NB Trauma Database

Reference Guide
For Years 2014-2015

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How to obtain more information

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- visit our website at go.unb.ca/fr-nbirdt
- email us at nb-irdt@unb.ca
- call us at 506-447-3363 Monday to Friday, 8:30am to 4:30pm

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About this guide

This reference guide is intended for users of the NB Trauma Database. The guide provides an overview of the data, the general methodology used in its creation and important technical information. It contains operational procedures as well as table and field descriptions of data elements. The development of this document is an ongoing process and will be updated with changes that occur in the trauma data.

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Overview

The New Brunswick Trauma program registry contains administrative information on the range of personal support, physical, social and mental health services provided to seniors requiring long-term care in New Brunswick.

Data Range

2014 – 2015 (Fiscal year)

Data Source

Horizon Health Network

How to cite this guide

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Acknowledgements

The NB Trauma Database is used with permission of the Horizon Health Network.

About this product

Purpose of the product

The purpose of the Trauma database reference guide is to provide information on the linkable New Brunswick Trauma data held at the New Brunswick Institute for Research Data and Training (NB-IRDT). This data is accessible to researchers for public health and other trauma related research.

Definitions and concepts

Data in the registry is obtained from all Level 1, Level 2, and Level 3 trauma centres in New Brunswick.

Level I	Level II	Level III
Saint John Regional Hospital	The Moncton Hospital	George Dumont Hospital Edmundston Regional Hospital Dr. Everett Chalmers Regional Hospital Hôpital Regional Chaleur Campbellton Regional Hospital Miramichi Regional Hospital

Data entry was performed by trauma nurses and the registry manager, unless the patient had an Injury Severity Score (ISS) greater than 12, or an ISS greater than 9 for all penetrating injuries. These cases are coded by Health Records and thus have more information available, e.g., IDC-10 codes, comorbidities, and complications.

Content

The Trauma registry includes all patients who presented to a hospital via an Emergency Department (ED) with evidence or report of an injury, and subsequently a) were admitted for further treatment or b) died in the ED. For those admitted, the database includes patients who presented directly at an ED prior to admission, and those who were first transferred from the ED of a lower-level (4 or 5) trauma centre to a higher level (1, 2, or 3) trauma centre to receive care.

A null value ‘Unknown’ applies if, at the time of patient care documentation or data abstraction, information was not known. A null value code of ‘Not applicable’ applies if, at the time of patient care documentation, the information requested was not applicable to the patient, the hospitalization or the patient care event. For example, if the patient was not ventilated, then VENTILATION_DAYS is not applicable.

This version of the Trauma database contains six (6) groups of data, shown below:

Field	Field Name
1	Demographic information
2	Patient pathway
3	Additional pre-hospital transport and treatment data
4	Nature of injury
5	Facility vitals and ED interventions
6	Additional data on patients with ISS greater than 12

General methodology

Not applicable

Limitations

This database does not contain all of the variables in the original source data. The variables listed here were determined by the NB Trauma Program to be relevant to future trauma research. For example, variables related to program quality assurance are not included in the database. Further, this registry does not include any procedures or interventions provided to the patient once admitted, or further transfers to receive continuing care or rehabilitation.

Comparison to other products/versions

Not applicable

Using with other products

Not applicable

Reference Date

2014 – 2015 (Fiscal years)

Technical specifications

Record layouts and data descriptions

1. Demographic Information

Type[1]	Variable name	Description
N	ISS12	Patients assigned an ISS greater than 12
N	Sex	Patient sex code
N	Year	Year of birth
N	Res_code	Individual address code

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

ISS12

Identifies patients who were assigned an Injury Severity Score (ISS) greater than 12 (and thus have additional variables describing their injuries)

Code	Description
1	Yes – ISS greater than 12
2	No – ISS is 12 or lower

Sex

Code	Description
1	Male
2	Female
999	Unknown (transgendered, truly unknown, or not documented

Year

The patient's year of birth (YYYY)

Res_Code

Number that identifies the Statistics Canada Census Subdivision Code of the patient's home address (####)

2. Patient Pathway: From Injury to Hospital Admission to Discharge

Type	Variable name	Description
C	INJ_D	Date of injury
C	INJ_T	Time of injury
N	INJ_APPROX	Approximate date/time of injury
N	CALL_D	Ambulance call date
N	CALL_T	Ambulance call time
N	DISPATCH_D	Ambulance dispatch date

N	DISPATCH_T	Ambulance dispatch time
N	LVPOST_D	Date of ambulance departure to scene
N	LVPOST_T	Time of ambulance departure to scene
N	ONSCENE_D	Date ambulance arrived on scene
N	ONSCENE_T	Time ambulance arrived on scene
N	TOPAT_D	If patient not located at scene
N	TOPAT_T	If patient not located at scene
N	LVSCENE_D	Ambulance departure from scene date
N	LVSCENE_T	Ambulance departure from scene time
C	ARRFC1_D	Date ambulance arrived at primary facility
C	ARRFC1_T	Time ambulance arrived at primary facility
N	ORIGIN	Identifies patient origin
N	FC1	Identifies primary treating facility
N	FC2	Identifies secondary treating facility
C	DEPFC1_D	Date patient leaves primary treating facility
C	DEPFC1_T	Time patient leaves primary treating facility
C	ARRFC2_D	Date patient arrives at secondary treating facility
C	ARRFC2_T	Time patient arrives at secondary treating facility
C	REGED_D	Date patient registers in ED of final treating facility
C	REGED_T	Time patient registers in ED of final treating facility
C	LEFTED_D	Date patient leaves ED
C	LEFTED_T	Time patient leaves ED
N	ED_DSP	Patient outcome in ED
C	ADMFC_D	Date patient admitted to facility
C	ADMFC_T	Time patient admitted to facility
N	SERVTYPE	Identifies physician service at admission
N	SERVFLR	Identifies first nursing unit at admission
N	DIS_D	Patient discharge date
C	DIS_T	Patient discharge time
N	DIS_STAT	Patient discharge status
N	DIS_DEST	Discharge destination
N	DIS_FC	Identifies facility to which patient discharged
C	HOSP_LOS	Length of stay at hospital

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

INJ_D

Identifies patient's date of injury (DD/MM/YYYY).

Code	Description
999	The injury date is unknown

INJ_T

Identifies the time when the injury occurred, using the 24-hour clock (XX:XX).

Code	Description
999	The injury time is unknown

INJ_APPROX

If injury date and/or injury time are unknown, this variable can provide an approximate day/time when the injury occurred.

Code	Description
1	Morning (0601 to 1200)
2	Afternoon (1201 to 1800)
3	Evening (1801 to 2400)
4	Night (0001 to 0600)
5	Today
6	Yesterday
7	Less than a week ago
8	More than a week ago
9	Not documented
Blank	Valid missing data – not required

CALL_D and CALL_T

Date and time the call is made to 911 for ambulance to respond to injury

Code	Description
999	The date or time is unknown

DISPATCH_D and DISPATCH_T

Date and time an ambulance is dispatched to respond to the scene by Medical Communications Management Centre

Code	Description
999	The date or time is unknown

LVPOST_D and LVPOST_T

Date and time ambulance leaves post to scene of injury

Code	Description
999	The date or time is unknown

ONSCENE_D and ONSCENE_T

Date and time ambulance is on scene

Code	Description
999	The date or time is unknown

TOPAT_D and TOPAT_T

This date and time is used if patient is not located at the scene

Code	Description
999	The date or time is unknown

LVSCENE_D and LVSCENE_T

Date and time ambulance leaves scene for primary treating facility

Code	Description
999	The date or time is unknown

ARRFC1_D and ARRFC1_T

Date and time ambulance arrives at primary treating facility

Code	Description
999	The date or time is unknown

Origin

Code that identifies whether the patient came from the scene or another facility by ambulance.

Code	Description
1	Scene
2	Transfer
Blank	Valid missing data – not applicable

FC1

Code that identifies the primary treating facility. Depending on the patient's pathway, this may be the hospital that admits the patients, or it may be the hospital that first receives and initially stabilizes the patient prior to transport to another institution for further treatment and admission.

Code	Description	HHN Zone
48	Georges Dumont Hospital – Level 3	1
45	Stella-Maris-de-Kent Hospital – Level 5	
16	Grand Manan Hospital – Level 5	
29	Saint John Regional Hospital – Level 1	2
33	Charlotte County Hospital – Level 5	
34	Sussex Health Centre – Level 5	
1	Dr. Everett Chalmer's Regional Hospital – Level 5	
23	Hotel Dieu St. Joseph's – Level 5	3
46	Oromocto Public Hospital – Level 5	

49	Upper River Valley Hospital – Level 5	
12	Stan Cassidy Rehabilitation Centre	
9	Edmundston Regional Hospital – Level 3	
32	Hotel-Dieu-St-Joseph St-Quentin – Level 5	4
42	Grand Falls General Hospital – Level 5	
5	Campbellton Regional Hospital – Level 3	5
39	Chaleur Regional Hospital – Level 3	
35	Tracadie-Sheila Hospital – Level 5	6
41	Hospital de l'Enfant – Caraquet – Level 5	
22	Miramichi Regional Hospital – Level 3	7

DEPFC1_D and DEPFC1_T

These variables are available for patients that require further treatment at a higher-level trauma centre, and relate to the date and time a patient leaves the primary treating facility.

ARRFC2_D and ARRFC2_T

For patients that require further treatment at a higher-level trauma centre, these variables provide the date and time a patient arrives at the secondary treating facility (FC2)

REGED_D and REGED_T

The date and time of when the patient registers in the ED of the final treating facility.

Code	Description
999	The date or time is unknown

LEFTED_D and LEFTED_T

The date and time of when the patient leaves the ED for further treatment or hospital admission.

Code	Description
999	The date or time is unknown

ED_DSP

Code that identifies what happened to patient in the emergency room – admitted, discharged, etc.

Code	Description
1	Another Acute Care Facility (V)
2	Another Trauma Centre (I, II, III)
3	Patient admitted to operating room (OR)
4	Patient admitted to intensive care unit (ICU)
5	Patient admitted to ward

6	Dies in emergency department (ED)
7	Discharged home
8	Other* (see below)
9	LWBS (Left Without Being Seen)
10	AMA (Against Medical Advice)
888	Not Applicable
999	Unknown

*Non-Trauma Admits: Option 8 is used for patients admitted to facility for non-trauma reasons. The trauma event may have brought them to the facility, but if the reason they are admitted is not trauma related then there is no reason to follow the patient to discharge.

ADMFC_D and ADMFC-T

The date and time when the patient is admitted to the facility.

Code	Description
999	The date or time is unknown

SERVTYPE

Codes identifying the physician service under which the patient is admitted.

Code	Description	Code	Description
1	Family Practice	57	Anaesthesiologist
10	Internist	60	Otolaryngologist
11	Allergist	62	Ophthalmologist
12	Cardiologist	64	Psychiatrist
13	Dermatologist	66	Hematologist
14	Endocrinologist	68	Immunologist
15	Gastro-enterologist	70	Physiatrist
16	Nephrologist	72	Geriatrician
17	Neurologist	74	Oncologist
18	Respirologist	77	Pathologist
19	Rheumatologist	78	Microbiologist
20	Pediatrician	79	Parasitologist
30	General Surgeon	80	Radiologist
31	Cardiac Surgeon	81	Radiotherapist
32	Neurosurgeon	82	Geneticist
33	Oral Surgeon	83	Toxicologist
34	Orthopedic Surgeon	87	Dentist
35	Plastic Surgeon	91	Podiatrist
36	Thoracic Surgeon	95	Vascular Surgeon
37	Transplant Surgeon	96	Infectious Disease Specialist
38	Traumatologist	97	Neonatologist
39	Urologist	99	Intensivist

50	Obstetrician/Gynecologist	888	Not Applicable
55	Critical care physician	999	Unknown

SERVFLR

Reflects the first nursing unit to which a patient has been admitted. For those patients that go to the OR, ED_DSP identifies that the patient went to the OR and this variable will then identify the first nursing unit to which the patient was admitted. OR will no longer be an option to fill in this field.

Code	Description
1	MICU
2	NICU
3	SICU
4	PICU
5	CCU
6	ICU
7	MSICU
8	PACU
9	OR (Retired)
10	ED
11	EIP
12	OBS
13	Not documented
14	DOA
15	DIE

Code	Description	Code	Description
16	S-3AN	25	S-4CN
17	S-3BN	26	S-4CS
18	S-3CN	27	S-4DN
19	S-3CS	28	S-5AN
20	S-3DS	29	S-5AS
21	S-4AN	30	S-5BN
22	S-4AS	31	S-5BS
23	S-4BN	32	S-5CN
24	S-4BS	33	S-5CS

Here, S = Saint John Regional Hospital

Code	Description	Code	Description
34	T-600	40	T-4600
35	T-5600	41	T-4200
36	T-5400	42	T-4100

37	T-5200	43	T-3600
38	T-5100	44	T-3400
39	T-2600	45	T-3200
		46	T-1600

Here, T = The Moncton Hospital

Code	Description	Code	Description
47	D-2SE	52	D-4NW
48	D-3E	53	D-4W
49	D-3SE	54	D-4NE
50	D-3SW	55	D-4SW
51	D-3NW	96	D-4SE

Here, D = Dr. Everett Chalmers Hospital

Code	Description	Code	Description
56	G-3A	62	G-4A
57	G-3B	63	G-4B
58	G-3C	64	G-4C
59	G-3D	65	G-4D
60	G-3E	66	G-4E
61	G-3F	67	G-4F

Here, G = Georges-L-Dumont Hospital

Code	Description	Code	Description
68	C-2E	72	C-2W
69	C-3W	73	C-3E
70	C-1E	74	C-4E
71	C-1W	75	C-4W

Here, C = Chaleur Regional Hospital

Code	Description	Code	Description
76	M-1W	80	M-3E
77	M-1E	81	M-4E
78	M-2W	82	M-4W
79	M-2E		

Here, M = Miramichi Regional Hospital

Code	Description	Code	Description
83	E-OBS	87	E-PSY/PED
84	E-AJC	88	E-Soins Prolonges
85	E-PSY	89	E-MED

86	E-PED	90	E-CHIR
		91	E-GYN

Here, E = Edmundston Regional Hospital

Code	Description	Code	Description
92	K-OBS	94	K-GERI
93	K-PSY	95	K-MEDSURG

Here, K = Campbellton Regional Hospital

DIS_D and DIS_T

Date and time the patient is discharged from the hospital

Code	Description
999	The date or time is unknown

DIS_STAT

Codes representing the discharge status of the patient

Code	Description
6	Discharged alive
7	Died in hospital after admission
8	Died in Emergency, other than failed resuscitation attempt
9	Died after failed resuscitation attempt lasting between 5 and 15 minutes
10	DOA (declared dead on arrival) less than 5 minutes after presentation/resuscitation efforts or no resuscitation attempt

DIS_DEST

Codes indicating the location to which the patient is discharged or the services arranged for the patient immediately upon discharge from the facility.

Code	Description
1	Home
2	Home with support services
3	Another acute care facility: Patient transferred to another facility for continuing care
4	General Rehabilitation Facility: Patient is discharged and admitted to the same facility for rehabilitation care
5	Chronic Care Facility: Patient transferred to chronic care facility. Example: St. Joseph's Hospital or Ridgewood
6	Nursing home
7	Special Rehabilitation facility: Patient transferred to Stan Cassidy Centre for Rehabilitation
8	Foster care/children's aid
9	Other

10	Died

DIS_FC
If discharged to another facility in the trauma network, this variable identifies the hospital.

HOSP_LOS
The total number of hospital days from ADMFC_D TO DIS_D. Patients who were admitted and discharged on the same day, or died on the same day, have a length of stay of 1 day.

3. Additional Pre-Hospital Transport and Treatment Data

Type[1]	Field Name	Description
N	PHP_TYP	Mode of transport to first treating facility
N	PHP_LATD	Latitude (Degrees)
N	PHP_LATM	Latitude (Minutes)
N	PHP_LATS	Latitude (Seconds)
N	PHP_LNGD	Longitude (Degrees)
N	PHP_LNGM	Longitude (Minutes)
N	PHP_LNGS	Longitude (Seconds)
N	PHP_AGNCS	Ambulance agency code
N	AMB_AREA	Ambulance coverage area
N	BYPASS	Bypass code
N	FAC_BYP	Identifies hospital bypassed
N	PHP_SBP1	Systolic blood pressure
N	PHP_DBP1	Diastolic blood pressure
N	PHP_HR1	Heart rate
N	PHP_RR1	Respiratory rate
N	PHP_O21	Oxygen saturation
N	PHP_GCS_EYE1	GCS eye score code
N	PHP_GCS_VERB1	GCS verbal response code
N	PHP_GCS_MTR1	GCS motor response code
N	PHP_GCS_TTL1	Total GCS score
N	PHP_RTS1	Revised trauma score

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

PHP_TYP
Identifies how the patient was transported to the first treating facility.

Code	Description
1	Land ambulance
2	Helicopter ambulance

3	Fixed-wing ambulance
4	Charter fixed-wing (Used for Air Manan flights from Grand Manan)
5	Charter helicopter
6	Private vehicle
7	Walk-In
8	Other
9	Land ambulance to land ambulance (for multiple transports)
999	Unknown

Many patients arrive at an ED through private transportation/walk-ins. However, if the patient used an ambulance, additional information will be available – if INJ_LOC = 7 (NB) and PHP_TYP = 1 (land ambulance), the exact location of the injury as per the responding ambulance's GPD system will be available.

PHP_LATD
Latitude (Degrees)

PHP_LATM
Latitude (Minutes)

PHP_LATS
Latitude (Seconds)

PHP_LNGD
Longitude (Degrees)

PHP_LNGS
Longitude (Seconds)

Code	Description
Blank	Valid missing data – not required

PHP_AGNCS
Code that identifies the ambulance agency that transported the patient.

Code	Description
1	ANB
2	PEI
3	NS
4	PQ
5	US
6	Other

999	Unknown (Identified as ambulance but not sure which one it is)
Blank	Missing data – valid (was a walk-in)

AMB_AREA

If PHP_TYP = 1 (Land ambulance), or if PHP_TYP = 2 (Helicopter ambulance), or if PHP_TYP =3 (Fixed-wing ambulance), the ambulance coverage area of the responding ambulance will be provided.

Code	Description
1	W1: Perth-Andover, Tobique, Plaster Rock, Florenceville
2	W2: Woodstock, Hartland, Dow Settlement
3	W3: Keswick, Fredericton, Oromocto
4	W4: Harvey, McAdam, Fredericton Junction
5	W5: Doaktown, Boiestown, Stanley, Chipman, Minto, Mill Cove
6	S1: Deer Island, Campobello Island, St. Stephen, St. Andrews
7	S2: Lepreau, Grand Manan, Blacks Harbour
8	S3: Saint John, Westfield
9	S4: Sussex, Hampton, Kingston, St. Martins
10	E1: Miramichi, Blackville, Rogersville, Baie-Ste-Anne, Neguac
11	E2 : Elsipogtog, Rexton, Claireville, Bouctouche
12	E3: Moncton
13	E4: Petitcodiac, Salisbury, Hillsborough, Riverside-Albert
14	E5: Shediac, Cap-Pélé, Port Elgin, Sackville
15	N1: Edmundston, St-Francois, Ste-Anne
16	N2: Kedgwick, Saint Quentin, Saint Leonard, Grand Falls
17	N3: Dalhousie, Belledune, Campbellton
18	N4: Bathurst
19	N5: Caraquest, Lamèque, Shippagan, Tracadie
20	AR (Aircare)
21	AM (Air Manan)
22	CR
888	Not Applicable (e.g., not ANB)
999	Unknown
Blanks	Valid missing data – not required or if ambulance, not certain it was ANB

BYPASS

After paramedics assess and treat a trauma patient at the scene of an injury, they apply NB Trauma's Field Trauma Triage (FTT) guidelines, which consider the physiological, anatomical and mechanism of injury. Those with qualifying injuries are either taken to the closest available ED (if an immediate life threat is present) or to a Level 1, 2, or 3 Trauma centre for care. This ensure that patients with major injuries are taken directly to a facility that is best equipped to

help them. Level 5 Trauma centres are also key, offering emergency interventions for those with an immediate life threat and by offering care to trauma patients whose injuries do not qualify them for bypass to a larger facility.

Code	Description
1	Yes
2	No
888	Not Applicable – FTT was not activated
999	Unknown
Blank	Valid missing data – e.g., was not ANB case

FAC_BYP

If BYPASS = 1 (Yes), this variable will indicate the hospital which the patient bypassed.

Code	Description	HHN Zone
20	Moncton City Hospital – Level 2	
26	Sackville Memorial Hospital – Level 5	1
48	Georges Dumont Hospital – Level 3	
45	Stella-Maris-de-Kent Hospital – Level 5	
16	Grand Manan Hospital – Level 5	
29	Saint John Regional Hospital – Level 1	2
33	Charlotte County Hospital – Level 5	
34	Sussex Health Centre – Level 5	
1	Dr. Everett Chalmer's Regional Hospital – Level 5	
23	Hotel Dieu St. Joseph's – Level 5	
46	Oromocto Public Hospital – Level 5	3
49	Upper River Valley Hospital – Level 5	
12	Stan Cassidy Rehabilitation Centre	
9	Edmundston Regional Hospital – Level 3	
32	Hotel-Dieu-St-Joseph St-Quentin – Level 5	4
42	Grand Falls General Hospital – Level 5	
5	Campbellton Regional Hospital – Level 3	5
39	Chaleur Regional Hospital – Level 3	
35	Tracadie-Sheila Hospital – Level 5	6
41	Hospital de l'Enfant – Caraquet – Level 5	
22	Miramichi Regional Hospital – Level 3	7

Paramedics record vital signs and clinical measurements for patients transported by ambulance to a hospital. These are recorded in the registry as the data variables given below. The first variable name for each measurement ends with '1' to denote the first measurement taken. If multiple measurements are taken, data will populate additional variables in sequential order.

PHP_SBP1 and PHP_SBP2
Systolic blood pressure (###)

Code	Description
999	Unknown

PHP_DBP1 and PHP_DBP2
Diastolic blood pressure (###)

Code	Description
999	Unknown

PHP_HR1 and PHP_HR2
Heart rate (###)

Code	Description
999	Unknown

PHP_RR1 and PHP_RR2
Respiratory rate (###)

Code	Description
999	Unknown

PHP_O21 and PHP_O22
Oxygen saturation (###)

Code	Description
999	Unknown

PHP_GCS_EYE1 and PHP_GCS_EYE2
Code that identifies Glasgow Coma Scale (GCS) eye score (grade assigned to best response) for patient

Code	Description
1	No response
2	To pain
3	To sound
4	Spontaneously
999	Unknown

PHP_GCS_VERB1 and PHP_GCS_VERB2
Code that identifies GCS best verbal response for patient

Code	Description
1	No response
2	Incomprehensible sounds

3	Inappropriate words
4	Confused
5	Oriented to time, place and person
999	Unknown

PHP_GCS_MTR1 and PHP_GCS_MTR2

Code that identifies GCS best motor response for patient

Code	Description
1	No response
2	Abnormal extension
3	Abnormal flexion
4	Flexion withdrawal from pain
5	Moves to localized pain
6	Obeys commands
999	Unknown

PHP_GCS_TTL1 and PHP_GCS_TTL2

Patient's total GCS score

Code	Description
15	Best response
8 or less	Comatose
3	Totally responsive
999	Unknown

PHP_RTS1 and PHP_RTS2

Revised Trauma Score. 999 = unknown

Table-1: Revised Trauma Score.

Glasgow Coma Scale (GCS)	Systolic Blood Pressure (SBP)	Respiratory Rate (RR)	Coded Value
13-15	>89	10-29	4
9-12	76-89	>29	3
6-8	50-75	6-9	2
4-5	1-49	1-5	1
3	0	0	0
RTS=0.9368 GCS + 0.7326 SBP + 0.2908 RR			

4. Nature of Injury

Type	Field name	Description
N	INJ_TYPE	Injury identifier
N	INJ_CLASS	Injury class identifier
C	MOI	Mechanism of injury
N	WORK	Identifies work related injuries

N	JOB	Job identifier
N	SPORT	Sport identifier
N	FALL_HGT	Fall height identifier
N	FALL_LOC	Fall location identifier
N	BURN_TYPE	Identifies type of burn
N	PDEVS1	Protective devices identifier
N	MVC_DET	Motorized vehicular collision details
N	VEH_TYPE	Motor vehicle identifier
N	VEH_POS	Patient location identifier
N	EJECTED	Patient ejection identifier

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

INJ_TYPE

Code that identifies primary mechanism of injury.

Code	Description
1	Blunt: The majority of injuries are blunt. Inhalation, including chemical, and ingestion injuries are considered blunt
2	Penetrating: Any injury is defined as penetrating if the patient is impaled by an object or if a missile (bullets, piece of glass, or metal) enters the body. Impaling objects may include knives, nails, or fence posts.
3	Burns, including any fire/steam/heat related inhalation injuries
4	Drowning/asphyxiation: Used for cases of drowning, near drowning or asphyxiation (including suffocation and hanging, etc.)
888	Not Applicable
999	Unknown

INJ_CLASS

Groups patients by the primary cause or mechanism of the trauma event

Code	Description
1	Assault
2	Burns
3	Fall
4	Motorized Vehicle Collision (MVC)
5	Non-motorized vehicle
6	Self-harm
7	Sport
888	Other
999	Unknown

MOI

Code to describe the mechanism of injury, to further clarify or provide more details about how the injury occurred

Code	Description
1	Abuse
2	Amputation
3	Asphyxiation
4	Bite – Cat
5	Bite – Dog
6	Bite – Other
7	Crush
8	Exposure: Used for exposure to cold, i.e., hypothermia or anything that affects the skin, i.e., chemicals spilled on skin
9	Fall
10	Foreign Body: Includes anything in eye (dirt, chemicals, tree branch, welder's flash)
11	Gunshot wound
12	Hanging
13	Ingestion
14	Inhalation
15	Laceration
16	Movement: Includes rolling of ankles while stepping off curbs or where the patient did not actually fall (jumping from levels)
19	Penetrating
20	Sexual
21	Struck: Used when either patient hits something (head struck while playing in the yard), or something hits the patient (struck by a falling piece of ice)
888	Not documented
999	Unknown
Blank	Valid missing data – not applicable

WORK

Code that identifies those injuries that happen at work

Code	Description
1	Yes
2	No
888	Not applicable (e.g., no job, age)
999	Unknown

JOB

Code that describes the type of industry that the patient was working in at the time of the injury

Code	Description

1	Recreation, Sports, and Performing Arts (Athletes, Dancers, Physical Fitness Instructors, Actors)
2	Medicine and Health (MDs, Nurses, therapists, Ambulance Attendants, Dental Assistants, Veterinarians, Mental Health Workers)
3	Other professional, administrative, and artistic (Clerks, teachers, engineers, writers, literary agents, Artists, Accountants, Data Processors, Office workers)
4	Sales (Insurance agents, sales clerks, retail store workers, service station attendants)
5	Protective Services (Firefighters, Police, Security Guards, soldiers)
6	Other Services (Janitors, Food Service, Personal Services (hairstylists, cooks, day care workers, florists, butchers, public utility workers, landscapers))
7	Mining or quarrying (Drilling or blasting)
8	Forestry, Logging
9	Farming, Fishing, Hunting (General or specialist farms such as horse farms)
10	Manufacturing – processing or machinery (Packaging food, inspecting, knitting, metal plating, mixing chemicals, sheet metal, sawing, shaping clay, pulp and paper mills, grain elevators)
11	Other Manufacturing – Assembly, Repairing, or Fabricating (mechanic, shoe maker, vehicle assembler, upholsterer)
12	Construction trades (Plumber, carpentry, electrician, general contractor, bulldozer operator)
13	Transport equipment (drivers of car, vans, trucks, buses, ambulances and taxis)
14	Other Drivers (Fast Food Delivery, Streetcars, Railways, ships, aircraft)
15	Material Handling and related equipment operation (Freight handler, forklift operator, crane operator, hoist operator)
16	Other crafts and stationary equipment operators (Printers, Photo Processing, Audio/Visual Equipment operators)
17	Student (Full time, all ages)
18	Retired
19	Homemaker
20	Unemployed
999	Unknown

SPORT

Code used to identify the sport or recreational activity involved in the incident

Code	Description
1	Aerobics
2	Aircraft: Recreational Motorized (e.g. Fixed wing)
3	Aircraft: Recreational Non-motorized (e.g. Glider)
4	All-Terrain Vehicle
5	Amusement Rides
6	Auto Racing

7	Badminton
8	Baseball (Hard Ball, Soft Ball, T-ball, and Slo-pitch)
9	Basketball
10	Billiards/Pool/Shuffleboard
11	Boating: Motorized
12	Boating: Non-motorized (canoe, kayak, rowboat, sailboat, pedal boat)
16	Boating: Windsurf/Sail board
18	Boating: Waverunners, Seadoos, etc.
19	Boating: Other ,unspecified
20	Boxing (organized, would not include children at play)
21	Bowling (5 or 10 pin)
22	Cricket
23	Croquet/Lawn Bowling
24	Curling
25	Cycling: Driver (if unspecified, assume driver)
26	Cycling: Passenger
27	Cycling: Unicycles
28	Dancing
29	Darts
30	Dirt Biking/Mini Biking/Motocross
31	Diving
32	Fencing
33	Fire (Open flames outdoors – e.g. Charcoal and gas barbecues, camp fires)
34	Fireworks: User
35	Fireworks: Observer
36	Fishing
37	Football
38	Go-carting
39	Golf
40	Gymnastics (Organized – would not include children at play)
41	Handball
42	Hang-gliding/Para-sailing
43	Hiking
44	Horseback riding
45	Hockey: Ice (if type unspecified, assume ice or street depending on season)
46	Hockey: Non-ice, Non-inline hockey
48	Hockey: Inline
49	Horseshoes
50	Hunting: Bow and arrow, Gun, Knives
53	Jogging/running
54	Lacrosse

55	Lawn Darts
56	Luge/Bobsled
57	Martial Arts: Judo, Kendo, Karate, Tae Kwon-DO, Jiu-Jitsu, etc.
58	Mountaineering/Rock climbing
59	Playground equipment (Swings, Slides, Monkey Bars, Teeter-totter in any location)
60	Play not further specified (e.g. running, jumping, skipping, general play)
61	Racquetball
62	Ringette
63	Rugby
64	Scuba Diving
65	Shooting: Bow and arrow (targets) Gun (i.e. non-hunting use of firearm, targets, rifle range, skeet)
67	Skateboarding
68	Skating: Ice (use in winter season if type of skating is not specified
69	Skating: Inline
70	Skating: Roller
71	Skiing: Downhill – recreational (use if type of skiing is not specified)
72	Skiing: Downhill – Racing
73	Skiing: Cross-country
74	Ski Jumping (includes moguls and aerial stunts)
75	Sky diving/Parachuting
76	Snowboarding
77	Snowmobiling: Driver (assume driver if not specified)
78	Snowmobiling: Passenger
79	Snowmobiling: Towed behind on toboggan, tube, sleigh
80	Soccer
81	Squash
82	Swimming: Pool
83	Swimming: Open water
84	Swimming: Wading pool, location unspecified
85	Tennis
86	Tobogganing/Sledding/Snow tubing (not towed)
87	Track and Field
88	Trampoline
89	Volleyball
90	Walking (for Exercise)
91	Water Polo
92	Waterskiing/Tubing
93	Weightlifting (recreational or organized, includes exercise equipment)
94	Wrestling (organized, does not include children at play)
95	Observer of sporting event

96	Other
97	Non-motorized scooters
98	Rodeo sports
99	Scooter – motorized
Blank	Valid missing data – not applicable

FALL_HGT

Present if INJ_CLASS = 3. This is a code that identifies the height that the patient fell.

Code	Description
1	Same level
2	Less than 3m (10ft)
3	3 to 6m (10ft to 20ft)
4	More than 6m (20ft)
5	Not Documented
7	More than 5 stairs
8	Less than 6 stairs
9	Stairs – Unknown number
999	Unknown
Blank	Valid missing data – not applicable

FALL_LOC

Present if INJ_CLASS = 3. This is a code that identifies where the fall happened.

Code	Description
1	Home
2	Work
3	Nursing Home
4	Outside
5	Public Place
6	School
7	Special Care Home
8	Daycare
888	Not Applicable
999	Unknown
Blank	Valid missing data – not applicable

BURN_TYPE

Present if INJ_CLASS = 2. This code identifies the type of burn.

Code	Description
1	Thermal
2	Chemical
3	Electrical

4	Scald
999	Unknown
Blank	Valid missing data – not applicable

PDEVS1 and PDEVS2

Code used to identify if protective devices were used to help prevent the injuries.

Code	Description
0	None
1	Seatbelt: Lap and shoulder belt
2	Seatbelt: Lap belt only
6	Airbag deployment
8	Helmet
9	No Helmet
10	No Seatbelt
11	Use unknown
12	Other safety equipment used
13	Rear-facing infant seat
14	Forward-facing child seat
15	Booster seat
16	Seatbelt: NFS
18	Child Safety seat (unspecified type)
19	Eye protection/visor (sport and recreational use)
20	Life Jacket/Personal Floatation Device
21	Sports – specific pads
22	Hard Hat (work related)
23	Safety harness/restraining bar (work related)
24	Safety/protective clothing (work related)
25	Goggles/eye protection (work related)
26	Not documented
999	Unknown
Blank	Valid missing data – not applicable

MVC_DET

Present if INJ_CLASS = 4. Code provides details of what happened during the motorized vehicular collision (MVC)

Code	Description
1	Animal
2	Head-on
3	Not documented
4	Off road
5	Rear end

6	Rollover
7	Pedestrian
8	Sideswipe
9	Struck
10	T-bone
999	Unknown
Blank	Valid missing data – not applicable

VEH_TYPE

Code that identifies the type of motor vehicle used in the incident

Code	Description
1	Bus
2	Passenger Vehicle
3	Light Truck (van) – includes SUVs and vans
4	Heavy Truck – more than ½ ton
5	Recreational Vehicle
6	Motorcycle
7	Snowmobile
8	ATV
9	Boat
10	Transport Truck
11	Logging Truck
12	Plane
13	Train
14	Other
999	Unknown
Blank	Valid missing data – not applicable

VEH_POS

Code that identifies the location of the patient in the vehicle

Code	Description
1	Driver
2	Middle front
3	Right front
4	Left rear
5	Middle rear
6	Right rear
7	Behind middle row (occupants of third row in vans)
8	Hanger-on [Person hanging on to the outside of the vehicle (on roof or rear bumper) or in the back of an open ½ ton truck]
9	Front NS (not specified)

10	Rear NS (not specified)
999	Unknown
Blank	Valid missing data – not applicable

EJECTED

Identifies patients that were ejected or thrown from the vehicle. This is also the code used to identify pedestrians struck by vehicle and thrown a distance

Code	Description
1	Yes
2	No
Blank	Valid missing data – not applicable

5. Facility Vitals and ED Interventions

Type	Field name	Description
N	CTAS	Canadian Triage and Acuity Score
N	FV_WGT	Pediatric patient weight
N	FV_TEMP	First recorded temperature
N	FV_SBP	Patient's systolic blood pressure
N	FV_DBP	Patient's diastolic blood pressure
N	FV_HR	Patient hear rate
N	FV_URR	Patient's unassisted respiratory rate
	EDAS_GCS	GCS Total value
N	FV_PTS	Pediatric patient trauma score
N	FV_BAC_LVL	Blood Alcohol Concentration
N	FC1_INTS1 – FC1_INTS18	Interventions at first treating facility
N	FC2_INTS1 – FC2_INST18	Interventions at second and final facility

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

CTAS

The Canadian Triage and Acuity Score. This is used in emergency departments to prioritize patients according to the type and severity of their injuries and/or illnesses.

Code	Description
1	Resuscitation – Immediate
2	Emergency – Within 15 minutes
3	Urgency – Within 30 minutes
4	Less Urgent – Within 60 minutes
5	Non-Urgent – Within 120 minutes
999	Unknown
Blank	Valid missing data – not applicable

FV_WGT

Weight of the patient in kilograms (kgs) for pediatric patients up to their 18th birthday (###). Typically recorded during the triage process to help with patient assessment

Code	Description
Blank	Not applicable or not documented

FV_TEMP

First recorded temperature, in degrees Celsius, at facility (###). Typically recorded during the triage process to help with patient assessment

Code	Description
Blank	Not applicable or not documented

FV_SBP

The patient's systolic blood pressure on arrival at facility (###). Typically captured within 30 minutes of arrival. However, there is no specific time associated with this variable

Code	Description
Blank	Not applicable or not documented

FV_DBP

The patient's diastolic blood pressure on arrival at facility (###). Typically captured within 30 minutes of arrival. However, there is no specific time associated with this variable

Code	Description
Blank	Not applicable or not documented

FV_HR

The patient's heart rate per minute on arrival at facility (###)

Code	Description
Blank	Not applicable or not documented

FV_URR

The patient's unassisted respiratory rate per minutes on arrival at facility

Code	Description
/	Arrives ventilated or bagged
Blank	Respiratory rate not recorded

EDAS_GCS

Total value of GCS. Unlike the paramedic-derived scores, only the total score is provided as a reliable and a valid indicator.

Code	Description
13 – 15	Minor injury

9 – 12	Moderate injury
8 or less	Severe injury
Blank	Not applicable or not documented

FV_PTS
Derived value that identifies trauma score for pediatric patients (used as injury severity predictor)

FV_BAC_LVL
The patient's first documented Blood Alcohol Concentration (BAC) in facility. If this is Blank, it means either the patient is less than or equal 10 years of age, or they were not tested, or the results are not available.

FC1_INTS1 through FC1_INTS18; and FC2_INTS1 through FC2_INTS18
Codes used to identify the non-operative procedures completed by personnel once the patient has arrived at the treating facility. It is possible that they have had multiple procedures of the same type. There are two sets of variables – one to identify interventions provided at the first treating facility (FC1), and another to identify interventions provided at the second and final treating facility (FC2). Depending on the patient's pathway to admission, FC2_INTS1 onward may or may not be completed. Furthermore, not all sites have recorded data for their interventions

Code	Description	Code	Description
1	ABG	**44**	Halo Traction/Tongs
2	Alternative Airway	**45**	ICP Monitoring
3	Analgesia	**46**	Intraosseous
4	Angiography	**47**	IV med. Infusions
5	Antibiotic-Fracture	**48**	IV Therapy
6	Antibiotic-Other	**49**	Mannitol
7	Anticoagulant-Other	**50**	Massive Transfusion Activation
8	Anticoagulant-Warfarin	**51**	MRI
9	Arterial Line	**52**	Nasal Intubation
10	Aspen Collar	**53**	Needle decompression
11	Bedside Glucose	**54**	NPA
12	Beta-blockers	**55**	O2 Sat
13	Blanket Warmer	**56**	OPA
14	Blood Typing	**57**	Oral Intubation
15	Blood work	**58**	Other
16	Blood/Blood products	**59**	Pelvic Wrap
17	Burr Holes	**60**	Pericardiocentesis
18	Cast	**61**	Pregnancy Test
19	Central line	**62**	Procedural Sedation and Analgesia

20	Applied Cervical Collar in ED	**63**	Prothrombin Complex Concentrate
21	Chest Tubes	**64**	Reduction
22	CPR	**65**	Sedation with Paralytic
23	Cricothyrotomy	**66**	Sling
24	CT Scan – Head	**67**	Spine Board
25	CT Scan – Spine	**68**	Splints
26	CT Scan – Chest	**69**	Staples
27	CT Scan – Abdomen	**70**	Suction
28	CT Scan – Pelvis	**71**	Sutures
29	CT Scan – Other	**72**	Tetanus status
30	Cut Down	**73**	Tourniquet
31	Defibrillation	**74**	Tracheotomy
32	Dilantin	**75**	Traction/pins
33	DPL	**76**	Tranexamic Acid
34	Dressings	**77**	Ultrasound
35	ED Thoracotomy	**78**	Urine Dip/Urinalysis
36	EDUS	**79**	Urine Toxicology
37	EKG	**80**	Ventilation
38	External Ventricular Drain	**81**	Vitamin K
39	FAST	**82**	Warm Blankets
40	Fluid Bolus	**83**	X-Rays
41	Fluid Warmer	**888**	Not Applicable
42	Foley	**999**	Unknown
43	Gastric Tube	**Blank**	Valid missing data – not applicable

6. Additional Data on Patients with ISS > 12

Type	Field Name	Description
N	INJ_LOC	Identifies province of incident
N	INJ_PLC	Identifies place of incident
N	ISS	Injury Severity Score
C	SCODE1 – SCODE8	Identifies Diagnosis Codes
C	ECODE	External cause of injury code
N	TRISS	Trauma score – injury severity score
N	PREDOT1 – PREDOT6	Identifies diagnosis based on AIS
C	COMORBID1 – COMORBID9	Identifies patient comorbidities
C	COMPL1 – COMPL9	Identifies patient complications
N	VENT_DAYS	Identifies number of days of ventilation
	ALC_DAYS	Identifies number of alternate level of care days

The type 'N' refers to numeric values while 'C' refers to both alphabetic and numeric characters.

INJ_LOC

Code that identifies the province where the trauma incident occurred.

Code	Description
1	Ontario
2	Manitoba
3	Saskatchewan
4	British Columbia
5	Alberta
6	Quebec
7	New Brunswick
8	Newfoundland and Labrador
9	Prince Edward Island
10	Nova Scotia
11	Northwest Territories and Nunavut
12	Yukon Territory
13	United States
14	Other
Blank	Valid missing data – not required

INJ_PLC

Code that identifies the place or location of the injury

Code	Description
1	U980: Home
2	U981: Residential Institution
3	U9820: Hospital
4	U9828: School and other institutions and Public Area
5	U983: Sports and Athletic Area
6	U984: Street and Highway
7	U985: Trade and Service Area
8	U986: Industrial and Construction Area
9	U987: Farm
10	U988: Other Specified Place of Occurrence
11	U989: NOS Place of Occurrence
888	Not Applicable
999	Unknown

ISS

Injury Severity Score (ISS) as calculated based on the Abbreviated Injury Scale (AIS 2005), once all the injury information is available or at the time of patient discharge. The ISS is the sum of the squares of the highest AIS code in each of the three most severely injured ISS body regions.

SCODE1 through SCODE8
Codes that identify the up to 27 diagnoses available to describe the injuries sustained by the patient (based on valid ICD-10 codes). It is possible that more than one of these codes will be repetitious in cases where the injury is duplicated (e.g., two broken legs)

ECODE1 and ECODE2
ICD-10-CA External cause of injury code. This code identifies the patient's primary cause of injury. It is the external cause of injury code that reflects the primary cause of the patient's most serious injuries

TRISS
Trauma Score – Injury Severity Score. This combines both physiologic and anatomic indices (ISS, RTS and patient age) to characterize the severity of injury and estimate the patient survival probability (see www.trauma.org for a calculator and its underlying formulae)

PREDOT1 through PREDOT6
Code that identifies the up to 27 diagnoses available to describe the injuries sustained by the patient based on the Abbreviated Injury Scale (AIS). The first digit identifies the body region. The second digit identifies the type of anatomical structure. The third and fourth digits identify the specific anatomic structure of the specific nature of the injury. The fifth and sixth digits identify the level of injury. The digit to the right of the decimal point is the AIS score.

COMORBID1 through COMORBID9
Comorbidities that the patient has, based on ICD-10-CA codes.

ICD-10-CA Code	Description
F10.0 – F10.9, F19.0, F19.2, Z13.3	Alcoholism: To be determined based on brief screening tool
F90.0	Attention deficit hyperactivity disorder (ADHD)
R18	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
F84.0, F84.1, F84.5	Autism/Asperger's
D68.4, D66, D68.1, D67.1, D68.0, D68.3, D69.1, D69.4, D69.5, D69.6, D69.8, D69.9	Bleeding disorder: Any condition that places the patient at risk for excessive bleeding due to a deficiency of blood clotting elements (such as vitamin K deficiency, hemophilia, thrombocytopenia or chronic anticoagulation therapy with Coumadin, Plavix or similar medications). Do not include patients on chronic aspirin therapy.
Z51.1	Chemotherapy for cancer within 30 days: A patient who had any chemotherapy treatment for cancer in the 30 days 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 tumours, as well as lymphatic and hematopoietic malignancies, such as lymphoma, leukemia and multiple myeloma
K74.0 – K74.6, K70.3, K70.4, K71.7	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
Q00.0 – Q99.9	Congenital anomalies: Documentation of a cardiac, pulmonary, body wall, CNS/spinal, GI, renal, orthopedic or metabolic congenital anomaly
I50.0, I50.1, I11, I13, I42.0 – I42.9, I43.0 –I43.8, I09.8	Congestive heart failure: The inability of the heart to pump a sufficient quantity of blood to meet the metabolic needs of the body or the ability of the heart to do so only at an increased ventricular filling pressure. To be included, this condition must be noted in the medical record as CHF, congestive heart failure or pulmonary edema with onset or increasing symptoms within 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; and 7. Pulmonary vascular engorgement.
No corresponding 1CD-10-CA code	Current smoker: A patient who has smoked cigarettes in the year prior to admission. Do not include patients who smoke cigars or pipes or use chewing tobacco
Z99.2	Currently requiring or on dialysis: Acute or chronic renal failure prior to injury that was requiring periodic peritoneal dialysis, hemodialysis, hemofiltration or hemodiafiltration.
I60.0 - I69.8	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

	(such as hemiplegia, hemiparesis, aphasia, sensory deficit or impaired memory).
E10.0 - E11.9, E13.0 - E14.9	Diabetes mellitus: Diabetes mellitus prior to injury that required exogenous parenteral insulin or an oral hypoglycemic agent.
C77.0-C80.9	Disseminated cancer: Patients who have cancer that has spread to one or more sites in addition to the primary site; and In whom the presence of multiple metastases indicates the cancer is widespread, fulminant or near terminal. Other terms describing disseminated cancer include “diffuse”, “widely metastatic”, “widespread”, or “carcinomatosis”. Common sites of metastases include major organs (brain, lung, liver, meninges, abdomen, peritoneum, pleura, and bone)
No corresponding ICD-10-CA code	Do Not Resuscitate (DNR) status: The patient had a do not resuscitate (DNR) document or similar advance directive recorded prior to injury.
F11.0 - F16.9, F19.0 - F19.9, Z13.3	Drug use: Mental and behavioural disorders due to the use of drugs.
I86.4	Esophageal varices: Engorged collateral veins in the esophagus that bypass a scarred liver to carry portal blood to the superior vena cava. A sustained increase in portal pressure results in esophageal varies, which are most frequently demonstrated by direct visualization at esophagoscopy.
No corresponding ICD-10-CA code	Functionally dependent health status: Pre-injury functional status may be represented by the ability of the patient to complete activities of daily living (ADLs), including bathing, feeding, dressing, toileting, and walking. This item is identified if the patient, prior to injury, was partially dependent or completely dependent upon equipment, devices, or another person to complete some or all ADLs.
I20.0-I20.9	History of angina within past one month: Pain or discomfort between the diaphragm and the mandible resulting from myocardial ischemia. Typically, angina is a dull, diffuse substernal chest discomfort precipitated by exertion or emotion and relieved by rest or nitroglycerin. Radiation often occurs to the arms and shoulders and occasionally to the neck, jaw, and interscapular region. For patients on anti-anginal medications, identify angina if the patient has had angina within one month prior to admission.
I25.2	History of myocardial infarction within past six months: The history of a non-Q wave or a Q wave infarction in the six months prior to injury

No corresponding ICD-10-CA code	History of revascularization/amputation for peripheral vascular disease: Any type of angioplasty or revascularization procedure for atherosclerotic peripheral vascular disease (PVD) or patient who has had any type of amputation procedure for PVD. Patients who have had an amputation for trauma or resection of abdominal aortic aneurysms would not be included.
I10.0-I10.9, I11-I15	Hypertension requiring medication: History of a persistent elevation of systolic blood pressure greater than 100 mm HG and a diastolic blood pressure greater than 90 mm Hg requiring an antihypertensive treatment.
F00.0-F09, F70.0-F79.9, G30.0-G30.9, F90.0, F91.8, F91.9, F84.0, F81.9, F80.0, F80.1, F80.8, F80.9, F81.3, F81.8.	Impaired sensorium: Patients should be noted to have an impaired sensorium if they had mental status changes and/or delirium in the context of a current illness prior to injury. Patients with chronic or long-standing mental status changes secondary to chronic mental illness or chronic dementing illnesses should be included. Mental retardation would qualify as impaired sensorium.
E66.0-E66.9	Obesity: A body mass index of 30 or greater
G80.0-G80.9, P07.0-P07.3, P27.0-P27.9	Prematurity: Documentation of premature birth, a history of bronchopulmonary dysphasia, ventilator support for longer than seven days after birth or the diagnosis of cerebral palsy
E84.0-E84.9, J40-J45.91	Respiratory Disease: Severe chronic lung disease, chronic asthma, cystic fibrosis or chronic obstructive pulmonary disease (COPD) resulting in any of the following: • Functional disability from COPD; • Hospitalization in the past for treatment of COPD; • Requirement for chronic bronchodilator therapy with oral or inhaled agents; and/or • An FEV1 of less than 75 % of predicted in pulmonary function testing. • Do not include patients with acute asthma or diffuse interstitial fibrosis or • Sarcoidosis
No corresponding ICD-10-CA code	Steroid use: Patients who required the regular administration of oral or parenteral corticosteroid medications in the 30 days prior to injury for a chronic medical condition. Do not include topical corticosteroids applied to the skin or corticosteroids administered by inhalation or rectally.

COMPL1 through COMPL9

Complications that the patient has, based on ICD-10-CA codes.

ICD-10-CA Code	Description
T79.6	Abdominal compartment syndrome: The sudden increase in intra-abdominal pressure resulting in alteration in the respiratory mechanism, hemodynamic parameters and renal perfusion.
No corresponding ICD-10-CA code	Abdominal fascia left open: No primary surgical closure of the fascia, or intra-abdominal packs left at conclusion of primary laparotomy. No corresponding ICD-10-CA code; therefore, yes, no, unknown or not applicable should be entered in a separate data field to capture this information.
N17.0-N19, N25.0, N03.0-N05.9, I12, I13, T79.5	Acute renal failure: A patient who did not require dialysis prior to injury, who has worsening renal dysfunction after injury requiring hemodialysis, ultrafiltration or peritoneal dialysis. If the patient refuses treatment, the condition is still present.
J80	ARDS: Adult respiratory distress syndrome occurs with catastrophic medical conditions, such as pneumonia, shock, sepsis and trauma. It is a form of sudden and often severe lung failure characterized by PaO2/FiO2 of 200 or less, decreased compliance and diffuses bilateral pulmonary infiltrates without associated clinical evidence of CHF. The process must persist beyond 36 hours and require mechanical ventilation.
CCI code: 1.LZ.19	Bleeding: Any transfusion of five or more units of packed red blood cells or whole blood given from the time the patient is injured up to and including 72 hours later
I46.0-I46.9	Cardiac arrest with CPR: The absence of a cardiac rhythm or presence of chaotic cardiac rhythm that results in loss of consciousness requiring the initiation of advanced cardiac life support
D65-D68.2, D69.1, D69.30-D69.4	Coagulopathy: Twice the upper limit of the normal range for PT or PTT in a patient without a pre-injury bleeding disorder
L89.0-L89.9	Decubitus ulcer: A pressure sore resulting from pressure exerted on the skin, soft tissue, muscle, or bone by the weight of an individual against a surface beneath.
T81.4	Deep surgical site infection: An infection that occurs within 30 days after and operation and that appears to be related to the operation. The infection should involve deep soft tissues at the site of the incision and at least one of the following: • There is purulent drainage from the deep incision • A deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has at least one of the following: fever, localized pain or tenderness.

	• An abscess or other evidence of infection • A deep incision infection is diagnosed by the physician.
F10.3-F10.5	Drug or alcohol withdrawal syndrome: A set of symptoms that may occur when a person who has been drinking too much alcohol or habitually using certain drugs suddenly stops. Symptoms may include activation syndrome, seizures, hallucinations, or delirium tremens
I80.2	Deep vein thrombosis/thrombophlebitis: The formation, development or existence of a blood clot or thrombus within the vascular system. The patient must be treated with anticoagulation therapy
M62.20-M62.29	Extremity compartment syndrome: A condition in which there is swelling and an increase in the pressure within the limited space that presses on and compromises blood vessels, nerves, and/or tendons that run through that compartment. Compartment syndromes usually involve the leg, but can also occur in the forearm, arm, thigh and shoulder
T82.0-T82.9	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
G93.2	Intracranial pressure elevation: Intracranial pressure greater than 25 torr for longer than 30 minutes
I21.0-I21.9	Myocardial infarction: A new acute myocardial infarction occurring during hospitalization (within 30 days of injury)
T81.4, T82.6, T82.7, T83.5, T83.6, T84.50-T84.58, T84.60-T84.69, T85.7, T87.40-T87.49, Y83.0-Y83.9, Y88.3	Organ/space surgical site infection (SSI): An infection that occurs within 30 days of injury after an operation and which involves any part of the anatomy other than the incision, which was opened or manipulated during the procedure. The infection must involve at least one of the following: • There is purulent drainage from the drain placed through a stab wound or puncture into the organ or space • Organisms are isolated from an aseptically obtained culture of fluid or tissue. • An abscess or other evidence of infection • An SSI is diagnosed by the physician.
H05.0, M86.00-M86.19	Osteomyelitis: A condition that meets at least one of the following: • Organisms are cultured from bone; • There is evidence of osteomyelitis on direct examination

	• At least two of the following signs and symptoms are present: fever, localized swelling, tenderness, heat or drainage and at least one of the following: Organisms are cultured from blood, positive blood antigen test, and radiographic evidence of infection.
J12.0-J18.9, J95.88	Pneumonia: Patients with evidence of pneumonia that develops during the hospitalization
I26.0-I26.9	Pulmonary embolism: A lodging of a blood clot in a pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma
I63.1-I63.9, I.64	Stroke/CVA: Following injury, patient develops an embolic, thrombotic, or hemorrhagic vascular accident or stroke with motor, sensory, or cognitive dysfunction that persists for 24 or more hours
T81.4	Superficial surgical site infection: Defined as an infection that occurs within 30 days after an operation and that involves only skin or subcutaneous tissue of the incision. The following are not conditions to identify: Stitch abscess, infected burn wound, or incisional SSI that extends into the facial and muscle layers
A40.0-A41.9, A49.9	Systemic sepsis: Definitive evidence of infection, plus evidence of a systemic response to infection.
No corresponding ICD-10-CA code	Unplanned intubation: Patient requires placement of an endotracheal tube and mechanical or assisted ventilation because of an onset of respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis
No corresponding ICD-10-CA code	Unplanned return to the Operating Room: Unplanned return to the operating room after initial operation management for a similar or related previous procedure
No corresponding ICD-10-CA code	Unplanned return to the ICU: Unplanned return to the intensive care unit after initial ICU discharge
N39.0	Urinary tract infection: An infection anywhere along the urinary tract with clinical evidence of infection.
T81.3	Wound disruption: Separation of the layers of a surgical wound, which may be partial or complete, with disruption of the fascia

VENT_DAYS

Identifies the number of days (###) that the patient was intubated and mechanically ventilated intermittently or continuously at the trauma facilities. This does not include the day ventilation is begun (unless there is only one day of ventilation). If a patient is not mechanically ventilated at any time during the hospital stay, the code is entered as not applicable. If the patient is

mechanically ventilated but the length of time is not documented, the code is entered as not known. The variable does not include ventilation during OR procedures only or non-invasive procedures (like CPAP)

Code	Description
888	Ventilated, but data not available
999	Unknown
Blank	Valid missing data – not applicable

ALC_DAYS

Identifies the number of days (###) that the patient stayed in an alternate level of care facility