# MICHIGAN TQIP VARIABLES & DEFINITIONS

**Trauma Registry Inclusion Criteria:** To ensure consistent data collection across all MTQIP centers and according to the NTDS, 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 in the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM): **800-959.9**

**Excluding the following isolated injuries:**

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

**And must include one of the following in addition to (ICD-9-CM 800-959.9)**

- 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 transfer status)

Patients entered into the trauma registry will then be selected for analysis using TQIP and/or MTQIP inclusion and exclusion criteria.

Def. Source: NTDS 2012

**Case Number:** Registry # from NTRACS or other commercial registry software. This number (six digit number in NTRACS) is automatically assigned by the registry program. We will use only the initial admission (xxxxxx.000) record.

Def. Source: NTRACS

Data Base Column Name: RECORDNO
Type of Field: Numeric
Length: 10

Report: #1

**Trauma Center:** A two letter code that identifies each trauma center. Assigned by the data coordinating center.

WB = Beaumont Health System
BO = Borgess Health
BF = Botsford Hospital
BM = Bronson Methodist Hospital
CO = Covenant HealthCare
DR = Detroit Receiving Hospital
GH = Genesys Health System
HF = Henry Ford Hospital
HU = Hurley Medical Center
MG = Marquette General Health System

MC = Mount Clemens Regional Medical Center
MU = Munson Medical Center
OW = Oakwood Hospital & Medical Center
OS = Oakwood Southshore Medical Center
PO = POH Regional Medical Center
MM = Saint Mary's Health Care
SG = Sinai-Grace Hospital
SP = Sparrow Hospital
SH = Spectrum Health
JO = St. John Providence Health System
SJ = St. Joseph Mercy Hospital Ann Arbor
SM = St. Mary's of Michigan
UM = University of Michigan Health System

Def. Source: MTQIP

Report: None

## DEMOGRAPHICS

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

Def. Source: NTDS 2012

Data Base Column Name: AGE
Type of Field: Numeric
Length: 5

Report: #1

**Sex:** The patient's sex. Patients who have undergone a surgical and/or hormonal sex reassignment should be coded using the current gender assignment.

(1) Male (M)
(2) Female (F)
(3) Not Available/Not Known/Not Recorded (X)

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: SEX
Type of Field: Character
Length: 1

Report: #1

**Race:** The patient's race. 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.

(1) Asian, (A)
(2) Native Hawaiian, or Other Pacific Islander (P)

(3) Other Race (O)
(4) American Indian (I)
(5) Black or African American (B)
(6) White (W)

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: RACE
Type of Field: Character
Length: 2

Report: #1

## INJURY

**Injury Date:** The date the injury occurred. 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 time) should not be used.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: INJDATE
Type of Field: Date
Length: 8

Report: #1

**Injury Time:** The time the injury occurred. Collected as HH:MM in 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 time) should not be used.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: INJTIME
Type of Field: Character (Time Format)
Length: 5

Report: #1

**Mechanism:** Enter the mechanism that caused the injury event. Blunt injuries are the result of an external force exerted onto the body. Penetrating injuries result from the puncturing of the skin creating a wound.

(1) Blunt
(2) Penetrating

Def. Source: NTRACS

Data Base Column Name: BLUNT
Type of Field: Character
Length: 15

Report: #1

**Primary E-Code:** E-code used to describe the mechanism (or external factor) that caused the injury event. The Primary E-code should describe the main reason a patient is admitted to the hospital. E-codes are used to auto-generate two calculated fields: Trauma Type (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix). ICD-9-CM Codes were retained over ICD-10 due to CMS's continued use of ICD-9. Activity codes should not be reported in this field.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ECODE
Type of Field: Character (Alphanumeric)
Length: 5

Report: #1

## ED ADMISSION

**Date arrival/admit TQIP Institution:** The date the patient arrived to the TQIP ED/hospital. Collected as YYYY-MM-DD. If the patient was brought to the TQIP ED, enter date patient arrived at TQIP ED. If patient was directly admitted to the TQIP hospital, enter date patient was admitted to the TQIP hospital.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_ARRDATE
Type of Field: Date
Length: 8

Report: #1

**Time arrival/admit TQIP Institution:** The time that the patient arrived to the TQIP accepting ED/hospital. If the patient was brought to the TQIP ED, enter time patient arrived at TQIP ED. If patient was directly admitted to the TQIP hospital, enter time patient was admitted to the TQIP hospital. Collected as HH:MM in military time.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_ARRTIME
Type of Field: Character
Length: 5

Report: #1

**Direct admit:** Enter whether patient was directly admitted to TQIP accepting facility without ED evaluation (i.e. direct admit to floor or ICU).

(1) Yes (Y)
(2) No (N)

Def. Source: NTRACS

Data Base Column Name: DIR_ADMIT
Type of Field: Character
Length: 1

Report: #1

**Arrived from:** The location where patient arrived from.

(1) Scene of Injury (Scene)
(2) Home (Home)
(3) Transfer from referring hospital ED (Refer Hospital)

Def. Source: NTRACS

Data Base Column Name: ARRIV_FROM
Type of Field: Character
Length: 15

Report: #1

**Complaint:** The description of event that caused the injury. If a matching description is not available choose "other".

(1) Fall (Fall)
(2) Motor Vehicle Collision/Crash (MVC)
(3) Motor Cycle Collison/Crash (MCC)
(4) ATV Collision/Crash (ATV)
(5) Stab with object (Stab)
(6) Gun shot wound (GSW)
(7) Pedestrian vs. Motor Vehicle Collision (MPC)
(8) Bicycle (Injured while riding) (Bicycle)
(9) Other

Def. Source: NTRACS

Data Base Column Name: CHIEFCOMP
Type of Field: Character
Length: 15

Report: #1

## ED ASSESS 1

**First ED Temperature:** First recorded temperature (in degrees Celsius [centigrade]) in the TQIP ED/hospital.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_TEMP
Type of Field: Numeric
Length: 5

Report: #1

**Initial ED/Hospital Pulse Rate:** First recorded pulse in the TQIP ED/hospital (palpated or auscultated), expressed as a number per minute.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_PULSE
Type of Field: Numeric
Length: 3

Report: #1

**Initial ED/Hospital Systolic Blood Pressure:** First recorded systolic blood pressure in the TQIP ED/hospital.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_BP
Type of Field: Numeric
Length: 3

Report: #1

**Intubation Status:** The location of first intubation. LMA or Combitube counts as an intubation.

(1) Never
(2) Field/Scene/En route
(3) ED
(4) OR
(5) ICU
(6) Other (Floor, Radiology, etc.)

Def. Source: MTQIP

Data Base Column Name: INTSTAT
Type of Field: Custom, Character
Length: 20

Report: #1

**CPR:** CPR performed in the ED of OSH or TQIP hospital. Check yes if patient received chest compressions or external/internal cardioversion (defibrillation) in ED. Do not include respiratory arrest requiring rescue breathing or intubation.

(1) ED CPR (CPR Performed in ED)
(2) Not Performed (Not Performed)

Def. Source: NTRACS

Data Base Column Name: CPR
Type of Field: Character
Length: 15

Report: #1

**Initial ED/Hospital GCS – Eye:** First recorded Glasgow Coma Score (Eye) in the TQIP ED/hospital. 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.

(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

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_EYE
Type of Field: Numeric
Length: 2

Report: #1

**Initial ED/Hospital GCS – Verbal:** First recorded Glasgow Coma Score (Verbal) in the TQIP ED/hospital. If patient s 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.

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

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_VRB
Type of Field: Numeric
Length: 2

Report: #1

**Initial ED/Hospital GCS – Motor:** First recorded Glasgow Coma Score (Motor) in the TQIP ED/hospital. 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.

(1) No motor response
(2) Extension to pain
(3) Flexion to pain

(4) Withdrawal from pain
(5) Localizing pain
(6) Obeys commands

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_MTR
Type of Field: Numeric
Length: 2

Report: #1

**Initial ED/Hospital GCS – Total:** First recorded Glasgow Coma Score (total) in the TQIP ED/hospital. 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 contraindicating documentation.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_GCS
Type of Field: Numeric
Length: 2

Report: #1

**Initial ED/Hospital GCS Assessment Qualifiers:** Documentation of factors potentially affecting the first assessment of GCS upon arrival in the TQIP ED/hospital. 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 one of the below listed agents. 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.

(1) S=Patient Chemically Sedated
(2) T=Patient Intubated
(3) TP=Patient Intubated and Chemically Paralyzed
(4) L=Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to eye

OR if available in your registry

(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

| **Neuromuscular Blockers** |
|---|

| Trade Name | Generic Name |
|---|---|
| Anectine | succinylcholine |
| Tracrium | atracurium |
| Mivacron | mivacurium |
| Nimbex | cisatracurium |
| Pavulon | pancuronium |
| Norcuron | vecuronium |
| Zemuron | rocuronium |

Def. Source: NTRACS

Data Base Column Name: ED_CALCAQ
Type of Field: Character
Length: 2

Report: #1

**ETOH:** Initial blood alcohol level in mg/dL in TQIP ED/hospital. Default is -5.00.

Def. Source: NTRACS

Data Base Column Name: ETOH
Type of Field: Numeric
Length: 7

Report: #1

**Hematocrit:** First measured hematocrit in TQIP ED/hospital.

Def. Source: NTRACS

Data Base Column Name: HCT
Type of Field: Numeric
Length: 4

Report: #1

**ED ASSESS 2**

**Admit Service:** The service that the patient was admitted to.
(1) Trauma
(2) Others

Def. Source: NTRACS

Data Base Column Name: ADMSERVICE
Type of Field: Character
Length: 15

Report: #1

**ED Discharge Disposition:** The disposition of the patient at the time of discharge from the TQIP ED. Based upon UB-40 disposition coding. If the patient is directly admitted to the hospital, code as NA. If ED Discharge Disposition is 4, 5, 6, 9, 10, 11, then Hospital Discharge Date, Time, and Disposition should be NA.

(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) Died
(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

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ED_DISP
Type of Field: Character
Length: 15

Report: #1

**Signs of Life:** Indication of whether patient arrived at ED/Hospital with signs of life.
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.

(1) Arrived with NO signs of life (Code as DOA if this option does not exist.)
(2) Arrived with signs of life

Def. Source: NTDS 2012

Data Base Column Name: DEATHINED
Type of Field: Yes/No*, Logical
Length:

Report: #1

## DIAGNOSIS

**ICD-9-CM Code:** Diagnoses related to all identified injuries. Injury diagnoses as defined by (ICD-9-CM) codes (code range: 800-959.9). The maximum number of diagnoses that may be reported for an individual patient is 50. 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.

Def. Source: NTDS 2012

Data Base Column Name: DCODE
Type of Field: Character
Length: 6

Report: #2 (Include RECORDNO, TRAUMACTR, DXNUMBER, DCODE, TDIA_DESCR)

**AIS Severity:** The Abbreviated Injury Scale (AIS) severity codes that reflect the patient's injuries. The required resource is AIS 2005.

(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

Def. Source: NTDS 2012

Data Base Column Name: AISCODE
Type of Field: Character
Length: 8

Report: #3 (Include RECORDNO, TRAUMACTR, DXNUMBER, AISCODE)

**ISS:** Calculated injury severity score from the trauma registry. Each injury is assigned an Abbreviated Injury Scale (AIS) score and is allocated to one of six body regions (Head, Face, Chest, Abdomen, Extremities (including Pelvis) and External). The 3 most severely injured body regions have their AIS score squared and added together to produce the ISS. Only the highest AIS score in each body region is used. The ISS takes values from 0 to 75. If an injury is assigned an AIS of 6 (unsurvivable injury), the ISS is automatically assigned to 75.

Def. Source: NTRACS

Data Base Column Name: USRAIS_ISS
Type of Field: Numeric
Length: 2

Report: #1

**nISS:** Calculated new injury severity score from the trauma registry. Each injury is assigned an Abbreviated Injury Scale (AIS) score and is allocated to one of six body regions (Head, Face, Chest, Abdomen, Extremities (including Pelvis) and External). The 3 highest AIS scores regardless of regions are squared and added together to produce the nISS. The nISS takes values from 0 to 75. If an injury is assigned an AIS of 6 (unsurvivable injury), the nISS is automatically assigned to 75.

Def. Source: NTRACS

Data Base Column Name: NISS
Type of Field: Numeric
Length: 2

Report: #1

**Max Head/Neck AIS:** Maximum severity value of AIS from 0-6 of individual injuries as defined by Abbreviated Injury Scale for all injuries in the head/neck region. Head or neck injuries include injury to the brain or cervical spine, skull or cervical spine fractures.

Data Base Column Name: USRAISHN
Type of Field: Numeric
Length: 2

Report: #1

**Max Face AIS:** Maximum severity value of AIS from 0-6 of individual injuries as defined by Abbreviated Injury Scale for all injuries in the face region. Facial injuries include those involving mouth, ears, nose and facial bones.

Data Base Column Name: USRAISFAC
Type of Field: Numeric
Length: 2

Report: #1

**Max Chest AIS:** Maximum severity value of AIS from 0-6 of individual injuries as defined by Abbreviated Injury Scale for all injuries in the chest region. Chest injuries include all lesions to internal organs. Chest injuries also include those to the diaphragm, rib cage, and thoracic spine.

Data Base Column Name: USRAISCHS
Type of Field: Numeric
Length: 2

Report: #1

**Max Abdomen or Pelvic Contents AIS:** Maximum severity value of AIS from 0-6 of individual injuries as defined by Abbreviated Injury Scale for all injuries in the abdomen region. Abdominal or pelvic contents injuries include all lesions to internal organs. Lumbar spine lesions are included in the abdominal or pelvic region.

Data Base Column Name: USRAISABD
Type of Field: Numeric
Length: 2

Report: #1

**Max Extremity or Pelvic Girdle AIS:** Maximum severity value of AIS from 0-6 of individual injuries as defined by Abbreviated Injury Scale for all injuries in the extremity region. Injuries to the extremities or to the pelvic or shoulder girdle include sprains, fractures, dislocations, and amputations, except for the spinal column, skull and rib cage.

Data Base Column Name: USRAISEXT
Type of Field: Numeric
Length: 2

Report: #1

**Max External AIS:** Maximum severity value of AIS from 0-6 of individual injuries as defined by Abbreviated Injury Scale for all injuries in the external region. External injuries include lacerations, contusions, abrasions, and burns, independent of their locations on the body surface.

Data Base Column Name: USRAISST
Type of Field: Numeric
Length: 2

Report: #1

## COMORBIDITY

The value "Not Applicable" should be used for patients with no known co-morbid conditions.

Def. Source: NTDS 2012

Data Base Column Name: COMORCODE
Type of Field: Character
Length: 4

Report: #4 (Include RECORDNO, TRAUMACTR, COMORCODE, COMORDESCR )

## GENERAL

**Alcoholism:** The patient admits to drinking > 2 ounces of hard liquor or > two 12 oz. cans of beer or > two 6 oz. glasses of wine per day in the two weeks prior to admission. If the patient is a binge drinker, divide out the numbers of drinks during the binge by seven days, then apply the definition. Include evidence of chronic use, such as withdrawal episodes. Exclude isolated elevated blood alcohol level in absence of history of abuse. Determine inclusion based on the brief screening tool used at your institution.

N.02 Alcoholism (NTDS 2)

Def. Source: NSQIP, NTDS 2012

**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).

X.xx Current Smoker (NTDS 8)

Def. Source: NSQIP, NTDS 2012

**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).

X.xx Drug Abuse or Dependence (NTDS 28)

Def. Source: NTDS 2012

**Diabetes Mellitus:** Diabetes mellitus prior to injury that required exogenous parenteral insulin or an oral hypoglycemic agent. Do not include a patient if diabetes is controlled by diet alone.

B.01 Insulin Dependent (NTDS 11)
B.02 Non-Insulin Dependent (NTDS 11)
B.03 Diabetes Mellitus (NTDS 11)

Def. Source: NSQIP, NTDS 2012

**Advanced Directive Limiting Care:** The patient had a Do Not Resuscitate (DNR) document or similar advance directive recorded prior to injury. If the DNR order as defined above was rescinded immediately upon arrival to the TQIP institution in order to emergently care for the patient, enter "YES". Answer "NO" if DNR discussions are documented in prior documentation, but no official DNR order has been written..

Z.01 Do Not Resuscitate (DNR) Status (NTDS 13)

Def. Source: NSQIP, NTDS 2012

**Functionally Dependent Health Status:** Pre-injury functional status may be represented by the ability of the patient to complete activities of daily living (ADL) including: bathing, feeding, dressing, toileting, and walking. This item is marked YES if the patient, prior to injury, was partially dependent or completely dependent upon equipment, devices or another person to complete some or all activites of daily living. Formal definitions of dependency are listed below.

1. **Partially dependent:** The patient requires the use of equipment or devices coupled with assistance from another person for some activities of daily living. Any patient coming from a nursing home setting who is not totally dependent would fall into this category, as would any patient who requires kidney dialysis or home ventilator support that requires chronic oxygen therapy yet maintains some independent functions.
2. **Totally dependent**: The patient cannot perform any activities of daily living for himself/herself. This would include a patient who is totally dependent upon nursing care, or a dependent nursing home patient. All patients with psychiatric illnesses should be evaluated for their ability to function with or without assistance with ADLs just as the non-psychiatric patient.

X.xx Functionally Dependent Health Status (NTDS 15)

Def. Source: NSQIP, NTDS 2012

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

| BMI ($kg/m^2$) | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Height (in.) | Weight (lbs.) | | | | | | | | | | | | | |
| 58 | 91 | 96 | 100 | 105 | 110 | 115 | 119 | 124 | 129 | 134 | 138 | 143 | 167 | 191 |
| 59 | 94 | 99 | 104 | 109 | 114 | 119 | 124 | 128 | 133 | 138 | 143 | 148 | 173 | 198 |
| 60 | 97 | 102 | 107 | 112 | 118 | 123 | 128 | 133 | 138 | 143 | 148 | 153 | 179 | 204 |
| 61 | 100 | 106 | 111 | 116 | 122 | 127 | 132 | 137 | 143 | 148 | 153 | 158 | 185 | 211 |
| 62 | 104 | 109 | 115 | 120 | 126 | 131 | 136 | 142 | 147 | 153 | 158 | 164 | 191 | 218 |
| 63 | 107 | 113 | 118 | 124 | 130 | 135 | 141 | 146 | 152 | 158 | 163 | 169 | 197 | 225 |
| 64 | 110 | 116 | 122 | 128 | 134 | 140 | 145 | 151 | 157 | 163 | 169 | 174 | 204 | 232 |
| 65 | 114 | 120 | 126 | 132 | 138 | 144 | 150 | 156 | 162 | 168 | 174 | 180 | 210 | 240 |
| 66 | 118 | 124 | 130 | 136 | 142 | 148 | 155 | 161 | 167 | 173 | 179 | 186 | 216 | 247 |
| 67 | 121 | 127 | 134 | 140 | 146 | 153 | 159 | 166 | 172 | 178 | 185 | 191 | 223 | 255 |
| 68 | 125 | 131 | 138 | 144 | 151 | 158 | 164 | 171 | 177 | 184 | 190 | 197 | 230 | 262 |
| 69 | 128 | 135 | 142 | 149 | 155 | 162 | 169 | 176 | 182 | 189 | 196 | 203 | 236 | 270 |
| 70 | 132 | 139 | 146 | 153 | 160 | 167 | 174 | 181 | 188 | 195 | 202 | 207 | 243 | 278 |
| 71 | 136 | 143 | 150 | 157 | 165 | 172 | 179 | 186 | 193 | 200 | 208 | 215 | 250 | 286 |
| 72 | 140 | 147 | 154 | 162 | 169 | 177 | 184 | 191 | 199 | 206 | 213 | 221 | 258 | 294 |
| 73 | 144 | 151 | 159 | 166 | 174 | 182 | 189 | 197 | 204 | 212 | 219 | 227 | 265 | 302 |
| 74 | 148 | 155 | 163 | 171 | 179 | 186 | 194 | 202 | 210 | 218 | 225 | 233 | 272 | 311 |
| 75 | 152 | 160 | 168 | 176 | 184 | 192 | 200 | 208 | 216 | 224 | 232 | 240 | 279 | 319 |
| 76 | 156 | 164 | 172 | 180 | 189 | 197 | 205 | 213 | 221 | 230 | 238 | 246 | 287 | 328 |

X.xx Obesity (NTDS 22)

Def. Source: NTDS 2012

**PULMONARY**

**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.

L.03 Respiratory Disease (NTDS 23)

Def. Source: NSQIP, NTDS 2012

**HEPATOBILIARY**

**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.

G.02 Ascites (NTDS 3)

Def. Source: NTDS 2012

**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.

G.02 Cirrhosis (NTDS 25)

Def. Source: NSQIP, Up-to-date, NTDS 2012

**GASTROINTESTINAL**

**Esophageal Varices:** Esophageal varices are engorged collateral veins in the esophagus which bypass a scarred liver to carry portal blood to the superior vena cava. A sustained increase in portal pressure results in esophageal varices which are most frequently demonstrated by direct visualization at esophagogastroscopy.

C.02 Esophageal Varices (NTDS 14)

Def. Source: NSQIP, NTDS 2012

**CARDIAC**

**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.

X.xx Pre-hospital cardiac arrest with CPR (NTDS 29)

Def. Source: NTDS 2012

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

1. Abnormal limitation in exercise tolerance due to dyspnea or fatigue
2. Orthopnea (dyspnea on lying supine)
3. Paroxysmal nocturnal dyspnea (awakening from sleep with dyspnea)
4. Increased jugular venous pressure
5. Pulmonary rales on physical examination
6. Cardiomegaly
7. Pulmonary vascular engorgement

A.03 Congestive Heart Failure (NTDS 7)

Def. Source: NSQIP, NTDS 2012

**History of Angina within past 1 month:** Pain or discomfort between the diaphragm and the mandible resulting from myocardial ischemia. Typically angina is a dull, diffuse (fist sized or larger) substernal chest discomfort precipitated by exertion or emotion and relieved by rest or nitroglycerine. Radiation often occurs to the arms and shoulders and occasionally to the neck, jaw (mandible, not maxilla), or interscapular region. For patients on anti-anginal medications, enter yes only if the patient has had angina within one month prior to admission.

X.xx Angina (NTDS 16)

Def. Source: NSQIP, NTDS 2012

**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.

A.05 Myocardial Infarction (NTDS 17)

Def. Source: NSQIP, NTDS 2012

**History of PVD (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.). Include patients who have had any type of amputation procedure for PVD (e.g., toe amputations, transmetatarsal amputations, below the knee or above the knee amputations). Exclude patients who have had amputation for trauma or resection/repair of abdominal aortic aneurysms, including Endovascular Repair of Abdominal Aortic Aneurysm (EVAR).

X.xx History of Revasc/Amp for PVD (NTDS 18)

Def. Source: NSQIP, NTDS 2012

**Hypertension Requiring Medication:** History of a persistent elevation of systolic blood pressure > 140 mm Hg or diastolic blood pressure > 90 mm Hg that requires antihypertensive treatment (e.g., diuretics, beta blockers, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers) prior to the time of injury. History of hypertension prior to injury must be documented in the patient's chart.

A.06 Hypertension (NTDS 19)

Def. Source: NSQIP, NTDS 2012

**RENAL**

**Chronic Renal Failure:** Acute or chronic renal failure prior to injury that was requiring treatment with peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration.

M.02 Dialysis (Excludes Transplant Patients) (NTDS 9)

Def. Source: NSQIP, NTDS 2012

**CENTRAL NERVOUS SYSTEM**

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

J.09 CVA/Hemiparesis (Stroke with Residual) (NTDS 10)

Def. Source: NSQIP, NTDS 2012

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

X.xx Dementia (NTDS 26)

Def. Source NTDS 2012

**PSYCHIATRIC**

**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.

X.xx Major Psychiatric Illness (NTDS 27)

Def. Source NTDS 2012

**NUTRITIONAL/IMMUNE/OTHER**

**Congenital Anomalies:** Defined as documentation of a cardiac, pulmonary, body wall, CNS/spinal, GI, renal, orthopaedic, or metabolic congenital anomaly.

X.xx Congenital Anomalies (NTDS 6)

Def. Source: NTDS 2012

**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," "carcinomatosis". Common sites of metastases include major organs (e.g., brain, lung, liver, meninges, abdomen, peritoneum, pleura, bone).

Report Acute Lymphocytic Leukemia (ALL), Acute Myelogenous Leukemia (AML), and Stage IV Lymphoma under this variable.

Do not report Chronic Lymphocytic Leukemia (CLL), Chronic Myelogenous Leukemia (CML), Stages I through III Lymphoma, or Multiple Myeloma as disseminated cancer.

Example: A patient with a primary breast cancer with positive nodes in the axilla does NOT qualify for this definition. She has spread of the tumor to a site other than the primary site, but does not have widespread metastases. A patient with primary breast cancer with positive nodes in the axilla AND liver metastases does qualify, because she has both spread of the tumor to the axilla and other major organs.

Example: A patient with colon cancer and no positive nodes or distant metastases does NOT qualify. A patient with colon cancer and several local lymph nodes positive for tumor, but no other evidence of metastatic disease does NOT qualify. A patient with colon cancer with liver metastases and/or peritoneal seeding with tumor does qualify.

Example: A patient with adenocarcinoma of the prostate confined to the capsule does NOT qualify. A patient with prostate cancer that extends through the capsule of the prostate only does NOT qualify. A patient with prostate cancer with bony metastases DOES qualify.

H.02 Concurrent or Existence of Metastasis (NTDS 12)

Def. Source: NSQIP, NTDS 2012

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

F.02 Routine Steroid Use (NTDS 24)

Def. Source: NSQIP, NTDS 2012

**Bleeding Disorder:** Any condition that places the patient at risk for excessive bleeding due to a deficiency of blood clotting elements (e.g., vitamin K deficiency, hemophilias, thrombocytopenia, chronic anticoagulation therapy with Coumadin, Plavix, or similar medications). Do not include patients on chronic aspirin therapy or coagulopathy of cirrhosis.

The following is a list of medications that impact the patient's risk for bleeding. Please utilize the associated time frames for discontinuation of medication to determine your answer to this variable.

| **Medication** | **Time Frame** |
|---|---|
| Coumadin (warfarin) | 5 days |
| Heparin (IV only) | 4 hours |
| Plavix (clopidogrel) | 10 days |
| Ticlid (ticlopidine) | 14 days |
| Lovenox (enoxaparin) | 12 hours |
| Reopro (abciximab) | 9 days |
| Integrilin (eptifibatide) | 2 days |

| | |
|---|---|
| Agrylin (anagrelide) | 3 days |
| Fragmin (dalteparin) | 24 hours |
| Aggrastat (tirofiban) | 4 hours |
| Pradaxa (dabigatran etexilate) | 2 days |
| Xarelto (rivaroxaban) | 2 days |

D.01 Acquired Coagulopathy (NTDS 4)

Def. Source: NSQIP, NTDS 2012

**Chemotherapy for Cancer:** A patient who is currently receiving 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 lymphomas, leukemia, and multiple myeloma. Do not include if treatment consists solely of hormonal therapy.

F.04 Active Chemotherapy (NTDS 5)

Def. Source: NSQIP, NTDS 2012

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

X.xx Prematurity (NTDS 21)

Def. Source: NTDS 2012

**Other:** Enter other chronic co-morbid conditions present prior to injury.

X.xx Other (NTDS 1)

Def. Source: NTDS 2011

**MEDICATIONS**

**Aspirin:** Enter "YES" for patients who report use of aspirin for minimum interval of 7 days prior to injury.

D.05 Aspirin

Def. Source: MTQIP

**Plavix**: Enter "YES" for patients who report use of Plavix (clopidogrel) for minimum interval of 10 days prior to injury.

D.06 Plavix

Def. Source: MTQIP

**Warfarin:** Enter "YES" for patients who report use of Coumadin (warfarin) for a minimum interval of 5 days prior to injury.

D.02 Coumadin Therapy

Def. Source: MTQIP

**Beta Blocker:** Enter "YES" for patients who report use of parenteral beta blocker medication for minimum interval of 2 weeks prior to injury.

| **Beta Blockers** | |
|---|---|
| **Trade Names** | **Generic Names** |
| Sectral | acebutolol |
| Tenormin, Tenoretic | atenolol |
| Betapace AF | sotalol AF |
| Kerlone | betaxolol |
| Zebeta, Ziac | bisoprolol |
| Brevibloc | esmolol |
| Bystolic | nebivolol |
| Coreg | carvedilol |
| Corgard | nadolol |
| Inderal, InnoPran XL | propranolol |
| Trandate | labetalol |
| Levatol | penbutolol |
| Lopressor, Toprol XL | metoprolol |
| | pindolol |
| | sotalol |
| Timolide | timolol |

Z.02 Beta Blocker

Def. Source: MTQIP

**Statin:** Enter "YES" for patients who report use of statin-class medication for minimum interval of 2 weeks prior to injury.

| **Statins** | |
|---|---|
| **Trade Names** | **Generic Names** |
| Advicor, Altoprev, Mevacor | lovastatin |
| Caduet | atorvastatin |
| Crestor | rosuvastatin |
| Lescol | fluvastatin |
| Lipitor | atorvastatin |
| Pravachol | pravastatin |
| Simcor, Vytorin, Zocor | simvastatin |

Z.03 Statin

Def. Source: MTQIP

**Direct Thrombin Inhbitor:** Enter "YES" for patients who report use of direct thrombin inhibitor class medication for minimum interval of 2 days prior to injury.

| **Direct Thrombin Inhibitors** | |
|---|---|
| **Trade Names** | **Generic Names** |
| Pradaxa | dabigatran etexilate |

Z.04 Direct Thrombin Inhibitor

Def. Source: MTQIP

**Factor Xa Inhibitor:** Enter "YES" for patients who report use of a factor Xa inhibitor class medication for minimum interval of 2 days prior to injury.

| **Factor Xa Inhibitors** | |
|---|---|
| **Trade Names** | **Generic Names** |
| Xarelto | rivaroxaban |

Z.05 Factor Xa Inhibitor

Def. Source: MTQIP

## PROCEDURES

**Emergency Operation:** An emergency case is usually performed as soon as possible and no later than 12 hours after patient injury. Answer "YES" if the surgeon and/or anesthesiologist report the case as emergent.

(1) Yes
(2) No

Def. Source: MTQIP

Data Base Column Name: EOPERATE
Custom
Type of Field: Yes/No*
Length: 1

Report: #1

**Hospital Procedures:** 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 desired 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. Use major and minor procedure (ICD-9-CM) IP codes. The maximum number of procedures that may be reported for a patient is 200. Code the field as Not Applicable if patient did not have procedures. 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. The hospital may capture additional procedures.

Def. Source: NTRACS, NTDS 2012

**Diagnostic & Therapeutic Imaging**
Computerized tomographic studies *
Diagnostic ultrasound (includes FAST) *
Doppler ultrasound of extremities *
Angiography
Angioembolization
Echocardiography
Cystogram
IVC filter (**MTQIP process measure**)
Urethrogram

**Cardiovascular**
Central venous catheter *
Pulmonary artery catheter *
Cardiac output monitoring *
Open cardiac massage
CPR

**CNS**
Insertion of ICP monitor * (**MTQIP process measure**)
Ventriculostomy * (**MTQIP process measure**)
Cerebral oxygen monitoring * (**MTQIP process measure**)

**Musculoskeletal**
Soft tissue/bony debridements *
Closed reduction of fractures
Skeletal and halo traction
Fasciotomy

**Genitourinary**
Ureteric catheterization (i.e. Ureteric stent)
Suprapubic cystostomy

**Respiratory**
Insertion of endotracheal tube *
Continuous mechanical ventilation *
Chest tube *
Bronchoscopy *
Tracheostomy

**Gastrointestinal**
Endoscopy (includes gastroscopy, sigmoidoscopy, colonoscopy)
Gastrostomy/jejunostomy (percutaneous or endoscopic)
Percutaneous (endoscopic) gastrojejunostomy

**Other**
Hyperbaric oxygen
Decompression chamber
TPN *

Data Base Column Name: OPCODE
Type of Field: Character
Length: 5

Report: #5 (Include RECORDNO, TRAUMACTR, OPNUMBER, OPDATE, OPTIME, OPCODE, OPSDESCR)

**Hospital Procedure Start Date:** The date operative and essential procedures were performed. Collected as YYYY-MM-DD.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: OPDATE
Type of Field: Date
Length: 8

Report: #5 (Include RECORDNO, HOSPID, OPNUMBER, OPDATE, OPTIME, OPCODE, OPSDESCR)

**Hospital Procedure Start Time:** The time operative and essential procedures were performed. Collected as HH:MM. HH:MM should be collected as 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.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: OPTIME
Type of Field: Character (Time Format)
Length: 5

Report: #5 (Include RECORDNO, HOSPID, OPNUMBER, OPDATE, OPTIME, OPCODE, OPSDESCR)

## HOSPITAL OUTCOME

**Hospital Discharge Date:** The date the patient was discharged from the TQIP hospital. 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). 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).

Def. Source: NTDS 2012

Data Base Column Name: DCDATE
Type of Field: Date

Length: 8

Report: #1

**Hospital Discharge Time:** The time the patient was discharged from the TQIP hospital. Collected as HH:MM. HH:MM should be collected as military time. Useed to auto-generate additional calculated field: Total Length of Hospital Stay (elapsed time from ED/hospital arrival to hospital discharge). 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).

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: DCTIME
Type of Field: Character (Time Format)
Length: 5

Report: #1

**Discharge Service:** Choose the Service that the patient was discharged from.

(1) Trauma
(2) Others

Def. Source: NTRACS

Data Base Column Name: HOSDISSERV
Type of Field: Character
Length: 15

Report: #1

**Hospital Discharge Disposition:** The disposition of the patient when discharged from the hospital. Field vale = 6, "home" refers to the patient's current place of residence (e.g., prison, 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 9. Refer to the below glossary for definitions of facilities types.

(1) Discharged/Transferred to a short-term general hospital for inpatient care.
(2) Discharged/Transferred to an Intermediate Care Facility (ICF). Intermediate Care Facility: A facility providing a level of medical care that is less than the degree of care and treatment that a hospital or skilled nursing facility is designed to provide, but greater than the level of room and board.
(3) Discharged/Transferred to home under care of organized home health service. Home Health Service: A certified service approved to provide care received at home as part-time skilled nursing care, speech therapy, physical or occupational therapy or part-time services of home health aides.
(4) Left against medical advice or discontinued care.
(5) Expired.
(6) Discharged home with no home services.
(7) Discharged/Transferred to Skilled Nursing Facility. Skilled Nursing Care: Daily nursing and rehabilitative care that is performed only by or under the supervision of

skilled professional or technical personnel. Skilled care includes administering medication, medical diagnosis and minor surgery.

(8) Discharged/Transferred to hospice care. Hospice: An organization which is primarily designed to provide pain relief, symptom management and supportive services for the terminally ill and their families.

(9) Discharged/Transferred to another type of rehabilitation or long-term care facility.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: HOSPDISP
Type of Field: Character
Length: 30

Report: #1

**Death Location:** Record location of patient death if death in hospital occurred.

(1) ED (Emergency Department)
(2) Floor (Floor)
(3) ICU (Intensive Care Unit)
(4) OR (Operating Room)
(5) Radiology (Radiology)

Def. Source: NTRACS

Data Base Column Name: HODEATHLOC also include DEAD
Type of Field: Character
Length:

Report: #1

**Death in First OR:** Record as "YES" if patient expired during first OR (emergent). OR start time (incision) must be within 12 hours of injury.

(1) Yes
(2) No

Def. Source: MTQIP

Data Base Column Name: DEATH1OR
Type of Field: Custom, Yes/No*
Length: 1

Report: #1

**Total Ventilator Days:** The cumulative amount of time spent on the ventilator. Each partial or full day should be measured as one calendar day. 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. 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.'

| 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 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) |
| K. | Unknown | Unknown | 01/02/11 | 16:00 | |
| | 01/03/11 | 18:00 | 01/03/11 | 20:00 | Unknown (can't compute total) |

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: NVSUP_DAYS
Type of Field: Numeric
Length: 3

Report: #1

**Total ICU Length of Stay:** The cumulative amount of time spent in the ICU. Each partial or full day should be measured as one calendar day. Recorded in full day increments, with any partial day listed as a full day. The calculation assumes that the date and time of starting and stopping an ICU episode are recorded in the patient's chart. 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.'

| 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 | |
| | | | | | |
| **Example #** | **Start Date** | **Start Time** | **Stop Date** | **Stop Time** | **LOS** |
| | 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) |
| | | | | | |

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: ICUDAYS
Type of Field: Numeric
Length: 6

Report: #1

**Total Days in Hospital:** Total number of days spent in hospital (calculate from admit and discharge date).

Def. Source: NTRACS
Data Base Column Name: HOSPDAYS

Type of Field: Numeric
Length: 4

Report: #1

**Withdrawal of Care:** After discussion with patient and/or family the patient underwent elective withdrawal of care (Made DNR and subsequently died).

(1) Yes
(2) No

Def. Source: MTQIP

Data Base Column Name: WDCARE
Type of Field: Custom, Yes/No*
Length: 1

Report: #1

## BLOOD PRODUCTS

**Rx Units Blood in ED or Transport:** Enter as a whole number the total # units of PRBC's administered to the patient in both the TQIP hospital ED and during transport. For transfer patients from another hospital the total amount of blood given prior to arrival at the TQIP hospital should be included within this number regardless of time interval unless the patient was admitted to the OSH prior to transfer.

Def. Source: NTRACS

Data Base Column Name: EDPRBC
Type of Field: Custom, Numeric
Length: 2

Report: #1

**Units PRBC's 0-24 hrs:** Enter the total number of units of packed red blood cells administered during the time 0-24 hrs after injury. Count all units spiked and hung, even if not completely given. 1 unit PRBC = 300-350 mL. For Cell Saver blood, every 500mL of blood re-infused into the patient will equal 1 unit of packed cells. If less than 250mL of Cell Saver blood is re-infused, enter 0.

Def. Source: MTQIP

Data Base Column Name: PRBC24
Type of Field: Custom, Numeric
Length: 2

Report: #1

**Units Blood Total (Hospital):** Enter the total number of units of packed red blood cells administered during the patient's entire hospitalization. Count all units spiked and hung, even if not completely given. 1 unit PRBC = 300-350 mL. For Cell Saver blood, every 500mL of blood re-

infused into the patient will equal 1 unit of packed cells. If less than 250mL of Cell Saver blood is re-infused, enter 0.

Def. Source: MTQIP

Data Base Column Name: PRBCTOT
Type of Field: Custom, Numeric
Length: 2

Report: #1

**Units FFP 0-24 hrs:** Enter the total number units of fresh-frozen plasma administered during the time 0-24 hrs after injury. Count all units spiked and hung, even if not completely given. 1 unit FFP = 150-250 mL

Def. Source: MTQIP
Data Base Column Name: FFP24
Type of Field: Custom, Numeric
Length: 2

Report: #1

**Units FFP Total (Hospital):** Enter the total number units of fresh-frozen plasma administered during the patient's entire hospitalization. Count all units spiked and hung, even if not completely given. 1 unit FFP = 150-250 mL.

Def. Source: MTQIP

Data Base Column Name: FFPTOT
Type of Field: Custom, Numeric
Length: 2

Report: #1

**Units Platelets 0-24 hrs:** Enter the total number of packs of platelets administered during the time 0-24 hrs after injury. Count all units spiked and hung, even if not completely given. 1 pack PLT = 50 mL.

Def. Source: MTQIP

Data Base Column Name: PLT24
Type of Field: Custom, Numeric
Length: 2

Report: #1

**Units Platelets Total (Hospital):** Enter the total number of packs of platelets administered during the patient's entire hospitalization. Count all units spiked and hung, even if not completely given. 1 pack PLT = 50 mL.

Def. Source: MTQIP

Data Base Column Name: PLTTOT
Type of Field: Custom, Numeric
Length: 2

Report: #1

## FINANCIAL

**Primary Method of Payment:** Primary source of payment for hospital care.

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

Def. Source: NTDS 2012

Data Base Column Name: INSUR
Type of Field: Character
Length: 15

## COMPLICATIONS

**Complication TRACS Code:** Enter all corresponding 4-digit codes (NTRACS) or 2-digit codes (NTDS) for complications collected in the outcomes section as you would normally within this field.

Def. Source: NTRACS, NTDS 2012

Data Base Column Name: TCODE
Type of Field: Character
Length: 4

Report: #6 (Include RECORDNO, TRAUMACTR, TCODE, COMP_DESC, COMPOCDATE)

**Complication Date:** For all outcomes, enter the corresponding date when the complication was first recognized. Recognition of the condition is based on satisfying the criteria listed below. The specific term describing the condition does not necessarily have to be identified in the progress notes.

> Example: A progress note states that the patient's incision was red with purulent drainage necessitating opening of the incision by staple removal. This is a positive result for superficial incisional SSI regardless if the note specifically mentions a wound infection.

Def. Source: NTRACS

Data Base Column Name: COMPOCDATE
Type of Field: Date
Length: 8

Report: #6 (Include RECORDNO, TRAUMACTR, TCODE, COMP_DESC, COMPOCDATE)

**WOUND OCCURENCES**

**Superficial Incisional SSI**: Defined as an infection that occurs within 30 days after the operation and infection involves only skin or subcutaneous tissue of the incision
AND at least one of the following:

1. Purulent drainage, with or without laboratory confirmation, from the superficial incision.
2. Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision.
3. 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.
4. Diagnosis of superficial incisional SSI by the surgeon or attending physician.

Do not report the following conditions as SSI:

- Stitch abscess (minimal inflammation and discharge confined to the points of suture penetration).
- Infected bum wound.
- Incisional SSI that extends into the fascial and muscle layers (see deep incisional SSI).

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 5509 NTDS: 23

**Deep Incisional SSI:** 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
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 (> 38C), or localized pain or tenderness
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 incision SSI by a surgeon or attending physician

Note:

- Classify infection that involves both superficial and deep incision sites as deep incisional SSI.
- Report an organ/space SSI that drains through the incision as a deep incisional SSI.

- If an incision spontaneously opens as a result of infection, code for deep incisional SSI.
- 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 CABG).
    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 CABG).

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 5509 NTDS: 12

**Organ/Space SSI:** Defined as 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 an operation and at least one of the following:

1. Purulent drainage from a drain that is placed through a stab wound into the organ/space.
2. Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space.
3. 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.
4. Diagnosis of an organ/space SSI by a surgeon or attending physician.

| **Site-Specific Classifications of Organ/Space Surgical Site Infection** | |
|---|---|
| Arterial or venous infection | Mediastinitis |
| Breast abscess or mastitis | Meningitis or ventriculitis |
| Disc space | Myocarditis or pericarditis |
| Ear, mastoid | Oral cavity (mouth, tongue, or gums) |
| Endocarditis | Osteomyelitis |
| Endometritis | Other infections of the lower respiratory tract (e.g. abscess or empyema) |
| Eye, other than conjunctivitis | Other male or female reproductive tract |
| Gastrointestinal tract | Sinusitis |
| Intra-abdominal, not specified elsewhere | Spinal abscess without meningitis |
| Intracranial, brain abscess or dura | Upper respiratory tract |
| Joint or bursa | Vaginal cuff |

An empyema is the result of accumulation or undrained fluid within the pleural cavity that becomes purulent. Enter "YES" for patients that require chest tube for empyema, empyema tube, VATS drainage, or thoracentesis with positive culture.

Def. Source: NSQIP, NTDS 2012, MTQIP

NTRACS Code: 5503 NTDS: 19

The figure below may help to clarify the anatomic distinctions of these infections.

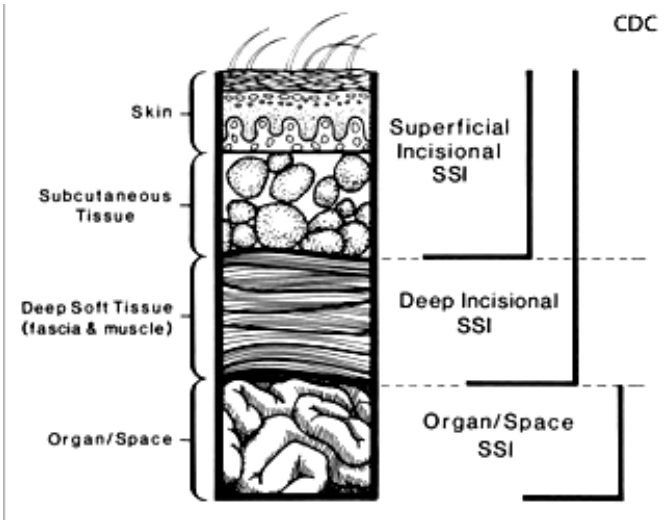


**Figure 1:** Cross-section of abdominal wall depicting classifications of surgical site infection.

**Wound Disruption:** Separation of the layers of a surgical wound, which may be partial or complete, with disruption of the fascia.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 4003 NTDS: 26

**Abdominal Fascia Left Open:** Record as "YES" if the abdominal wall fascia was left open for any reason following exploratory laparotomy. No primary surgical closure of the fascia or intra-abdominal packs left at conclusion of primary laparotomy (damage control).

Def. Source: NTDS 2012, MSQIP

NTRACS Code: NTDS: 3
Type of Field: Yes/No*
Length:

Report: #6

**RESPIRATORY OCCURRENCES**

**Acute Lung Injury/Adult (Acute) Respiratory Distress Syndrome (ARDS):** 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 characterized by PaO2/FiO2 < 300, 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 echocardiogram which do not demonstrate analogous findings).

Def. Source: NTDS 2012

NTRACS Code: 3002 NTDS: 5

**Pneumonia:** Patients with evidence of pneumonia that develops during hospitalization. Patients with pneumonia must meet at least one of the following two criteria:

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

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

**OR**

**Criterion 2:** Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion AND any of the following:

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

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 3008, 3003 NTDS: 20

**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, emergency department, or those intubated for surgery, unplanned intubation occurs if they require reintubation >24 hours after extubation. Intubation followed by extubation the same day for a planned operative intervention is not considered an unplanned intubation.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: None NTDS: 25

**Pulmonary Embolism:** Defined as lodging of a blood clot in the 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.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 3014 NTDS: 21

**URINARY TRACT OCCURRENCES**

**Acute Kidney Injury:** A patient who did not require chronic renal replacement therapy prior to injury, who has worsening of renal dysfunction requiring renal replacement therapy such as hemodialysis, peritoneal dialysis, hemofiltration, hemodiafiltration, or ultrafiltration. If the patient or family refuses treatment (e.g., dialysis), the condition is still considered present.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 6001 NTDS: 4

**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 (≥100,000 microorganisms per $cm^3$ of urine with no more than two species of microorganisms)

OR at least <u>two</u> 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 <u>one</u> 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.

Def. Source: CDC, NSQIP, NTDS 2012

NTRACS Code: 6005, 6003, 6004 NTDS: 27

**CNS OCCURRENCES**

**Stroke/Cerebral Vascular Accident (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).

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.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 7011 NTDS: 22

**CARDIAC OCCURRENCES**

**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.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 3502 NTDS: 8

**Myocardial Infarction:** A new acute myocardial infarction occurring during hospitalization (within 30 days following injury).

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 3505 NTDS: 18

## OTHER OCCURRENCES

**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 the following:

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.

**OR**

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

1. Fever >38 C
2. Chills
3. WBC> 100,000 or < 3000 per cubic millimeter
4. Hypotension (SBP<90) or >25% drop in systolic blood pressure

**AND**

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.

**OR**

Criterion 3: Patient < 1 year of age has at least one of the following signs or symptoms:

1. Fever (>38°C core)
2. Hypothermia (<36°C core),
3. Apnea
4. Bradycardia

**AND**

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.

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

Def. Source: CDC, NTDS 2012

NTRACS Code: 5504 NTDS: 28

**Deep Vein Thrombosis (DVT) / Thrombophlebitis:** 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 venogram, ultrasound, or CT scan. The patient should be treated with anticoagulation therapy and/or placement of a vena cava filter or clipping of the vena cava. Also include as a positive result, patients with deep vein thrombosis where the attending physician documents therapeutic anticoagulation contraindication due to bleeding risk. Do not include as a positive result, thrombosis of superficial veins of the upper or lower extremities, such as the cephalic or greater saphenous vein.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 7502 (LE), 7503 (UE) NTDS: 14

**Drug or Alcohol Withdrawal Syndrome**: Defined as a set of symptoms that may occur when a person who has been drinking too much alcohol or habitually using certain drugs (e.g. narcotics, benzodiazepine) experiences physical symptoms upons suddenly stopping consumption. Symptoms may include: activation syndrome (i.e., tremulousness, agitation, rapid heartbeat and high blood pressure), seizures, hallucinations or delirium tremens.

Def. Source: NTDS 2012

NTRACS Code: NTDS: 13

**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 syndrome usually involves 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. Answer "NO" if a fasciotomy is performed prophylactically without evidence of elevated compartment pressures (> 25mmHg).

Def. Source: NTDS 2012, MTQIP

NTRACS Code: 6501 NTDS: 15

**Abdominal Compartment Syndrome:** Defined as a condition in which there is swelling and sudden increase in pressure within the abdominal space (a fascial compartment) that presses on and compromises blood vessels and end organ function. Alterations typically occur to the respiratory mechanism, hemodynamic parameters, and renal perfusion. Answer "YES" if the abdomen must be opened or a percutaneous drain placed to lower the intraabdominal pressure and relieve end organ dysfunction. Answer "NO" if abdomen was left open and did not require reopening for revision of the temporary closure for abdominal compartment syndrome.

Def. Source: NTDS 2011, MTQIP

NTRACS Code: NTDS: 2
Type of Field: Yes/No*
Length:

Report: #6

**Graft/Prosthesis/Flap Failure:** Mechanical failure of an extracardiac vascular graft or prosthesis including myocutaneous flaps and skin grafts requiring return to the operating room or a balloon angioplasty.

Def. Source: NSQIP, NTDS 2012

NTRACS Code: NTDS: 16

**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.).

Def. Source: NTDS 2012

NTRACS Code: 6508 NTDS: 29

**Other:** Enter other complications post-injury present in physician documentation and requiring treatment, but not on NTDS list. The entry "Not applicable" indicates no complications present at all.

Def. Source: NTDS 2012

NTRACS Code: NTDS: 1

**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/mm$^3$, 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

Def. Source: NSQIP, NTDS 2012

NTRACS Code: 5507, 5511, 5502, 5512 NTDS: 32

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

Def. Source: NTDS 2012

NTDS: 11

**Enterocutaneous Fistula/ GI Leak:** Defined as a fistula of the gastrointestinal tract (stomach, duodenum, small bowel, or large bowel) to the skin, open wound, or body cavity resulting from injury, break down/leak of GI anastomosis, or presence of an open abdominal fascia. This is typically documented in the patient physical exam or by radiologic study with presence of leakage of gastrointestinal contents or contrast.

Def. Source: MTQIP

NTRACS Code: 4005, 4001

**C. Diff Colitis:** Combination of diarrhea, elevated WBC (> 11), and positive stool test for C. diff toxin and/or culture.

Def. Source: MTQIP

Data Base Column Name: CDIFF
Custom
Type of Field: Yes/No*
Length:

Report: #1

Def. Source: NSQIP, NTDS 2012

NTRACS Code: NTDS:

**Unplanned Return to OR:** Unplanned return to the operating room after initial operation management for a similar or related previous procedure.

Def. Source: NTDS 2012

NTRACS Code: NTDS: 30

**Unplanned Return to 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.

Def. Source: NTDS 2012

NTRACS Code: NTDS: 31

## PROCESS MEASURES

### TRAUMATIC BRAIN INJURY

**Highest GCS Total:** Highest total GCS within 24 hours of ED/hospital arrival. Refers to highest total GCS within 24 hours after ED hospital/arrival to index hospital, where index hospital is the

TQIP 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 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 not other contradicting documentation.

Def. Source: TQIP 2012

Data Base Column Name: TBIGCS
Type of Field: Custom, Numeric
Length: 2

Report: #1

**GCS Motor Component of Highest GCS Total:** Highest motor GCS within 24 hours of ED/hospital arrival. Refers to the highest GCS motor score within 24 hours after arrival to index hospital, where index hospital is the TQIP hospital abstracting the data. 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. Must be the motor component of Highest GCS Total. 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.

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

Def. Source: TQIP 2011

Data Base Column Name: TBIMTR
Type of Field: Custom, Numeric
Length: 2

Report: #1

**GCS Assessment Qualifier Component of Highest GCS Total:** Documentation of factors potentially affecting the Highest GCS Total within 24 hours of ED/hospital arrival. Refers to highest GCS assessment qualifier score after arrival to index hospital, where index hospital is the TQIP hospital abstracting the data. Requires review of all data sources to obtain the highest GCS motor score which might occur after the ED phase of care. Identifies 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 blockers commonly used are listed below. 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.

(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

NEW MTQIP TAB QUALIFIERS

L Legitimate without intervention
E Obstruction to eye
S Chemically sedated
T Intubated
TP Intubated and chemically paralyzed
I Inappropriate
? Unknown

| **Neuromuscular Blockers** | |
|---|---|
| **Trade Name** | **Generic Name** |
| Anectine | Succinylcholine |
| Tracrium | Atracurium |
| Mivacron | Mivacurium |
| Nimbex | Cisatracurium |
| Pavulon | Pancuronium |
| Norcuron | Vecuronium |
| Zemuron | rocuronium |

Def. Source: TQIP 2011

Data Base Column Name: TBICALCAQ
Type of Field: Custom, Character
Length: 2

Report: #1

**Cerebral Monitor:** Enter the first (TBIMON1), and if applicable second (TBIMON2), and third (TBIMON3) cerebral monitors placed. This includes any of the following: ventriculostomy, subarachnoid bolt, external ventricular drain (EVD), Camino bolt, jugular venous bulb, Licox monitor. Refers to the insertion of a monitor or device for the purposes of managing a severe TBI Choose not applicable if patient did not have a cerebral monitor.. Must also document under procedures if ICD9 code available.

(1) Intraventricular monitor/catheter (e.g. ventriculostomy, external ventricular drain)
(2) Intraparenchymal pressure monitor (e.g. Camino bolt, subarachnoid bolt, intraparenchymal catheter)
(3) Parenchymal oxygen monitor (e.g. Licox monitor)
(4) Jugular venous bulb

Def. Source: TQIP 2012

Data Base Column Name: TBIMON1, TBI MON2, TBIMON3
Type of Field: Custom, Character (Numeric Output)
Length: 1

Report: #1

**Cerebral Monitor Date:** Date of first (MON1DATE), and if applicable, second (MON2DATE) and third (MON3DATE) cerebral monitors placed. Collected as YYYY-MM-DD. .If no cerebral monitor then code as NA.

Def. Source: TQIP 2011

Data Base Column Name: MON1DATE, MON2DATE, MON3DATE
Type of Field: Custom, Date
Length: 8

Report: #1

**Cerebral Monitor Time:** Time of first (MON1TIME), and if applicable, second (MON2TIME) and third (MON3TIME) cerebral monitors placed. Collected as HH:MM in military time. If no cerebral monitor then code as NA.

Def. Source: TQIP 2011

Data Base Column Name: MON1TIME, MON2TIME, MON3TIME
Type of Field: Custom, Character (Time Format)
Length: 5

Report: #1

**Data Collection Criteria for Reason Cerebral Monitor Withheld:**

**The presence of the following:**
**-**At least one injury in AIS head region
**AND**
-Best post resuscitation GCS within the first 24 hours after ED/hospital arrival ≤ 8 **or** best post resuscitation motor score ≤ 3 within the first 24 hrs of ED/hospital arrival

**Reason Cerebral Monitor Withheld**: Reason for withholding cerebral monitor placement. Coagulopathy refers to an elevated INR or low platelet count that might occur as a result of the injury or pre-existing conditions (e.g. Coumadin). Requires documentation in the medical record as to why cerebral monitor was withheld by a physician. If no reason documented, indicate Not Known/Not Recorded. If cerebral monitor was placed within 8 hours of ED/hospital arrival then code as NA. The wording listed in parentheses is suggested text due to character limitation in software.

(0) Not Known/Not Recorded
(1) Decision to withhold life sustaining measures within 8 hours of ED arrival (Decision to wd w/in 8 hr of ED arrive)
(2) Death prior to correction of coagulopathy (Death b/fore correct of coagulopathy)

(3) Expected to improve within 8 hours due to effects of alcohol and/or drugs (Expect improve w/in 8hr d/t effects Etoh/drug)
(4) Operative evacuation with improvement post-op (OR evac with post-op improve)
(5) No ICP because of coagulopathy (No ICP due to coagulopathy)

Def. Source: MTQIP 2011

Data Base Column Name: TBIWITH
Type of Field: Custom, Character (Numeric Output)
Length: 1

Report: #1

**Data Collection Criteria for Beta Blocker Treatment:**

**The presence of the following:**
**-**At least one injury in AIS head region
**AND**
-Best post resuscitation GCS within the first 24 hours after ED/hospital arrival ≤ 8 **or** best post resuscitation motor score ≤ 3 within the first 24 hrs of ED/hospital arrival

**Beta Blocker Treatment:** Enter "YES" for patients who receive scheduled administration of parenteral or oral beta blocker medication within 48 hours of admission time to the TQIP institution. Do not include patients who receive prn or intermittent administration of beta blocker treatment.

| **Beta Blockers** | |
|---|---|
| **Trade Names** | **Generic Names** |
| Sectral | acebutolol |
| Tenormin, Tenoretic | atenolol |
| Betapace AF | sotalol AF |
| Kerlone | betaxolol |
| Zebeta, Ziac | bisoprolol |
| Brevibloc | esmolol |
| Bystolic | nebivolol |
| Coreg | carvedilol |
| Corgard | nadolol |
| Inderal, InnoPran XL | propranolol |
| Trandate | labetalol |
| Levatol | penbutolol |
| Lopressor, Toprol XL | metoprolol |
| | pindolol |
| | sotalol |
| Timolide | timolol |

Def. Source: MTQIP

Data Base Column Name: TBIBETA
Type of Field: Custom, Logical (True/False Output)

Length:

Report: #1

**VENOUS THROMBOEMBOLISM PROPHYLAXIS**

**Venous Thromboembolism Prophylaxis Type:** Type of first prophylactic agent administered (must be given, not just ordered) to patient.

- 1 Heparin
- 2 Lovenox (enoxaparin)
- 3 Fragmin (dalteparin)
- 4 Other LMWH (including but not limited to Tinzaparin (innohep, logiparin); Nadroparin (fraxiparin)
- 5 None

Def. Source: TQIP 2012

Data Base Column Name: VTETYPE
Type of Field: Custom, Character (Numeric Output)
Length: 1

Report: #1

**Venous Thromboembolism Prophylaxis Date:** Date of administration of first prophylactic dose of heparin Lovenox (Enoxaparin) or Fragmin (Dalteparin) or other low molecular weight heparins.. Collected as YYYY-MM-DD. Refers to date upon which patient first received prophylactic agent indicated in VTE Prophylaxis Type field. Choose NA if never received prophylaxis.

Def. Source: TQIP 2012

Data Base Column Name: VTEDATE
Type of Field: Custom, Date
Length: 8

Report: #1

**Venous Thromboembolism Prophylaxis Time:** Time of administration of first prophylactic dose of heparin, Lovenox (Enoxaparin) or Fragmin (Dalteparin) or other low molecular weight heparins. Collected as HH:MM in military time. Refers to time upon which patient first received prophylactic agent indicated in VTE Type field. Choose NA if never received prophylaxis.

Def. Source: TQIP 2012

Data Base Column Name: VTETIME
Type of Field: Custom, Character (Time Format)
Length: 5

Report: #1

**Change History**

| | |
|---|---|
| 3/16/10 | Unplanned Intubation |
| 4/28/10 | First ED Temperature – Celsius from Fahrenheit . |
| 4/28/10 | First ED/Hospital GCS Eye (Eye) – Allow chart verbage to be used in assigning GCS values. |
| 4/28/10 | First ED/Hospital GCS Verbal (Verbal) – Allow chart verbage to be used in assigning GCS values. |
| 4/28/10 | First ED/Hospital GCS Motor (Motor) – Allow chart verbage to be used in assigning GCS values. |
| 4/28/10 | ED/Hospital GCS Total (Cal'c GCS) – Allow chart verbage to be used in assigning GCS values. |
| 4/28/10 | AIS – Preferred resource is AIS 2005. |
| 4/28/10 | Comorbidity - If no co-morbid conditions are present enter "No NTDS comorbidities are present". (NTDS 1) |
| 4/28/10 | Alcoholism – Determine based on brief screening tool. |
| 4/28/10 | Complication – Two digit NTDS code allowed. |
| 4/28/10 | Complication – Enter date complication recognized. |
| 4/28/10 | Deep Incisional SSI - If wound spontaneously opens as a result of infection, code for deep incisional SSI and wound disruption. |
| 4/28/10 | Unplanned Intubation - In patients who were intubated in the field, Emergency Department or other Hospital, or those intubated for their surgery, unplanned intubation occurs if they require reintubation after being extubated. |
| 4/28/10 | Cardiac Arrest Requiring CPR - Excludes patients that arrive at the hospital in full arrest. |
| 4/28/10 | Systemic Sepsis – Deleted anion gap information. Added: Sepsis with hypotension despite adequate fluid resuscitation combined with perfusion abnormalities that may include, but are not limited to, lactic acidosis, oliguria, or an acute alteration in mental status. Patients who are on inotropic or vasopressor agents may not be hypotensive at the time that perfusion abnormalities are measured. |
| 8/9/10 | Complication UTI – Deleted "postoperative" from definition description. |
| 9/19/10 | Complication Pneumonia – "Postoperative" changed to "pre-injury" in definition description. |
| 9/19/10 | Complication ARF – Deleted "postoperative". Changed "preoperative" to "pre-injury". |
| 9/19/10 | Acquired bleeding disorders – Added exclusion for coagulopathy of cirrhosis. |
| 10/31/10 | Complication DVT – Changed wording (should instead of must) and added clarification about what patients have a DVT. The patient should be treated with anticoagulation therapy and/or placement of a vena cava filter or clipping of the vena cava. Also include as a positive result, patients with deep vein thrombosis where the attending physician documents therapeutic anticoagulation contraindication due to bleeding risk. Do not include as a positive result, thrombosis of superficial veins of the upper or lower extremities, such as the cephalic or greater saphenous vein. |
| 10/31/10 | Complication Date – Variable and definition added. |
| 12/12/10 | Trauma Registry Inclusion Criteria – Added inclusion criteria and definition. |
| 12/12/10 | Trauma Center – Added codes and facility name for Detroit Receiving Hospital, Sparrow Hospital, Botsford Hospital, Covenant Hospital, Mount Clemons Regional Medical Center, Munson Hospital, Oakwood Hospital and Medical Center, Saint Mary's of Michigan, Saint Mary's Mercy Medical Center, and St. John Hospital and Medical Center |

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| 12/12/10 | Age– Removed "Calculated age field from NTRACS" and added "Patient's age at the time of injury (best approximation). " |
| 12/12/10 | Gender – Variable name changed from gender to sex. Deleted "Gender**:** Report the patient's gender as either:" and added "Sex**:** The patient's sex. " |
| 12/12/10 | Race – Removed "Report the patient's race as" and added "The patient's race. 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." Deleted Hispanic and not available. |
| 12/12/10 | Injury Date – Added "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 time) should not be used." |
| 12/12/10 | Injury Time – Added "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 time) should not be used." |
| 12/12/10 | Primary E-code – Deleted "Relevant ICD-9-CM E-code value for the injury event." and added "The Primary E-code should describe the main reason a patient is admitted to the hospital. E-codes are used to auto-generate two calculated fields: Trauma Type (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix). ICD-9-CM Codes were retained over ICD-10 due to CMS's continued use of ICD-9. Activity codes should not be reported in this field." |
| 12/12/10 | First ED HR – Deleted "Enter first recorded systolic blood pressure in the TQIP accepting ED/hospital." and added "First recorded pulse in the TQIP ED/hospital (palpated or auscultated), expressed as a number per minute." |
| 12/12/10 | GCS Assess Qualifier – Deleted "Document factors potentially affecting the first assessment of GCS upon arrival to TQIP center." and "(1) Legitimate value, (2) Chemically sedated, (4) Intubated and chemically paralyzed." Added "Documentation of factors potentially affecting the first assessment of GCS upon arrival in the ED/hospital. 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.)." "(1) Patient Chemically Sedated, (2) Obstruction to the Patient's Eye, (4) Valid GCS: Patient was not sedated, not intubated, and did not have obstruction to eye" |
| 12/12/10 | ED Discharge Disposition – Added definition "The disposition of the patient at the time of discharge from the ED." Deleted the choice "DOA". Added the following choices: Observation unit, Telemetry/step-down unit, Home with services, Other, Home without services, Left against medical advice, and Transferred to another hospital. |
| 12/12/10 | Signs of Life – Added variable. Added definition "Indication of whether patient arrived at ED/Hospital with signs of life. 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." Added the following choices: arrived with NO signs of life or arrive with signs of life. |
| 12/12/10 | ICD-9-CM Code – Added definition "Diagnoses related to all identified injuries. Injury diagnoses as defined by (ICD-9-CM) codes (code range: 800-959.9). The maximum number of diagnoses that may be reported for an individual patient is 50." |
| 12/12/10 | AIS – Added definition "The Abbreviated Injury Scale (AIS) severity codes that reflect the patient's injuries." AIS 2005 became required resource. Added list of severity codes. |

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| 12/13/10 | Comorbidy – Added "The value "Not Applicable" should be used for patients with no known co-morbid conditions" |
| 12/13/10 | Current Smoker – Added variable and definition. |
| 12/13/10 | Diabetes Mellitus – Combined variable diabetes mellitus requiring therapy with insulin and diabetes mellitus requiring therapy with oral hypoglycemic to one variable. |
| 12/13/10 | Functionally Dependent Health Status – Added variable and definition. |
| 12/13/10 | Obesity – Added variable, definition, and chart. |
| 12/13/10 | Respiratory Disease – Deleted "History of Severe COPD" component of variable. Added diffuse interstitial fibrosis and sarcoidosis to definition. |
| 12/13/10 | Ascites within 30 Days – Added variable and definition. |
| 12/13/10 | Cirrhosis – Changed variable name from "Docmented History of Cirrhosis/Ascites." |
| 12/13/10 | Esophageal Varices – Removed "gastric" from variable and definition. |
| 12/13/10 | History of Angina within past 1 month – Added variable and definition. |
| 12/13/10 | History of MI within past 6 months – Added "within 6 months" to variable and definition. |
| 12/13/10 | History of Revascularization / Amputation for PVD – Added variable and definition. |
| 12/13/10 | History of atrial fibrillation – Deleted variable. |
| 12/13/10 | Currently Requiring or on Dialysis – Changed variable name from chronic renal failure requiring dialysis. |
| 12/13/10 | History of Seizure Disorder – Deleted variable. |
| 12/13/10 | Pregnancy – Deleted variable. |
| 12/13/10 | Congenital Anomalies – Added variable and definition. |
| 12/13/10 | Prematurity – Added variable and definition. |
| 12/13/10 | Other – Added variable and definition. |
| 12/13/10 | Hospital Procedures / Operation ICD-9 Code – Expanded definition of procedures to be captured and provided list. |
| 12/13/10 | Laboratory Data – Deleted variables for admission platelet count, PTT, and INR. |
| 12/13/10 | Primary Method of Payment – Added variable and definition. |
| 12/13/10 | Wound Disruption – Deleted variable and definition. |
| 12/13/10 | Abdominal Fascia Left Open – Deleted variable and definition. |
| 12/13/10 | Abdominal Compartment Syndrome – Deleted variable and definition. |
| 12/13/10 | Enterocutaneous Fistula/ GI Leak – Deleted variable and definition. |
| 12/13/10 | C.Diff Colitis – Deleted variable and definition. |
| 12/19/10 | Drug or Alcohol Withdrawal Syndrome – Added variable and definition. |
| 12/19/10 | Systemic Sepsis – Variable name change to Severe Sepsis. |
| 12/19/10 | Graft/Prosthesis/Flap Failure - Added variable and definition. |
| 12/19/10 | Catheter-Related Blood Stream Infection - Added variable and definition. |
| 12/19/10 | Osteomyelitis - Added variable and definition. |
| 12/19/10 | Unplanned Return to the OR - Added variable and definition. |
| 12/19/10 | Unplanned Returb to the ICU - Added variable and definition. |
| 12/19/10 | Other - Added variable and definition. |
| 12/19/10 | UTI – Deleted criteria 2. |
| 12/19/10 | UTI – Deleted frequency from criteria 1 and added WBC > 100,000 or < 3000 per cubic millimeter. |
| 12/19/10 | Myocardial Infarction – Deleted "transmural". |
| 1/19/11 | Functionally Dependent Health Status – Deleted phrasing with "or" referring to equipment, devices or another person. |
| 1/19/11 | Complication Other – Definition of when to use "Not applicable" added. |
| 1/31/11 | Obesity – Changed from BMI 30 or > to BMI 40 or > per NTDS 2011 |

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| 1/31/11 | Signs of Life – Option instructions added for software that have not added this variable. |
| 2/15/11 | Procedures – Deleted procedures to coincide with NTDS 2011. |
| 2/28/11 | UTI – Word symptomatic removed. |
| 3/6/11 | Abd Fascia Left Open, Wound Disruption, C.difficle Colitis, Enterocutaneous Fistula, Abdominal Compartment Syndrome – Returned to definitions. |
| 3/13/11 | Process Measures – Added variables for TBI and VTE. |
| 3/15/11 | Primary Method of Payment updated |
| 3/15/11 | Marquette code changed from MA to MG |
| 4/1/11 | Respiratory Disease – Changed to NTDS 2011 for consistency. |
| 5/1/11 | Process Measures – Revised for TBI. |
| 12/31/11 | Pre-hospital cardiac arrest with CPR – Deleted from pre-hospital section. Added to comorbidities section. |
| 12/31/11 | Hospital Procedures – Added asterisk to Diagnostic ultrasound (includes FAST), Insertion of ICP monitor, Ventriculostomy |
| 12/31/11 | Hospital Procedure Start Time – Add sentence " If distinct procedures with the same procedure code are performed, their start times must be different." |
| 12/31/11 | Congestive Heart Failure – Added requirement for associated symptoms documented 30 days prior to injury |
| 12/31/11 | Current Smoker – Removed the 1 year history of use requirement |
| 12/31/11 | Currently Requiring or on Dialysis – Variable name change to Chronic Renal Failure and removal of inclusion of ultrafiltration |
| 12/31/11 | DNR Status – Variable name change to Advanced Directive Limiting Care |
| 12/31/11 | Esophageal Varices – Removed phrasing requiring identification prior to injury |
| 12/31/11 | Obesity – BMI criteria decreased from 40 to 30 |
| 12/31/11 | Steroid Use – Deleted exclusion of patients who receive short course steroids (< 10 day course) |
| 12/31/11 | Dementia – Variable and definition added |
| 12/31/11 | Major Psychiatric Illness – Variable and definition added |
| 12/31/11 | Drug Abuse or Dependence – Variable and definition added |
| 12/31/11 | Total ICU Length of Stay – Add example table and clause that LOS unable to be calculated if data missing |
| 12/31/11 | Total Ventilator Days – Add example table and clause that LOS unable to be calculated if data missing |
| 12/31/11 | Discharge Date – Name change to Hospital Discharge Date and added if ED Disposition = 4, 5, 6, 9, 10, 11 then output should be NA |
| 12/31/11 | Discharge Time – Name change to Hospital Discharge Time and added if ED Disposition = 4, 5, 6, 9, 10, 11 then output should be NA |
| 12/31/11 | Hospital Discharge Disposition – Added definitions for ICF, Home Health Services, Hospice, and Skilled Nursing Care |
| 12/31/11 | Acute Renal Failure Requiring Dialysis – Name change to Acute Kidney Injury |
| 12/31/11 | ARDS – Name changed to ALI/ARDS. Parameters increased from PaO2/FiO2 of $\leq$ 200 to < 300. Removed 36 hour requirement for persistence. |
| 12/31/11 | Extremity Compartment Syndrome – Definition changed to capture only cases where late diagnosis/threat to limb |
| 12/31/11 | Myocardial Infarction – Deleted requirement for manifestation of Q waves post MI |
| 12/31/11 | Unplanned Intubation – Added "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" |
| 12/31/11 | UTI – Criteria 1: frequency returned to definition and temperature requirement decreased from 38.5C to 38. Criteria 2: entire option added back for consistency. |

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| 12/31/11 | Catheter-Related Blood Stream Infection: Deleted 48 culture requirement. Added criterion 3 for patients < 1 year. |
| 12/31/11 | Severe Sepsis – Deleted criterion for tachycardia and tachypnea. Increased requirement for immature bands from 10% to 20%. |
| 12/31/11 | Process Measures – Output for measures not received changed from "leave blank" to "code as NA" |
| 12/31/11 | VTE Thromboembolism Prophylaxis Type: changed from 1: Heparin, 2:LMWH, 3:None to 1: Heparin, 2: Lovenox, 3: Fragmin, 4: Other LMWH, 5: None |
| 12/31/11 | GCS Assessment Qualifier Component of Highest GCS Total: Previously 1. S=Patient chemically sedated or paralyzed, 2. T=Obstruction to the patient's eye, 3. TP=Patient is intubated, 4. L=Valid GCS" patient was note sedated, not intubated, and did not have obstruction to eye. |
| 12/31/11 | Traumactr: Deleted column for reports 1,2,3,4,5,6. Continue to use as center file name identifier |
| 12/31/11 | Factor 7a Total – Variable deleted |
| 12/31/11 | CRBSI – Added "and" before signs and symptoms component. Add "or" between each of the criteria options. |
| 12/31/11 | C.difficile – Deleted incorrect NTDS complication code 11. Added identifier as a custom data point (NTRACS). |
| 12/31/11 | Direct Thrombin Inhibitor – Added to medications. |
| 12/31/11 | Bleeding Disorder – Added Pradaxa to medication list. |
| 12/31/11 | GCS Assessment Qualifier Component of Highest GCS Total: Added options available on upcoming new MTQIP tab anticipated early 2012. |
| 2/22/12 | Factor Xa Inhibitor – Added to medications |
| 2/22/12 | Bleeding Disorder – Added Xarelto to medication list. |
| 2/22/12 | TBI Process Measures: Highest GCS Total, GCS Motor Highest, GCS Assessment Qualifier of Highest GCS Total, Cerebral Monitor, Cerebral Monitor Date/Time – Deleted capture criteria. |