25/2008 Alcohol Use Indicator (ED_15): Modified first field value to read: No (not suspected, not tested). Also added note under Additional Information which reads: If alcohol use is suspected, but not confirmed by test, record null value "Not Known".
- 1/25/2008 Drug Use Indicator (ED_16): Modified first field value to read: No (not suspected, not tested). Modified second field value to read: No (confirmed by test). Also added note under Additional Information which reads: If drug use is suspected, but not confirmed by test, record null value "Not Known."
- 02/15/2008 Initial ED/Hospital Temperature (ED_05): Maximum constraint changed from 120 to 45.
- 02/15/2008 Injury Severity (IS_02): Field value added: 9 - Not Possible to Assign. Also added note under Additional Information which reads: The field value (9) "Not Possible to Assign" would be chosen if it is not possible to assign a severity to an injury.
- 02/15/2008 Patient's Home State (D_03): Modified item under Field Values to read: Relevant value for data element (two digit numeric FIPS code).
- 02/15/2008 Incident State (I_10): Modified item under Field Values to read: Relevant value for data element (two digit numeric FIPS code).
- 02/15/2008 Appendix 4 – Rule 6903: Modified to read: 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)
- 02/15/2008 Appendix 4 – Rules 3601, 3701, 3801, 3901, 4701, 4901, 5001, 4801 and 5201 were modified to only enforce a length check and no longer enforce a range check.
- 02/15/2008 Appendix 4 – Rules 3603, 3703, 3803, 3903, 4704, 4903, 5005, 4804 and 5204 were added to enforce a range check

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- 04/21/2008 Common Null Values: Added Definition of Not Recorded under Additional Information to include instances where documentation was expected but none was provided.
- 04/21/2008 Date of Birth: Change made to indicate that if Age was less than 24 hours Age and Age Unit would need to be collected.
- 04/21/2008 Age: Change made to indicate that if DOB was less than 24 hours Age and Age Unit would need to be collected.
- 04/21/2008 Age Units: Change made to indicate that if DOB was less than 24 hours Age and Age Unit would need to be collected.
- 04/21/2008 Injury Incident Date/Time: Removed language "if date of injury is 'Not Recorded' or 'Not Known,' the null value is blank (or empty)."
- 04/21/2008 Incident City: Took out language in definition "or best approximation," and added an additional definition in Additional Information: "If incident location resides outside of formal city boundaries, report nearest city/town."
- 04/21/2008 Protective Devices: Added a description to the Lap Belt category which states: "Lap Belt should be used to include those patients that are restrained, but not further specified."
- 04/21/2008 Inter-Facility Transfer: Added a definition for Acute Care Facilities: "Outlying facilities purporting to provide emergency care services or utilized to stabilize a patient are considered acute care facilities."
- 04/21/2008 Initial ED Hospital Respiratory Assistance: Added a definition for Respiratory Assistance: "Respiratory Assistance is defined as mechanical and/or external support of respiration."
- 04/21/2008 Alcohol Use Indicator: Added another definition concerning DUI, DWI, or DWAls for clarification.
- 04/21/2008 Drug Use Indicator: Added definition stating "This data element refers to drug use by the patient and does not include medical treatment."
- 04/21/2008 Hospital Procedures: Added clarification that the element should "Include only procedures performed at your institution."
- 04/21/2008 Hospital Discharge Disposition: Additional Information added. "Disposition to any other non-medical facility should be coded as 6: Discharged home with no home services."
"Disposition to any other medical facility should be coded as 9: Discharged/Transferred to another type of rehabilitation or long-term care facility."
- 04/21/2008 Definition of Impaired Sensorium added to. "Mental retardation would qualify as impaired sensorium."
- 04/21/2008 Definition of Respiratory Disease changed with ICD-9Code Ranges deleted.

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- 04/21/2008 Definition of Diabetes Mellitus changed. Took out phrase, "Do not include a patient if diabetes is controlled by diet alone."
- 04/21/2008 Added information to Injury Diagnoses stating, "ICD-9-CM codes pertaining to other medical conditions (e.g., VCA, MI, co-morbidities, etc.) may also be included in this field, following a complete listing of injury diagnoses."
- 04/21/2008 Initial E/DHospital GCS Assessment Qualifiers: Added information for Additional Information stating, "Identified medical treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may have administered (i.e., ETOH, prescriptions, etc.)."
- 11/19/2008 **Version number changed from 1.2.2 to 1.2.5.**
- 11/19/2008 Added subsection to the Introduction entitled "Technical Notes Regarding NTDS Implementation."
- 11/19/2008 Inclusion Criteria Flow Chart: Partial definition changed from "Does the patient's hospital admission meet inclusion criteria defined by YOUR trauma registry?" to "Was the patient considered an admission based on your trauma registry inclusion criteria?"
- 11/19/2008 Common Null Values: "Not Recorded" removed as separate response category and collapsed into "Not Known/Not Recorded."
- 11/19/2008 Alternate Home Residence: Added operational definitions for the four value options under Additional Information.
- 11/19/2008 Age: Language changed from "Date of Birth is less than 24 hours" to "age is less than 24 hours" under Additional Information.
- 11/19/2008 Injury Incident Date: Deleted phrase "If the date is electronically stored within a database or transmitted via XML as a "tick," the referenced variables may also be used" under Additional Information.
- 11/19/2008 Injury Incident Time: Deleted phrase "If the time is electronically stored within a database or transmitted via XML as a "tick", the referenced variables may also be used" under Additional Information.
- 11/19/2008 Patient's Occupational Industry: Added phrase "Code as Not Applicable if injury is not work-related" under Additional Information.
- 11/19/2008 Protective Devices: Added phrase "If chart indicates "3 point restraint" choose 2 and 10" under Additional Information.
- 11/19/2008 Airbag Deployment: Added phrase "Airbag Deployed Front should be used for patients with documented airbag deployments, but are not further specified" under Additional Information.
- 11/19/2008 EMS Dispatch Date: Added phrases "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" and "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" under Definition. Also deleted the phrase "If the time is electronically stored within a

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database or transmitted via XML as a “tick”, the referenced variables may also be used” under Additional Information.

- 11/19/2008 EMS Dispatch Time: Added phrases “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” and “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” under Definition
- 11/19/2008 EMS Unit Arrival on Scene Date changed to EMS Unit Arrival at Scene/Transferring Facility Date.
- 11/19/2008 EMS Unit Arrival at Scene/Transferring Facility Date: Added phrases “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)” and “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)” under Definition.
- 11/19/2008 EMS Unit Arrival at Scene/Transferring Facility Date: Deleted phrases “Scene may be defined as “initial hospital” for inter-facility transfers” and “If the date is electronically stored within a database or transmitted via XML as a “tick”, the referenced variables may also be used” under Additional Information.
- 11/19/2008 EMS Unit Arrival on Scene Time changed to EMS Unit Arrival at Scene/Transferring Facility Time. Same content changes as EMS Unit Arrival at Scene/Transferring Facility Date.
- 11/19/2008 EMS Unit Scene Departure Date changed to EMS Unit Scene/Transferring Facility Departure Date.
- 11/19/2008 EMS Unit Scene/Transferring Facility Departure Date: Added phrases “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)” and 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 (arrival is defined at date/time when the vehicle started moving)” under Definition.
- 11/19/2008 EMS Unit Scene/Transferring Facility Departure Date: Deleted phrases “If the time is electronically stored within a database or transmitted via XML as a “tick,” the referenced variables may also be used” and “Scene may be defined as “initial hospital” for inter-facility transfers” from Additional Information.
- 11/19/2008 EMS Unit Scene Departure Time changed to EMS Unit Scene/Transferring Facility Departure Time. Same content changes as EMS Unit Scene/Transferring Facility Departure Date.
- 11/19/2008 Other Transport Mode: Added phrase “(prior to arrival at your hospital)” under Definition.

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- 11/19/2008 Initial Field Systolic Blood Pressure: Deleted phrase "First recorded systolic blood pressure in the pre-hospital setting" and added phrase "First recorded systolic blood pressure measured at the scene of injury" under Definition. Also deleted phrase "Field vital signs are the first vitals measured at the scene of injury" and added phrase "If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded*" under Additional Information.
- 11/19/2008 Initial Field Pulse Rate: Deleted phrase "in the pre-hospital setting" and added phrase "measured at the scene of injury" under Definition. Also deleted phrase "vital signs are the first vitals measured at the scene of injury" and added phrase "If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded*" under Additional Information.
- 11/19/2008 Initial Field Respiratory Rate: Deleted phrase "in the pre-hospital setting" and added phrase "measured at the scene of injury" under Definition. Also deleted phrase "vital signs are the first vitals measured at the scene of injury" and added phrase "If the patient is transferred to your facility with no EMS run sheet from the scene of injury, recorded as *Not Known/Not Recorded*" under Additional information.
- 11/19/2008 Initial Field Oxygen Saturation: Deleted phrase "in the pre-hospital setting" and added phrase "measured at the scene of injury" under Definition. Also deleted phrase "vital signs are the first vitals measured at the scene of injury" and added phrase "If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded*" under Additional Information.
- 11/19/2008 Initial Field GCS-Eye, Initial Field GCS-Verbal, Initial Field GCS-Motor: Deleted phrase "in the pre-hospital setting" and added phrase "measured at the scene of injury" under Definition. Also deleted phrase "vital signs are the first vitals measured at the scene of injury" and added phrase "If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded*" under Additional Information.
- 11/19/2008 Initial Field GCS-Total: Deleted phrase "in the pre-hospital setting" and added phrase "measured at the scene of injury" under Definition. Also added phrases "If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded*" and "If a patient does not have a numeric GCS recorded, but has documented verbiage 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 not other contraindicating documentation" under Additional Information.
- 11/19/2008 ED/Hospital Arrival Date, ED/Hospital Arrival Time: Deleted phrase "If the date/time is electronically stored within a database or transmitted via XML as a "tick," the referenced variables may also be used".
- 11/19/2008 Initial ED/Hospital Respiratory Rate: Increased maximum constraint from 59 to 99.
- 11/19/2008 Initial ED/Hospital GCS Assessment Qualifiers: Added phrase "If patient was not chemically sedated, intubated, and did not have eye obstruction then code as Not Applicable" under Additional Information.

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- 11/19/2008 Alcohol Use Indicator, Drug Use Indicator: Deleted “not suspected” from Field Value 1 No.
- 11/19/2008 ED Discharge Disposition: Changed UB-92 to UB-04 under Additional Information.
- 11/19/2008 ED Death: Added phrase “(no invasive procedures attempted)” under Field Value 1 DOA.
- 11/19/2008 ED Discharge Date, ED Discharge Time: Deleted phrase “If the date/time is electronically stored within a database or transmitted via XML as a “tick”, the referenced variables may also be used” under Additional Information.
- 11/19/2008 Hospital Procedure Start Date, Hospital Procedure Start Time: Deleted phrase “If the date/time is electronically stored within a database or transmitted via XML as a “tick”, the referenced variables may also be used” under Additional Information.
- 11/19/2008 Injury Diagnoses: Deleted first bullet point “ICD-9-CM codes should be listed starting with the most to least significant injury. The primary injury resulting in the hospitalization should be listed first. The “significance” of other injuries should be based upon severity and location” and deleted “following a complete listing of injury diagnoses” from the second bullet point under Additional Information.
- 11/19/2008 Total Ventilator Days: Changed phrase “(including all episodes)” to “(excluding time in the OR)” under Definition. Additional Information section now shows that we *exclude* mechanical ventilation time associated with OR procedures (previously included).
- 11/19/2008 Hospital Discharge Date, Hospital Discharge Time: Deleted phrase “If the date/time is electronically stored within a database or transmitted via XML as a “tick”, the referenced variables may also be used” under Additional Information.
- 11/19/2008 Hospital Discharge Disposition: Changed Field Value 1 “acute care hospital using EMS” to “short-term general hospital for inpatient care.” Changed Field Value 3 “Home Health Agency” to “organized home health service.” Added to Field Value 4 “or discontinued care.” Changed “UB-92” to “UB-04.”
- 11/19/2008 Appendix 1: Included Trauma Type calculation table. Included tables for both Revised Trauma Score EMS (adult and pediatric) and ED/Hospital (adult and pediatric). Added section on ICD-9-CM Body Regions and Nature of Injury. Extended Injury Severity Score calculation definition. Added “Use” section to Functional Capacity Index.
- 11/19/2008 Appendix 2: Changed title to “Hospital Characteristics received at time of NTDB Data Submission.” Altered format for presenting hospital characteristics.
- 11/19/2008 Appendix 3 “Data Elements used to Link Pre-Hospital Data with Trauma Registry Data” removed.
- 11/19/2008 Appendix 3 “Edit Checks for the National Trauma Data Standard Data Elements”: Rule ID 1703 changed to Level 4. Rule ID 2602 changed to Level 3. Rule ID 2702 changed to Level 3. Rule ID 6203 changed to Level 2. Rule ID 6802 changed to Level 2. Rule ID 7903 changed to Level 2. Rule ID 8102 changed to Level 2. Added the following Rule IDs: 3009, 3209, 4514, 6310, 6504, 7710, 7711, 7906, and 7907. Removed the following Rule IDs: 0004, 0604, 2003, 3903,

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4403, 4504, 5204, 6103, 6205, 7904, and 7905. Modified verbiage changes for the following Rule IDs: 0005, 0102, 0202, 0302, 0402, 0605, 0703, 0803, 2004, 2102, 2203, 2303, 2403, 4404, 4505, 6104, 6204, 6206, and 7903.

- 11/19/2008 Appendix 5 "National Trauma Data Standard Data Scheme" changed to Appendix 4. "Variable" term in subheadings changed to "Information." Removed "Auto-Populated Variables Defining Hospital Characteristics" and "Variables Auto-Calculated Based on Existing Data Elements."
- 11/19/2008 Appendix 6 "National Trauma Data Standard Data Tree" removed.
- 11/19/2008 Appendix 5 "Glossary of Terms" Co-Morbid Conditions: ICD-9 Code Range for Alcoholism no longer includes 291.8. ICD-9 Code Range for Ascites now includes 789.5 (pre2008), 789.59. ICD-9 Code Range for Bleeding disorder now includes 287.3 (pre 2006). ICD-9 Code Range for Chemotherapy for cancer within 30 days now includes V58.1 (pre 2006), V58.11. ICD-9 Code Range for Congenital Anomalies now includes 758.3 (pre 2005), 752.8 (pre 2004). ICD-9 Code Range for Hypertension requiring medication now includes 405.01. ICD-9 Code Range for Impaired Sensorium now includes 331.1 (pre 2004), 331.11 and no longer includes 315.3.
- 11/19/2008 Appendix 5 "Glossary of Terms" Hospital Complications: ICD-9 Code Range for Acute renal failure now includes 585 (pre 2006). ICD-9 Code Range for Decubitus ulcer now includes 707.0 (pre 2005). 707.00 through 707.09. ICD-9 Code Range for Deep Vein Thrombosis (DVT)/thrombophlebitis no longer includes 451.1 or 451.8. ICD-9 Code Range for Graft/prosthesis/flap failure no longer includes 996.5. ICD-9 Code Range for Pneumonia no longer includes 480, 482.3, 482.4, 482.8, 484, and 484.3-484.7. ICD-9 Code Range for Wound disruption now includes 998.3 (pre 2004).
- 11/19/2008 Appendix 5 "Glossary of Terms" Other Terms: Now includes definitions for Foreign Visitor, Intermediate care facility, Home Health Service, Homeless, Hospice, Migrant Worker, Operative and/or essential procedures, Skilled Nursing Care, and Undocumented Citizen.
- 11/23/2009 **Version number changed from 1.2.5 to 2010 Admissions.**
- 11/23/2009 Moved 2nd and 3rd bullet "If zip code is..." from under 'Uses' to under 'Additional Information' for field Patient's home ZIP Code.
- 11/23/2009 Added the text "Value should be based upon assessment before administration of supplemental oxygen." under 'Additional Information' for the field Initial Field Oxygen Saturation.
- 11/23/2009 Added the text "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. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation." to the fields Initial Field GCS – Eye, Initial Field GCS – Verbal, Initial Field GCS – Motor, Initial Field GCS – Total, Initial ED/Hospital GCS – Eye, Initial ED/Hospital GCS – Verbal, Initial ED/Hospital GCS – Motor and Initial ED/Hospital GCS – Total,

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- 11/23/2009 Added the text "If a patient does not have a numeric GCS recorded, but with 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 contraindicating documentation." under 'Additional Information' for the field Initial ED/Hospital GCS – Total.
- 11/23/2009 Removed third bullet "Dead on Arrival is defined as..." under 'Additional Information' for field ED Death.
- 11/23/2009 Added the text "Non-invasive means of ventilatory support (CPAP or BIPAP) should not be considered in the calculation of ventilator days" under 'Additional Information' for the field Total Ventilator Days.
- 11/23/2009 Appendix 1: Auto Calculated Variables Based upon Existing Data Elements.: Added introductory text.
- 11/23/2009 Appendix 1: Removed text for item 1 'FIPS code (location code)'.
- 11/23/2009 Appendix 1: Modified text under item 6 'Overall GCS – EMS score (both adult and pediatric)'.
- 11/23/2009 Appendix 1: Removed text for items 9 'Revised Trauma Score – EMS (both adult and pediatric)' and 10 'Revised Trauma Score – ED/Hospital (both adult and pediatric)'.
- 11/23/2009 Appendix 3: Moderate changes to the 'Introduction' text including updated list of level 2 flags and increased use of the term 'flag' instead of 'error'.
- 11/23/2009 Appendix 3 "Edit Checks for the National Trauma Data Standard Data Elements": Rule IDs 0603, 0606, 0607, 0608, 0609, 0610, 0611, 0612, 1102, 1702, 1704, 4401, 4702, 4704, 4802, 4804, 5002, 5005, 5102, 5103, 5402, 5502, 5602, 5702, 5703, 5802, 6102, 6104, 6202, 6204 and 7902 upgraded to level 2 flags.
- 11/23/2009 Appendix 3 "Edit Checks for the National Trauma Data Standard Data Elements": Rule IDs 0605, 4703, 4803 and 5003 upgraded to level 3 flags.
- 11/23/2009 Appendix 3 "Edit Checks for the National Trauma Data Standard Data Elements": Added new rule IDs 0613, 1103, 4405, 4515, 6105 and 7908.
- 11/23/2009 Appendix 3 "Edit Checks for the National Trauma Data Standard Data Elements": Modified the text for rule IDs 0603, 0613, 0612 and 5702.
- 11/23/2009 Appendix 5: Glossary of Terms: Removed text for 'Dead on arrival'.
- 11/23/2009 Added Appendix 6 "NTDS Data Dictionary Revision Cycle".
- 11/23/2009 Minor text changes throughout the Data Dictionary to reflect consistent use of correct ED capitalization.
- 10/10/2010 Other Transport Mode (P_08):
- XSD set to a maximum of 6 entries.
 - Option 7 "None; single mode transport" removed

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- Additional Information note added, "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.
- 10/10/2010 Initial ED/Hospital GCS Assessment Qualifier (ED_14): Additional field value added, "4 Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to eye."
- 10/10/2010 ED Death field was changed to Signs of Life (ED_18) with field values "1 Arrived with NO signs of life" and "2 Arrived with signs of life."
- 10/10/2010 Co-morbid Conditions (DG_01):
- The following options were retired: "0 No known co-morbid conditions (both NTDS-listed and unlisted" and "1 No NTDS co-morbidities are present."
 - The following options were added: "25 Cirrhosis" and "1 Other."
- Removed notes in Additional Information, 'The field value (1) "No NTDS co-morbidities are present" would be chosen if none of the pre-existing co-morbid factors listed above are present in the patient. This particular field value is available since individual state or hospital registries may track additional co-morbid factors not listed here' and 'The value "0" should be used for patients with no known co-morbid conditions coded by your registry or defined in the NTDS Data Dictionary.'
- 10/10/2010 Hospital Complications (Q_01):
- The following options were retired: "1 No NTDS-listed medical complications occurred," "2 Abdominal compartment syndrome," "3 Abdominal fascia left open," "6 Base deficit," "7 Bleeding," "9 Coagulopathy," "10 Coma," "17 Intracranial pressure," "24 Systemic sepsis" and "26 Wound disruption."
 - Removed notes in Additional Information, 'The field value (1) "No NTDS listed medical complications occurred" would be chosen if none of the hospital complications listed above are present in the patient. This particular field value is available since individual state or hospital registries may track additional hospital complications not listed here.' and 'The value "N/A" should be used for patients with no known complications coded by your registry or defined in the NTDS Data Dictionary.'
 - Additional Information note added, 'The value "N/A" should be used for patients with no complications.'
- 10/10/2010 AIS Version (IS_04): Field values changed to:
- | | |
|----------|----------|
| 1 AIS 80 | 4 AIS 95 |
| 2 AIS 85 | 5 AIS 98 |
| 3 AIS 90 | 6 AIS 05 |
- 10/10/2010 Terminology changed from "Required in XSD" to read "Required in NTDS"

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- 10/10/2010 Appendix 2: Edit Checks: "Level 2: Inclusion criteria and/or critical to analyses" updated.
- "ED Death" was changed to "Signs of Life."
 - Initial ED/Hospital GCS Eye, Initial ED/Hospital GCS Motor, Initial ED/Hospital GCS Verbal, and Initial ED/Hospital GCS Total were removed.
- 10/10/2010 Appendix 4: Glossary of Terms. The following were added:
- Cirrhosis
 - Urinary Tract infection
 - Catheter-Related Blood Stream Infection
 - Osteomyelitis
 - Unplanned return to the OR
 - Unplanned return to the ICU
 - Severe Sepsis
- 10/10/2010 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 at laparotomy/laparoscopy.
- 10/10/2010 **Catheter-Related Blood Stream Infection:** Defined as organism cultured from the bloodstream that is not related to an infection at another site and attributed to a central venous catheter. Patients must have evidence of infection including at least one of:
1. Fever >38 C
 2. WBC > 100,000 or < 3000 per cubic millimeter
 3. Hypotension (SBP <90) or >25% drop in systolic blood pressure
- Patients must also have evidence of bacteremia believed to be related to the central venous catheter:
1. Recognized pathogen from one or more blood cultures and organism cultured is not related to an infection at another site
 2. If a common skin contaminant (e.g. coagulase negative staphylococci, diphtheroids, propionibacterium, strep viridans), the organism must be cultured from at least two cultures within a 48 hour period.
 3. Erythema at the entry site of the central line or positive cultures on the tip of the line in the absence of positive blood cultures is not considered a CRBSI
- ICD-9 Code Range: 993.1, 790.7, 038.0, 038.1, 038.10, 038.11, 038.19, 038.3, 038.4-038.43, 038.49, 038.8, 038.9*

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- 10/10/2010 **Osteomyelitis:** Defined as meeting at least one of the following criteria:
1. Organisms cultured from bone.
 2. Evidence of osteomyelitis on direct examination of the bone during a surgical operation or histopathologic examination.
 3. At least two of the following signs or symptoms with no other recognized cause: fever (38° C), localized swelling, tenderness, heat, or drainage at suspected site of bone infection and at least one of the following:
 - a. Organisms cultured from blood
 - b. Positive blood antigen test (e.g., H. influenzae, S. pneumoniae)
 - c. Radiographic evidence of infection, e.g., abnormal findings on x-ray, CT scan, magnetic resonance imaging (MRI), radiolabel scan (gallium, technetium, etc.).
- ICD-9 Code Range: 730.00-730.09*
- 10/10/2010 **Severe sepsis: Sepsis and/or Severe Sepsis:** Defined as an obvious source of infection with bacteremia and two or more of the following:
1. Temp > 38 degrees C or < 36 degrees C
 2. White Blood Cell count > 12,000/mm³, or >20% immature (Source of Infection)
 3. Hypotension – (Severe Sepsis)
 4. Evidence of hypoperfusion: (Severe Sepsis)
 - A. Anion gap or lactic acidosis or
 - B. Oliguria, or
 - C. Altered mental status
- ICD-9 Code Range: 995.91, 995.92*
- 10/10/2010 **Unplanned return to the ICU:** Unplanned return to the intensive care unit after initial ICU discharge. Does not apply if ICU care is required for postoperative care of a planned surgical procedure.
- 10/10/2010 **Unplanned return to the OR:** Unplanned return to the operating room after initial operation management for a similar or related previous procedure.
- 10/10/210 **Urinary Tract Infection:** Defined as an infection anywhere along the urinary tract with clinical evidence of infection, which includes at least one of
1. Fever>38.5 C
 2. WBC> 100,000 or < 3000 per cubic millimeter
 3. Urgency

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4. Dysuria
5. Suprapubic tenderness

ICD9 Code Range: 599.0

- 10/10/2010 ICD9 Codes were added for:
Deep surgical site infection ICD9 Code Range: 998.59
Extremity compartment syndrome ICD-9 Code Range: 998.89, 958.90-958.93 and 958.99
Organ/space surgical site infection ICD9 Code Range: 998.59
- 10/10/2010 **Schema Changes:**
1. Initial Field Respiratory Rate (P_11): The maximum constraint was changed from 99 to 120
 2. Initial ED/Hospital Respiratory Rate: The maximum constraint was changed from 99 to 120
 3. Initial ED/Hospital GCS Qualifier: Add menu value 4 (Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to eye)
 - a. This new menu value was previously mapped to Not Applicable
- 2/15/2011 **Flag level changes:**
Appendix 2 "Edit checks for the National Trauma Data Standard Data Elements":
- Rules 5402, 5502, 5602, 5702 were changed to level 5.
 - Added the following Rule IDs: 1705, 3502, 5704, 7004, 7005, 7006, 7909, 9904, 9905, 9906
 - Deleted the following Rule IDs: 6203, 6204, 4703, 4803, 5003, 6504
 - Modified verbiage changes for the following Rule IDs: 5801, 6201, 6801, 7301, 8101
- 02/15/2011 Hospital Procedures (HP_01):
- The definition was changed to read: "Operative and essential procedures conducted during hospital stay. Operative and essential 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."

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- Additional Information now includes instructions to, "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." As well as, "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." And, "Note that the hospital may capture additional procedures"
- The follow lists of procedures were added:

Diagnostic & 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 *

Open cardiac massage

CPR

CNS

Insertion of ICP monitor *

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 *

In addition to coding the individual blood products listed above assign the 99.01 ICD-9 procedure code on patients that receive > 10 units of blood products over first 24 hours following hospital arrival *

Respiratory

Insertion of endotracheal tube*

Continuous mechanical ventilation *

Chest tube *

Bronchoscopy *

Tracheostomy

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Ventriculostomy *

Gastrointestinal

Cerebral oxygen monitoring *

Endoscopy (includes gastroscopy, sigmoidoscopy, colonoscopy)

Musculoskeletal

Gastrostomy/jejunostomy (percutaneous or endoscopic)

Soft tissue/bony debridements *

Percutaneous (endoscopic) gastrojejunoscopy

Closed reduction of fractures

Skeletal and halo traction

Other

Fasciotomy

Hyperbaric oxygen

Decompression chamber

TPN *

2/15/11 The purpose of Level 5 flags was added.

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Table of Contents

Added category:

Measures For Processes of Care

Added subfields:

Highest GCS Total

GCS Motor Component of Highest GCS Total

GCS Assessment Qualifier Component of Highest CGS Total

Cerebral Monitor

Cerebral Monitor Date

Cerebral Monitor Time

Venous Thromboembolism Prophylaxis Type

Venous Thromboembolism Prophylaxis Date

Venous Thromboembolism Prophylaxis Time

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Appendix 2

Added category:

TQIP Measures For Processes of Care

Patient's Occupational Industry (I_04)

Additional Information

Deleted:

Code as Not Applicable if injury is not work-related

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Additional E-Code (I_08)

Additional Information

Added: Activity codes should not be reported in this field

Initial Field GCS - Verbal E-Code (P_14)

Additional Information

Added: If patient is intubated then the GCS Verbal score is equal to 1

Initial Field GCS - Total (P_16)

Additional Information

Revised: 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 not other contradicting documentation

Deleted: 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.

Initial ED/Hospital GCS- Verbal (ED_06)

Additional Information

Deleted: Used to auto-generate an additional calculated field: Revised Trauma Score - ED (adult & pediatric).

Initial ED/Hospital GCS- Verbal (ED_11)

Additional Information

Added: If patient is intubated then the GCS Verbal score is equal to 1

Initial ED/Hospital GCS-Total (ED_13)

Additional Information

Revised: 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 not other contradicting documentation

Deleted: Used to auto-generate an additional calculated field: Revised Trauma Score- ED (adult 7 pediatric).

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.

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Initial ED/Hospital GCS Assessment Qualifiers (ED_14)

Filed Values

Revised: 1. Patient Chemically Sedated or Paralyzed

Additional Information

Added: 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.

Hospital Procedures (HP_01)

Transfusion Information

Added: For pediatric patients (age 14 and under), assign 99.01 ICD-9 procedure code on patients that receive 40cc/kg of blood products over first 24 hours following hospital arrival*

Hospital Procedure Start Time (HP_03)

Additional Information

Added: If distinct procedures with the same procedure code are performed, their start times must be different

Co-Morbid Conditions (DG_01)

Multiple Entry Configuration

Revised: Yes, max 28

Field Values

Revised: 5 Currently receiving chemotherapy for cancer
9 Chronic renal failure
13 Advanced directive limiting care
17 History of myocardial infarction
18 History of PVD

Added: 26 Dementia
27 Major psychiatric illness
28 Drug abuse or dependence
29 Pre-hospital cardiac arrest with CPR

Total ICU Length of Stay (O_01)

Definition

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

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Additional Information

Revised: Recorded in full day increments with any partial calendar day counted as a full calendar day

Added: 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

If the patient had no ICU days according to the above definition, code as 'Not applicable.'

NEW Example Chart

Total Ventilator Days (O_02)

Definition

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

Additional Information

Revised: Non-invasive means of ventilatory support (CPAP or BIPAP) should not be considered in the calculation of ventilator days.

Added: 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.

If the patient was not on the ventilator according to the above definition, code as 'Not applicable.'

NEW Example Chart

Deleted: Field allows for multiple "start" and "stop" dates and calculates total days spent on a mechanical ventilator. If a patient begins and ends mechanical ventilation on the same date, the total ventilator days is one day

Hospital Discharge Date (O_03)

Additional Information

Added: If ED Discharge Disposition = 5 (Died) then Hospital Discharge Date should be NA (BIU=1).

If ED Discharge Disposition = 4,6,9,10, or 11 then Hospital Discharge Date must be NA (BIU = 1).

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Associated Edit Checks

Added: 7712 2 If ED Discharge Disposition = 4,6,9,10, or 11 then Hospital Discharge Date must be NA (BIU = 1)

7713 2 If ED Discharge Disposition = 5 (Died) then Hospital Discharge Date should be NA (BIU=1)

Hospital Discharge Time (O_04)

Additional Information

Added: If ED Discharge Disposition = 5 (Died) then Hospital Discharge Time should be NA (BIU=1).

If ED Discharge Disposition = 4,6,9,10, or 11 then Hospital Discharge Time must be NA (BIU = 1).

Associated Edit Checks

Added: 7809 2 If ED Discharge Disposition = 4,6,9,10, or 11 then Hospital Discharge Time must be NA (BIU = 1)

7810 2 If ED Discharge Disposition = 5 (Died) then Hospital Discharge Time should be NA (BIU=1)

Hospital Discharge Disposition (O_05)

Additional Information

Added: If ED Discharge Disposition = 5 (Died) then Hospital Discharge Time should be NA (BIU=1).

If ED Discharge Disposition = 4,6,9,10, or 11 then Hospital Discharge Time must be NA (BIU = 1).

Hospital Complications (Q_01)

Field Values

Revised: 4. Acute kidney injury
5. Acute lung injury/Acute respiratory distress syndrome (ARDS)

Trauma Quality Improvement Program (PM_01 - PM_09)

[NEW--Review the Entire Section](#)

Appendix 1: NTDB Facility Dataset

Table

Added: TQIP/NSP / Yes/No

Other (Province) to All contact (primary, TPM/coord, TMD, Other) address information

Other Registry Software / Specify using provided text box (*under the category Facility Characteristics*)

State/System Characteristics (Only for Third Parties) Category

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(and coordinating subcategories)

Revised: AIS Coding Category

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

The Flag Levels

Level 2 List

Added: Hospital Discharge Date

Hospital Discharge Time

Revised: Initial ED/Hospital Respiratory Assistance

Hospital Discharge Date

Added: 7712 2 If ED Discharge Disposition = 4, 6, 9, 10, or 11 then Hospital Discharge Date must be NA (BIU = 1)

7713 2 If ED Discharge Disposition = 5 (Died) then Hospital Discharge Date should be NA (BIU = 1)

Hospital Discharge Time

Added: 7809 2 If ED Discharge Disposition = 4, 6, 9, 10, or 11 then Hospital Discharge Time must be NA (BIU = 1)

7810 2 If ED Discharge Disposition = 5 (Died) then Hospital Discharge Time should be NA (BIU=1)

TQIP Measures for Processes of Care (NEW category)

[NEW--Review the Entire Section](#)

Appendix 3: National Trauma Data Standard Data Scheme

Added: TQIP Measures for Processes of Care

[NEW--Review the Entire Section \(including sub categories\)](#)

Appendix 4: Glossary of Terms

Changed to: Alcoholism: Evidence of chronic use, such as withdrawal episodes. Exclude isolated elevated blood alcohol level in absence of history of abuse.
ICD-9 Code Range: 291.0 -291.3, 291.81, 291.9, 303.90-303.93, V11.3

Ascites within 30 days: The presence of fluid accumulation (other than blood) in the peritoneal cavity noted on physical examination, abdominal ultrasound, or abdominal CT/MRI.
ICD-9 Code Range: 789.51, 789.59

Bleeding disorder (code range revised)
ICD-9 Code Range: 286.0-286.9; 287.1-287.49; V58.61; V58.63

Currently receiving chemotherapy for cancer: A patient who is currently receiving any chemotherapy treatment for cancer prior to admission.

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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.

ICD-9 CODE RANGE DELETED

Congenital Anomalies (*code range revised*)

ICD-9 Code Range: 740.0 through 759.89

Congestive heart failure (*code range revised*)

ICD-9 Code Range: 398.91, 428.0 - 428.9, 402.01, 402.11, 402.91, 404.11, 404.13, 404.91, 425.0-425.4

Current smoker: A patient who reports smoking cigarettes every day or some days. Excludes patients who smoke cigars or pipes or use smokeless tobacco (chewing tobacco or snuff).

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

ICD-9 Code Range: 403.01, 403.11, 403.91, 404.02, 404.12, 404.03, 404.13, 404.92, 404.93

CVA/residual neurological deficit (*code range revised*)

ICD-9 Code Range: 434.01, 434.11, 434.91, 433.01-433.91, 438.0-438.9

Diabetes mellitus (*code range revised*)

ICD-9 Code Range: 250.00-250.93

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

Esophageal varices (*code range revised*)

ICD-9 Code Range: 456.0-456.21

History of angina within past 1 month (*code range revised*)

ICD-9 Code Range: 413.0-413.9

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

ICD-9 Code Range: 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91

History of PVD (History of peripheral vascular disease): 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 for trauma or resection/repair of abdominal aortic aneurysms, including Endovascular Repair of Abdominal Aortic Aneurysm (EVAR), would not be included.

ICD-9 Code Range: 440.20-440.29, 440.30-440.32 and 443.9

Hypertension requiring medication: History of a persistent elevation of systolic blood pressure >140 mm Hg and a diastolic blood pressure >90

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mm Hg requiring an antihypertensive treatment (e.g., diuretics, beta blockers, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers).

ICD-9 Code Range 401.0, 401.1, 401.9, 642.00-642.04 642.20-642.24 642.30-642.34, 402.0-402.91; 403.00-403.91; 404.00-404.93; 405.01-405.99

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

ICD-9 Code Range: 765.00-765.19, 765.20-765.29, 770.7

Obesity: Defined as a Body Mass Index of 30 or greater.

ICD-9 Code Range: 278.00-278.01, V85.3-V85.4

Respiratory Disease: Defined as severe chronic lung disease, chronic asthma, cystic fibrosis, or chronic obstructive pulmonary disease (COPD) such as emphysema and/or chronic bronchitis resulting in any one or more of the following:

1. Functional disability from COPD (e.g., dyspnea, inability to perform activities of daily living [ADLs])
2. Hospitalization in the past for treatment of COPD
3. Requires chronic bronchodilator therapy with oral or inhaled agents
4. 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.

ICD-9 Code Range: 011.00-011.66, 011.8-011.99, 012.0-012.9, 277.02, 491.0-491.9, 492.0-492.8, 493.00-493.92, 494.0-494.1, 495.0-495.9, 496, 518.2, 518.83-518.89

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.

ICD-9 Code Range: V58.65

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.

ICD-9 Code Range: 571.2, 571.5, 571.6, 571.8, 571.9, 572.2, 572.3, 572.4, 572.8

Added:

Dementia: With particular attention to senile or vascular dementia (e.g. Alzheimer's).

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ICD-9 Code range: 290.0-290.43, 294.0-294.11, 331.0-331.2, 331.82-331.89, 332.0-332.1, 333.0, 333.4,

Major psychiatric illness: Defined as 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.

ICD-9 Code range: 295.00-297.9, 300.0-300.09, 301.0-301.7, 301.83, 309.81, 311, V11.0-V11.2, V11.4-V11.8

Drug abuse or dependence: With particular attention to opioid, sedative, amphetamine, cocaine, diazepam, alprazolam, or lorazepam dependence (excludes ADD / ADHD or chronic pain with medication use as-prescribed).

ICD-9 Code Range: 304.00-304.8, 305.2-305.9

Pre-hospital cardiac arrest with CPR: A sudden, abrupt loss of cardiac function which occurs outside of the hospital, prior to admission at the center in which the registry is maintained, that results in loss of consciousness requiring the initiation of any component of basic and/or advanced cardiac life support by a health care provider.

Changed to:

Acute kidney injury: A patient who did not require chronic renal replacement therapy. 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.

GFR criteria: Increase creatinine x3 or GFR decrease > 75%

Urine output criteria: UO < 0.3ml/kg/h x 24 hr or anuria x 12 hrs

ICD-9 Code Range: 584.5-584.9; 588.0-588.9 585.1, 585.89, 585.9, 593.9, 958.5

ALI/ARDS: Acute Lung Injury/Adult (Acute) Respiratory Distress Syndrome: ALI/ARDS occurs in conjunction with catastrophic medical conditions, such as pneumonia, shock, sepsis (or severe infection throughout the body, sometimes also referred to as systemic infection, and may include or also be called a blood or blood-borne infection), and trauma. It is a form of sudden and often severe lung failure that is usually characterized by a PaO₂ / FiO₂ ratio of < 300 mmHg, bilateral fluffy infiltrates seen on a frontal chest radiograph, and an absence of clearly demonstrable volume overload (as signified by pulmonary wedge pressure < 18 mmHg, if measured, or other similar surrogates such as echocardiography which do not demonstrate analogous findings).

ICD-9 Code Range: 518.5, 518.82

Cardiac arrest with CPR: The sudden abrupt loss of cardiac function that results in loss of consciousness requiring the initiation of any component of basic and/or advanced cardiac life support. Excludes patients that arrive at the hospital in full arrest.

ICD-9 Code Range: 427.5 in conjunction with 99.60-99.69, 427.5 with 37.91; V12.53

Decubitus ulcer: Defined as any partial or full thickness loss of dermis resulting from pressure exerted by the patient's weight against a surface.

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Deeper tissues may or may not be involved. Equivalent to NPUAP Stages II – IV and NPUAP “unstageable” ulcers.

EXCLUDES intact skin with nonblanching redness (NPUAP Stage I), which is considered reversible tissue injury.

ICD-9 Code Range: 707.00 through 707.09 with one code from 707.22-707.25 to indicate the stage using the highest stage documented

Deep surgical site infection: Defined as a deep incisional SSI must meet one of the following criteria:

1. 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:

1. purulent drainage from the deep incision but not from the organ/space component of the surgical site of the following:
2. 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 (>38°C), or localized pain or tenderness. A culture-negative finding does not meet this criterion.
3. an abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination
4. diagnosis of a deep incisional SSI by a surgeon or attending physician.

NOTE: There are two specific types of deep incisional SSIs:

1. 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)
2. 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 INSTRUCTIONS:

• Classify infection that involves both superficial and deep incision sites as deep incisional SSI.

ICD9 Code Range: 674.30, 674.32, 674.34, 996.60-996.63; 996.66-996.69, 998.59

Drug or alcohol withdrawal syndrome: Defined as a set of symptoms that may occur when a person who has been habitually drinking too much alcohol or habitually using certain drugs (e.g. narcotics, benzodiazepine) experiences physical symptoms upon suddenly stopping consumption. Symptoms may include: activation syndrome

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(i.e., tremulousness, agitation, rapid heartbeat and high blood pressure), seizures, hallucinations or delirium tremens.

ICD-9 Code Range: 291.0, 291.3, 291.81, 292.0

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

ICD-9 Code Range: 729.71, 729.72, 998.89, 958.91, 958.92, 958.90

Graft/prosthesis/flap failure (code range revised)

ICD-9 Code Range: 996.00, 996.1, 996.52, 996.55, 996.61, 996.62, 996.72

Myocardial infarction (code range revised)

ICD-9 Code Range: 414.8, 412

Pneumonia (code range revised)

ICD-9 Code Range: 480.0-480.9, 481, 482.0-482.3, 482.30-483.39, 482.40-482.49, 482.81-48.89, 482.9, 483.0-483.8, 484.1-484.8, 485, 486, 997.31

Pulmonary embolism (code range revised)

ICD-9 Code Range 415.11; 415.12; 415.19; 416.2

Stroke/CVA: A focal or global neurological deficit of rapid onset and NOT present on admission. The patient must have at least one of the following symptoms:

1. Change in level of consciousness,
2. Hemiplegia,
3. Hemiparesis,
4. Numbness or sensory loss affecting one side of the body,
5. Dysphasia or aphasia,
6. Hemianopia
7. Amaurosis fugax,
8. Or other neurological signs or symptoms consistent with stroke

AND

- Duration of neurological deficit ≥ 24 h
- OR duration of deficit < 24 h, if neuroimaging (MR, CT, or cerebral angiography) documents a new hemorrhage or infarct consistent with stroke, or therapeutic intervention(s) were performed for stroke, or the neurological deficit results in death

AND

- No other readily identifiable nonstroke 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).

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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.
ICD-9 Code Range: 434.01, 434.11, 434.91, 433.01-433.91, 997.02

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.

Urinary Tract Infection: Defined as an infection anywhere along the urinary tract with clinical evidence of infection, which includes at least one of the following symptoms with no other recognized cause:

1. Fever ≥ 38 C
2. WBC > 100,000 or < 3000 per cubic millimeter
3. Urgency
4. Frequency
5. Dysuria
6. Suprapubic tenderness

AND positive urine culture ($\geq 100,000$ microorganisms per mm^3 of urine with no more than two species of microorganisms)

OR at least two of the following signs or symptoms with no other recognized cause:

1. Fever ≥ 38 C
2. WBC > 100,000 or < 3000 per cubic millimeter
3. Urgency
4. Frequency
5. Dysuria
6. Suprapubic tenderness

AND at least one of the following:

1. Positive dipstick for leukocyte esterase and/or nitrate
2. Pyuria (urine specimen with > 10 WBC/ mm^3 or > 3 WBC/high power field of unspun urine)
3. Organisms seen on Gram stain of unspun urine
4. At least two urine cultures with repeated isolation of the same uropathogen (gram-negative bacteria or *S. saprophyticus*) with $\geq 10^2$ colonies/ml in nonvoided specimens
5. $\leq 10^5$ colonies/ml of a single uropathogen (gram-negative bacteria or *S. saprophyticus*) in a patient being treated with an effective antimicrobial agent for a urinary tract infection
6. Physician diagnosis of a urinary tract infection
7. Physician institutes appropriate therapy for a urinary tract infection

Excludes asymptomatic bacteriuria and "other" UTIs that are more like deep space infections of the urinary tract.

ICD9 Code Range: 595.0-595.9 or 599.0

Added:

Catheter-Related Blood Stream Infection: Defined as organism cultured from the bloodstream that is not related to an infection at another site but

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is attributed to a central venous catheter. Patients must have evidence of infection including at least one of:

Criterion 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.

Criterion 2: Patient has at least one of the following signs or symptoms:

3. Fever >38 C
4. Chills
5. WBC > 100,000 or < 3000 per cubic millimeter
6. Hypotension (SBP <90) or >25% drop in systolic blood pressure
7. Signs and symptoms and positive laboratory results are not related to an infection at another site

AND

8. Common skin contaminant (i.e., diphtheroids [*Corynebacterium* spp.], *Bacillus* [not *B. anthracis*] spp., *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 separate occasions.

Criterion 3:

1. Patient < 1 year of age has at least one of the following signs or symptoms:
 - a. Fever (>38°C core)
 - b. Hypothermia (<36°C core),
 - c. Apnea, or bradycardia
 - d. Signs and symptoms and positive laboratory results are not related to an infection at another site and common skin contaminant (i.e., diphtheroids [*Corynebacterium* spp.], *Bacillus* [not *B. anthracis*] spp., *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 separate occasions.

Osteomyelitis (code range revised)

ICD-9 Code Range: 730.00-730.29

Severe sepsis (code range revised)

ICD-9 Code Range: 785.52, 995.92

Appendix 4: Glossary of Terms

Other Terms

Changed to:

Foreign Visitor is defined as any person visiting a country other than his/her usual place of residence for any reason.

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.

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VALIDATOR CHANGES 2012

Schema Changes

GCS Qualifier

- A. Revise menu text value
 1. Patient chemically sedated or paralyzed
 2. Obstruction to the Patient's eye
 3. Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to the eye

Co-Morbid Condition

- A. Change the list size to 28 (maxOccurs= "28")
- B. Change the definition of menu values
 5. Currently receiving chemotherapy for cancer
 9. Chronic renal failure
 13. Advanced directive limiting care
 17. History of myocardial infarction
 18. History of PVD
 23. Respiratory disease
- C. Remove the value 20 Impaired sensorium
- D. Add the values
 26. Dementia
 27. Major psychiatric illness
 28. Drug abuse or dependence
 29. Pre-hospital cardiac arrest with CPR

Hospital Complication

- A. Change the definition of menu values
 4. Acute kidney injury
 5. Acute lung injury/Acute respiratory distress syndrome (ARDS)

(Note: not a data dictionary change, correcting the XSD. These are slight text changes)

Home Residence

- A. Revise menu value
 3. Migrant Worker

Protective Device

- A. Revise menu value
 6. Child Restraint (booster seat or child car seat)

Added Rules

Rule ID	NTDS Element	Level	Message
7712	Hospital Discharge Date	2	If ED Discharge Disposition = 4, 6, 9, 10, or 11 then Hospital Discharge Date must be NA (BIU = 1)
7713	Hospital Discharge Date	2	If ED Discharge Disposition = 5 (Died) then Hospital Discharge Date must be NA (BIU = 1)
7809	Hospital Discharge Time	2	If ED Discharge Disposition = 4, 6, 9, 10, or 11 then Hospital

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Modified Rules	Rule ID	NTDS Element	Level	Message
	7810	Hospital Discharge Time	2	<p>Discharge Time must be NA (BIU = 1)</p> <p>If ED Discharge Disposition = 4, 6, 9, 10, or 11 then Hospital Discharge Time must be NA (BIU = 1)</p>
	3801	Initial Field Respiratory Rate	2	<p>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</p> <p>Change logic to age >=6 and RR >99 (for adults) OR age <6 and RR >120 (for peds). If Age and Age units are not valued, RR >120. If Age units is anything other than "Years" then assume that the patient is a pediatric one (i.e. < 6).</p> <p>Current behavior is >999</p>
	3803	Initial Field Respiratory Rate	2	<p>Invalid, out of range. 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.</p> <p>Change logic to age >=6 and RR >99 (for adults) OR age <6 and RR >120 (for peds). If Age and Age units are not valued, RR >120. If Age units is anything other than "Years" then assume that the patient is a pediatric one (i.e. < 6).</p> <p>Current behavior is >999</p>

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5001	Initial ED/Hospital Respiratory Rate	2	<p>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</p> <p>Change logic to age >=6 and RR >99 (for adults) OR age <6 and RR >120 (for peds). If Age and Age units are not valued, RR >120. If Age units is anything other than "Years" then assume that the patient is a pediatric one (i.e. < 6).</p> <p>Current behavior is >120 and <=999</p>
5005	Initial ED/Hospital Respiratory Rate	2	<p>Invalid, out of range. 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</p> <p>Change logic to age <6 and RR >99 and <=120 (for peds). If Age and Age units are not valued, RR >99 and <=120. If Age units is anything other than "Years" then assume that the patient is a pediatric one (i.e. < 6).</p> <p>Current behavior is >120 and <=999</p>
6801	Co-Morbid Conditions	2	<p>Invalid value- Change to allow a max constraint of 29 rather than 25.</p>

TQIP SPECIFIC Added Rules

Rule ID	NTDS Element	Level	Message
10001	Highest GCS Total	1	Invalid, out of range
10002	Highest GCS Total	2	Blank, required field
10003	Highest GCS Total	2	<i>Highest GCS</i>

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ID	Field Name	Length	Change Description
			<i>Total cannot be less than GCS Motor Component of Highest GCS Total</i>
10101	GCS Motor Component 1 of Highest GCS Total		Invalid, out of range
10102	GCS Motor Component 2 of Highest GCS Total		Blank, required field
10103	GCS Motor Component 2 of Highest GCS Total		Blank, required to complete variable: <i>Highest GCS Total</i>
10201	GCS Assessment Qualifier Component of Highest GCS Total	1	Invalid, out of range
10202	GCS Assessment Qualifier Component of Highest GCS Total	2	Blank, required field
10301	Cerebral Monitor	1	Invalid, out of range
10302	Cerebral Monitor	2	Blank, required field
10303	Cerebral Monitor	2	<i>If Highest GCS Total ≤ 8 within the first 24 hrs OR Highest GCS Motor score < within the first 24 hrs of ED/hospital arrival, AND at least one injury is in AIS head region, then Cerebral Monitor cannot be NA</i>
10401	Cerebral Monitor Date	1	Invalid value
10402	Cerebral Monitor Date	2	Blank, required field
10403	Cerebral Monitor Date	1	Date out of range
10404	Cerebral Monitor Date	2	<i>If Cerebral Monitor is complete, Cerebral Monitor Date cannot be blank or NA</i>
10405	Cerebral Monitor Date	3	<i>If Cerebral Monitor is complete, Cerebral Monitor Date cannot be Not Known/Not Recorded</i>
10407	Cerebral Monitor Date	4	<i>Cerebral Monitor</i>

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			<i>Date cannot be earlier than ED/Hospital Discharge Date</i>
10408	Cerebral Monitor Date	4	<i>Cerebral Monitor Date cannot be later than Hospital Discharge Date</i>
10501	Cerebral Monitor Time	1	Invalid value
10502	Cerebral Monitor Time	1	Time out of range
10503	Cerebral Monitor Time	2	Blank required field
10504	Cerebral Monitor Time	2	<i>If Cerebral Monitor is complete, Cerebral Monitor Time cannot be blank or NA</i>
10505	Cerebral Monitor Time	3	<i>If Cerebral Monitor is complete, Cerebral Monitor Time cannot be Not Known/Not Recorded</i>
10506	Cerebral Monitor Time	4	<i>If ED/Hospital Arrival Date and Cerebral Monitor Date are the same then Cerebral Monitor Time cannot be earlier than ED/Hospital Arrival Time</i>
10507	Cerebral Monitor Time	4	<i>If Hospital Discharge Date and Cerebral Monitor Date are the same then Cerebral Monitor Time cannot be later than Hospital Discharge Time</i>
10601	Venous Thromboembolism Prophylaxis Type	1	Invalid value, out of range
10701	Venous Thromboembolism Prophylaxis Date	1	Invalid value
10702	Venous Thromboembolism Prophylaxis Date	1	Date out of range

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10703	Venous Thromboembolism Prophylaxis Date	2	Blank, required field
10704	Venous Thromboembolism Prophylaxis Date	2	If <i>VTE Prophylaxis</i> is valued, then <i>VTE Prophylaxis</i> cannot be blank
10705	Venous Thromboembolism Prophylaxis Date	2	If <i>VTE Prophylaxis</i> is valued then <i>VTE Prophylaxis Date</i> cannot be NA
10706	Venous Thromboembolism Prophylaxis Date	4	<i>VTE Prophylaxis Date</i> cannot be earlier than <i>ED/Hospital Arrival Date</i>
10707	Venous Thromboembolism Prophylaxis Date	4	<i>VTE Prophylaxis Date</i> cannot be later than <i>Hospital Discharge Date</i>
10801	Venous Thromboembolism Prophylaxis Time	1	Invalid value
10802	Venous Thromboembolism Prophylaxis Time	1	Time out of range
10803	Venous Thromboembolism Prophylaxis Time	2	Blank, required field
10804	Venous Thromboembolism Prophylaxis Time	2	If <i>VTE Prophylaxis</i> is valued then <i>VTE Prophylaxis Time</i> cannot be blank
10805	Venous Thromboembolism Prophylaxis Time	2	If <i>VTE Prophylaxis</i> is valued then <i>VTE Prophylaxis Time</i> cannot be NA
10806	Venous Thromboembolism Prophylaxis Time	4	If <i>ED Hospital/Arrival Date</i> are the same, <i>VTE Prophylaxis Time</i> cannot be earlier than <i>ED/Hospital Arrival Time</i>

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10807	Venous Thromboembolism Prophylaxis Time	4	If <i>Hospital Discharge Date</i> and <i>VTE Prophylaxis Date</i> Are the same, <i>VTE Prophylaxis Time</i> cannot be later than <i>Hospital Discharge Time</i>
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