

PATOS Data Dictionary Ver 1.4

2016.08

Table of Contents

Congratulatory Message

Variables

<i>Variables List</i>	1
<i>Demographic</i>	3
<i>Injury Epidemiology</i>	6
<i>Prehospital Care</i>	12
<i>Interhospital Transfer</i>	19
<i>ED and Hospital Care</i>	22
<i>Injury Severity and Outcome</i>	34
<i>Rehabilitation</i>	36
<i>Outcome at 6 month</i>	37
<i>Outcome at 12 month</i>	39
<i>Death Certificate</i>	41

Appendix

<i>I. Intent of Injury</i>	42
<i>II. Mechanism of Injury</i>	44
<i>III. Type (nature) of Injury</i>	52
<i>IV. Place of Injury</i>	53
<i>V. Level of Trauma Center</i>	63
<i>VI. Calendar Days</i>	64
<i>VII. Charlson Comorbidity Index</i>	65
<i>VIII. Structured Interview for Glasgow Outcome Scale</i>	69
<i>IX. Modified Rankin Scale</i>	71
<i>X. Structured Interview for Glasgow Outcome Scale - Extended</i>	72
<i>XI. Structured Interview for EQ5D</i>	75

Case Report Form	77
-------------------------------	----

Reference	93
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Congratulatory Message

I would like to send my warmest congratulations to the launching of the Pan-Asian Trauma Outcomes Study (PATOS).

Since its first establishment in 2009, the Asian Emergency Medical Services (EMS) Council has acted as advocates for emergency medical services (EMS) to different communities and promoted collaboration for advancement of EMS systems.

We are pleased to be affiliated with the PATOS Clinical Research Network to make collaborative actions and research initiatives in trauma care. The partnership will create a platform for like-minded researchers to share experience, resources, and information about trauma care in Asia.

Again, I extend my congratulations on the launching of the Pan-Asian Trauma Outcomes Study (PATOS) and thank all researchers from all over Asia and those who contributed to organizing this study. I look forward to seeing the study hosted in more Asian countries and ultimately play a constructive role in improving prevention and management of trauma in Asia.

Sincerely,

Hideharu Tanaka
Chairman
Asian EMS Council

Congratulatory Message

As Chairman of the Pan-Asian Trauma Outcomes Study (PATOS) Clinical Research Network, I am pleased to extend my warmest greetings to the members of the Pan-Asian Trauma Outcomes Study (PATOS).

Asia is currently facing high burden of trauma with increasing incidence of traffic accidents, fall, and violence. While there have been substantial advances in trauma care in recent years, there are still needs and challenges with understanding the incidence and prevention measures of trauma.

Under these circumstances, PATOS Clinical Research Network was formed in 2013 to promote research and joint initiatives in trauma care with medical directors, emergency physicians, prehospital care providers, and researchers in the Asian-pacific region. The aim of PATOS is to develop a trauma surveillance system that allows analysis of secular trends and understanding of injury.

I would like to thank all researchers in the PATOS Clinical Research Network for their efforts to developing and organizing this study. I hope that PATOS Clinical Research Network will make great leaps forward for providing the necessary research infrastructure and strengthening management capability in the participating countries and in all over Asia.

Yours sincerely,



Sang Do Shin

Chairman

Pan-Asian Trauma Outcomes Study Clinical Research Network



List of variables

Core	Comprehensive	Optional
Demographic data		
<ul style="list-style-type: none"> ▪ Research institute ▪ Site ID ▪ Country ▪ EMS district or city ▪ Case ID ▪ Date of birth ▪ Age ▪ Gender 	<ul style="list-style-type: none"> ▪ Residential postal code ▪ Citizenship 	<ul style="list-style-type: none"> ▪ Patient name ▪ Phone number
Injury epidemiology		
<ul style="list-style-type: none"> ▪ Date/time of injury ▪ Intent of injury ▪ Mechanism of injury ▪ Location of injury ▪ Type (nature) of injury ▪ Place of injury ▪ Activity ▪ Alcohol use ▪ Psychoactive drug/substance use ▪ Arrival type ▪ Prehospital care provider 	<ul style="list-style-type: none"> ▪ Incident site address ▪ Incident site postal code ▪ Work-related injury 	<ul style="list-style-type: none"> ▪ Weather ▪ Alcohol use of others who were directly involved ▪ Psychoactive drug/substance use of other who were directly involved
Prehospital Care		
<ul style="list-style-type: none"> ▪ Mode of arrival ▪ Date/time call received ▪ Date/time ambulance departed from ▪ Date/time ambulance arrived at accident site ▪ Date/time ambulance left accident site ▪ Date/time ambulance arrived at hospital ▪ Prehospital CPR ▪ Prehospital BP ▪ Prehospital HR ▪ Prehospital RR ▪ Prehospital O2Sat ▪ Prehospital mental status 	<ul style="list-style-type: none"> ▪ Incident No. ▪ Ambulance No. ▪ Prehospital airway ▪ Prehospital oxygen ▪ Prehospital immobilization ▪ Prehospital fluid access ▪ Medications given during prehospital phase 	<ul style="list-style-type: none"> ▪ Pain control during prehospital phase ▪ Prehospital procedure for thoracic cavity ▪ Prehospital diagnosis ▪ Decontamination
Interhospital Transfer		
<ul style="list-style-type: none"> ▪ Level of referring hospital 	<ul style="list-style-type: none"> ▪ Mode of interhospital transfer ▪ Reason for transfer ▪ Transfer from where ▪ GCS at referring hospital prior to transfer 	<ul style="list-style-type: none"> ▪ Name of referring hospital ▪ Date/time of arrival at referring hospital ▪ Date/time of departure from referring hospital ▪ Intervention before transfer
ED and hospital care		
<ul style="list-style-type: none"> ▪ BP at triage ▪ HR at triage ▪ RR at triage ▪ Temperature at triage ▪ O2Sat at triage ▪ Mental status at triage (GCS) ▪ DOA ▪ Date/time of arrival at ED ▪ Date/time of disposition from ED ▪ ED disposition ▪ Hospital discharge disposition ▪ Date/time of hospital discharge ▪ Total length of stay in ICU 	<ul style="list-style-type: none"> ▪ Transfusion ▪ Surgical airway ▪ Tension PNTX decompression ▪ Non-surgical external bleeding control ▪ Cardiocentesis ▪ Thoracotomy ▪ Positive ventilation ▪ Non-surgical immobilization ▪ CPR ▪ Operation ▪ Operation date/time ▪ First angiography scan 	<ul style="list-style-type: none"> ▪ Fluid ▪ Pediatric - child abuse ▪ Pediatric – sport-related injury



<ul style="list-style-type: none"> ▪ Airway management ▪ Preexisting disability (GOS) ▪ Modified Rankin Scale at discharge 	<ul style="list-style-type: none"> ▪ First angiography scan – date/time ▪ Embolization ▪ Embolization date/time ▪ Pre-existing comorbidity ▪ Pediatric patient ▪ Pediatric - weight ▪ Pediatric - airway ▪ Pediatric - level of consciousness ▪ Pediatric - fracture ▪ Pediatric - wound 	
Injury severity and outcome		
<ul style="list-style-type: none"> ▪ ICD-10 diagnosis ▪ AIS ▪ GOS at discharge 		
Rehabilitation		
	<ul style="list-style-type: none"> ▪ Date/time for first rehabilitation evaluation during hospital stay ▪ Date for first psychiatric evaluation during hospital stay 	
Outcome at 6 months		
	<ul style="list-style-type: none"> ▪ Extended Glasgow Outcome Scales (GOSE) Interview at 6 months ▪ EQ5D at 6 months 	<ul style="list-style-type: none"> ▪ Current residence at 6 months ▪ Occupational status at 6 months
Outcome at 12 months		
	<ul style="list-style-type: none"> ▪ Extended Glasgow Outcome Scales (GOSE) Interview at 12 months ▪ EQ5D at 12 months 	
Death certificate		
<ul style="list-style-type: none"> ▪ Date/time of death ▪ Primary COD 		



Demographic data

1

Variable	Research institute
Definition	Name of the study site
Obligation	Core (Minimum)
Time point	N/A
Code type	Text
No. of responses	Single
Code choices	
Comments	Name will be auto-filled using your registration information.

2

Variable	Site ID
Definition	Study site ID
Obligation	Core (Minimum)
Time point	N/A
Code type	Numeric
No. of responses	Single
Code choices	
Comments	Each study site will be given a 3-digit code. Site ID will be auto-filled using your registration information.

3

Variable	Country
Definition	Alphabetic abbreviations of a country
Obligation	Core (Minimum)
Time point	N/A
Code type	Character
No. of responses	Single
Code choices	
Comments	Each country will be given a 3-digit code based on international dialing codes (e.g. Korea: 082). Country code will be auto-filled using your registration information.

4

Variable	EMS district or city
Definition	Alphabetic abbreviations of a district or city
Obligation	Core (Minimum)
Time point	N/A
Code type	Character
No. of responses	Single
Code choices	
Comments	Each district or city will be given a 3-letter code based on EMS coverage. EMS district or city will be auto-filled using your registration information.

5

Variable	Case ID
Definition	Deidentified ID given to each patient
Obligation	Core (Minimum)
Time point	N/A
Code type	Numeric
No. of responses	Single
Code choices	
Comments	Each patient at a study site will be given a 6-digit code. Case ID may be linked with Patient ID (or chart ID) at each study site, but the



	<p>linkage key is not to be transferred to the PATOS database for privacy reasons.</p> <p>The resulting ID for each patient will be in the form of: 000-000-000000 (12 digits); country code (3 digits) – site code (3 digits) – case ID (6 digits)</p> <p>Country code will be auto-filled using your registration information.</p>
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6

Variable	Date of birth
Definition	Patient's date of birth
Obligation	Core (Minimum)
Time point	N/A
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy
Comments	If date is unknown, enter 99:99:9999.

7

Variable	Age
Definition	Patient's age at time of injury, in years, as of last birthday
Obligation	Core (Minimum)
Time point	N/A
Code type	mmddyyyy
No. of responses	Single
Code choices	
Comments	Age will be automatically generated in if "date of birth" is entered. If "date of birth" is unknown, enter the patient's estimated age.

8

Variable	Gender
Definition	Gender of the patient
Obligation	Core (Minimum)
Time point	N/A
Code type	Numeric
No. of responses	Single
Code choices	1 Male 2 Female
Comments	

9

Variable	Residential postal code
Definition	Postal code of the residential address where the patient resides in
Obligation	Comprehensive
Time point	N/A
Code type	Free text
No. of responses	Single
Code choices	
Comments	If a site does not have postal code, enter 99999. For study sites in Korea, postal codes can be selected using Search function.

10

Variable	Citizenship
Definition	The status of a person recognised under the custom or law of a state that bestows on that person (called a citizen) the rights and the duties of citizenship
Obligation	Comprehensive
Time point	N/A
Code type	Numeric



No. of responses	Single
Code choices	1 Citizenship 2 No citizenship 9 Unknown
Comments	Definition of “citizenship” will be determined by Country P.I.; all sites in the country should follow the same criteria for distinguishing between “citizenship” and “no citizenship”.

Optional_1

Variable	Patient name
Definition	Patient's name
Obligation	Optional
Time point	N/A
Code type	Text
No. of responses	Single
Code choices	None
Comments	Name acts as an identifier for tracing prehospital and ED data. Patient name is to be retained at study sites and is not to be transferred to the case report form or http://epatos.org/ .

Optional_2

Variable	Phone number
Definition	Patient's phone number
Obligation	Optional
Time point	N/A
Code type	Numeric
No. of responses	Single
Code choices	
Comments	Phone number is to be retained at study sites and is not to be transferred to the case report form or http://epatos.org/ .



Injury Epidemiology

11

Variable	Date/time of injury
Definition	Date and time when the injury event occurred
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

12

Variable	Weather
Definition	Weather of the day when the injury occurred
Obligation	Optional
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Multiple
Code choices	1 Wet 2 Dry 3 Snow 4 Ice 5 Dark 6 Light 7 Fog 99 Unknown
Comments	

13

Variable	Incident site address
Definition	Address of the incident site
Obligation	Comprehensive
Time point	At the time of injury incident
Code type	Free text
No. of responses	Single
Code choices	
Comments	The extent of address entered will be determined by country P.I.

14

Variable	Incident site postal code
Definition	Postal code of the incident site
Obligation	Comprehensive
Time point	At the time of injury incident
Code type	Free text
No. of responses	Single
Code choices	
Comments	If a site does not have postal code, then enter '99999'. For study sites in Korea, postal codes can be selected using Search function.

15

Variable	Intent of injury
Definition	The role of human intent in occurrence of the injury incident
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Unintentional (accidental)



	2 Intentional self-harm (suicide, attempted suicide) 3 Assault (interpersonal violence) 4 Undetermined (awaiting results of investigation) 5 Legal interventions 6 Operations of war and civil insurrection 99 Unknown
Comments	For definitions of codes, refer to Appendix I.

16

Variable	Mechanism of injury
Definition	How the injury was inflicted (i.e. how the person was hurt)
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Traffic injury 2 Sexual assault 3 Fall 4 Struck/hit by person or object 5 Stab or cut 6 Gun shot 7 Fire, flames or heat 8 Choking or hanging 9 Drowning or near-drowning 10 Poisoning 8X Other 80 Physical over-exertion 81 Cooling 82 Exposure to (effect of) weather, natural disaster or other force of nature 83 Complications of health care 84 Corrosion by chemical or other substance 88 Other mechanism of injury 99 Unknown
Comments	If more than one mechanism, record the one that precipitated the injury. For definitions of codes, refer to Appendix II.

17

Variable	Location of injury
Definition	Anatomical location of the injury
Time point	Core
Applicable to	At ED admission
Code type	Numeric
No. of responses	Multiple
Code choices	1 Head 2 Face 3 Neck 4 Thorax 5 Abdomen and pelvic contents 6 Spine 7 Upper extremity 8 Lower extremity (including bony pelvis) 9 External (skin) 88 Other (non-anatomical injury)
Comments	



18

Variable	Type (Nature) of injury
Definition	Physical nature of the injury, real or suspected, which brought the patient to the agency
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Multiple
Code choices	1 Fracture 2 Sprain, strain or dislocation 3 Cuts, bites or open wound 4 Bruise or superficial injury 5 Burns 6 Concussion 7 Organ system injury 88 Other 99 Unknown
Comments	For definitions of codes, refer to Appendix III.

19

Variable	Place of injury
Definition	Type of place where the injury event occurred
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Home, including garden and out buildings 2 School, including kindergarten and schoolyard 3 Street/highway 4 Residential institution 5 Sports and athletics area 6 Other transport area 7 Industrial/construction 8 Farm, excluding home 9 Commercial 10 Countryside, water, sea 8X Other 80 Medical service area 81 Recreational and cultural area and public building 88 Other place of occurrence 99 Unknown
Comments	For complete listing of codes, refer to Appendix IV.

20

Variable	Work-related injury
Definition	Was the cause of the injury work-related?
Obligation	Comprehensive
Time point	At ED admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	Work-related injury is defined as any incident taking place during the performance of occupational and paid activity, caused by exposure to factors associated with employment.



21

Variable	Activity
Definition	What was the injured person doing at time of injury?
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Work, including travel for work (e.g. truck driving) 2 Education, including school sports 3 Sports 4 Leisure/play 5 Travelling not elsewhere classified 8X Other 80 Unpaid activities 81 Activities of daily living 82 During treatment 88 Other activities, not elsewhere classified 99 Unknown
Comments	<p>Unpaid activities include any type of activities which are not economic activities but does require some form of physical labor (e.g. shopping; volunteer; cooking; child sitting; household chore; house maintenance; and garden care).</p> <p>Activities of daily living are any type of activities that are fundamental for people's daily self care activities (e.g. sleeping; eating; bathing; resting; sexual life; and dressing up).</p> <p>Activities during treatment include hospital care and transport via EMS vehicles.</p>

22

Variable	Alcohol use
Definition	Suspicion or evidence of alcohol use before the injury event by the injured person
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Suspected (by report or observation) 2 Confirmed by biological evidence 3 No use – by report or observation or biological evidence 99 No information available
Comments	

23

Variable	Alcohol use of others who were directly involved
Definition	Suspicion or evidence of alcohol use before the injury event by others directly involved in the incident
Obligation	Optional
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Suspected (by report or observation) 2 Confirmed by biological evidence 3 No use – by report or observation or biological evidence 88 Not applicable 99 No information available
Comments	<p>Others directly involved are defined as those who accompanied the patient during the incident. (e.g. driver in the same car)</p> <p>If there are no persons involved in the accident other than the patient, select 88.</p>



24

Variable	Psychoactive drug / substance use
Definition	Suspicion or evidence of use of a psychoactive substance, legal or illegal (e.g. heroin, cocaine, benzodiazepam) before the injury event by the injured person
Obligation	Core (Minimum)
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Suspected (by report or observation) 2 Confirmed by biological evidence 3 No use – by report or observation or biological evidence 99 No information available
Comments	

25

Variable	Psychoactive drug / substance use of others who were directly involved
Definition	Suspicion or evidence of use of a psychoactive substance, legal or illegal (e.g. heroin, cocaine, benzodiazepam) before the injury event by others directly involved in the incident
Obligation	Optional
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Suspected (by report or observation) 2 Confirmed by biological evidence 3 No use – by report or observation or biological evidence 88 Not applicable 99 No information available
Comments	Others directly involved are defined as those who accompanied the patient during the incident. (e.g. driver in the same car) If there are no persons involved in the accident other than the patient, select 88.

26

Variable	Arrival type
Definition	Mode of transport to move non-ambulatory patients to hospital; whether patients were directly transported from scene or transferred from another hospital
Obligation	Core (Minimum)
Time point	At ED admission
Code type	Numeric
No. of responses	Single
Code choices	1 Prehospital ambulance transport 2 Interhospital ambulance transport 3 Prehospital transport using other vehicles (non-EMS) 4 Interhospital transport using other vehicles (non-EMS)
Comments	If select 1 or 3, proceed to Prehospital Care section. If select 2 or 4, proceed to Interhospital Transfer section. <u>Note for inclusion criteria:</u> Codes 3 and 4 are applicable to countries that have no or underdeveloped EMS system. Countries with EMS systems in place should only include EMS-transported patients in the study (codes 1 and 2). <u>Note for codes 3 & 4:</u> Examples of other vehicles (non-EMS) include taxi, bus, rickshaw, etc, which were used to transport patients. Other vehicles do not extend to ambulatory patients who arrived to hospital without assistance (e.g. patients driving in their own cars).



27

Variable	Prehospital care provider
Definition	Level of medical personnel conducting patient transport
Obligation	Core
Time point	At ED admission
Code type	Numeric
No. of responses	Multiple
Code choices	1 Non-EMT (includes volunteer) 2 EMT(basic, intermediate, advanced, paramedic) 3 Doctors 4 Nurses 99 Unknown
Comments	



Prehospital Care

28

Variable	Incident No.
Definition	Identification number of incident given by EMS system
Obligation	Comprehensive
Time point	N/A
Code type	Free text
No. of responses	Single
Code choices	
Comments	

29

Variable	Ambulance No.
Definition	Unique number for ambulance identification
Obligation	Comprehensive
Time point	N/A
Code type	Free text
No. of responses	Single
Code choices	
Comments	

30

Variable	Mode of arrival
Definition	How did the patient arrive at the hospital?
Obligation	Core (Minimum)
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	1 Road ambulance 2 Helicopter 3 Ship 88 Other 99 unknown
Comments	

31

Variable	Date/time call received
Definition	When did the EMS system receive notification about the patient?
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

32

Variable	Date/time ambulance departed from
Definition	When did the ambulance depart to the patient?
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.



33

Variable	Date/time ambulance arrived at accident site
Definition	When did the ambulance arrive at the accident site?
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

34

Variable	Date/time ambulance left accident site
Definition	When did the ambulance leave the accident site?
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

35

Variable	Date/time ambulance arrived at hospital
Definition	When did the ambulance arrive at the hospital?
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

36

Variable	Prehospital CPR
Definition	Did the patient receive CPR during prehospital care?
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	

37

Variable	Prehospital BP
Definition	Initial systolic and diastolic BP measured in field
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	3 digits / 3 digits; Unit: mmHg Not measured : 888/888 Unknown : 999/999
Comments	Diastolic BP may be optional.



38

Variable	Prehospital HR
Definition	Initial HR measured in field
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	3 digits; Unit: /min Not measured : 888 Unknown : 999
Comments	

39

Variable	Prehospital RR
Definition	Initial RR measured in field
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	3 digits; Unit: /min Not measured : 888 Unknown : 999
Comments	

40

Variable	Prehospital O2Sat
Definition	Initial O2Sat measured in field
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	3 digits; Unit: % Not measured: 888 Unknown : 999
Comments	

41

Variable	Prehospital mental status
Definition	Mental status measured in field
Obligation	Core
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	How was the patient's prehospital mental status measured? 1 Not measured 2 Based on Glasgow Coma Scale -> if select 2, enter Glsgow Coma Scale for E, M, V 3 Based on AVPU -> if select 3, enter AVPU score 99 Unknown <u>Glagow Coma Scale:</u> Eye: 1 No eye opening 2 Eyes open only with painful stimuli 3 Eyes open to verbal command 4 Eyes open spontaneously



	<p>Verbal:</p> <ol style="list-style-type: none"> 1 No verbal response 2 Incomprehensible sounds 3 Inappropriate words 4 Disoriented 5 Oriented 6 Intubated <p>Motor:</p> <ol style="list-style-type: none"> 1 No motor response 2 Extension (decerebrate) 3 Flexion (decorticate) 4 Withdraws from pain 5 Localizes pain 6 Obeys verbal commands <p>AVPU:</p> <ol style="list-style-type: none"> 1 A 2 V 3 P 4 U
Comments	<p>Glasgow Coma Scale (E/V/M) is preferred; if not available, record AVPU.</p> <p>Total GCS score will be automatically generated if all three scores are entered.</p>

42

Variable	Prehospital airway
Definition	What type of airway management did the patient receive during prehospital phase?
Obligation	Comprehensive
Time point	During prehospital stage
Code type	Numeric
No. of responses	Multiple
Code choices	<ol style="list-style-type: none"> 10 None 20 Oropharyngeal airway (OPA) 3X Supraglottic arway 31 Combitube 32 Laryngeal tube 33 Laryngeal mask airway (LMA) 34 Other types 40 Endotracheal tube (ETT) 88 Other 99 Unknown
Comments	

43

Variable	Prehospital oxygen
Definition	Method of oxygen supply during prehospital phase
Obligation	Comprehensive
Time point	During prehospital stage
Code type	Numeric and Text
No. of responses	Multiple
Code choices	<ol style="list-style-type: none"> 1 None 2 Nasal 3 Venturi mask 4 Facial mask (breathing or non-rebreathing) 5 Bag valve mask 6 Mechanical ventilator 88 Other 99 Unknown



	If select coding choices 2-88, enter the total amount of oxygen administered during prehospital phase: _____ L/min.
Comments	If amount is unknown, enter -1 L/min.

44

Variable	Prehospital immobilization
Definition	Did the patient have immobilization during prehospital phase?
Obligation	Comprehensive
Time point	During prehospital stage
Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 Backboard 3 Scoop 4 Femur traction splint 5 Other extremity splint 6 Bandaging 7 Pelvic binder 8 C-spine 88 Other 99 Unknown
Comments	

45

Variable	Prehospital fluid access
Definition	Did the patient have any fluid access during prehospital phase? If yes, which and how much fluid was administered during prehospital phase?
Obligation	Comprehensive
Time point	During prehospital stage
Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 IV 3 IO 99 Unknown If select 2 (IV) and/or 3 (IO), choose the type and total amount of fluid infused: 1 Normal Saline 2 Dextrose 5% 3 Dextrose 10% 4 Dextrose 50% 5 Hartmann solution 6 Hypertonic saline 88 Other 99 Unknown _____ mL
Comments	If the total amount of infused fluid is unknown, enter -1 mL.

46

Variable	Pain control during prehospital phase
Definition	Medications used for pain control during prehospital phase
Obligation	Optional
Time point	During prehospital stage
Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 Entonox (medical nitrous oxide and oxygen mixture) 3 IM/IV NSAIDs 4 IM/IV Opioids



	5 PenthoroX (PenthoroX inhaler for self-administration of methoxyflurane for analgesia) 6 IM/IV Ketamine 7 PO Paracetamol 88 Other 99 Unknown
Comments	

47

Variable	Medications given during prehospital phase
Definition	Medications given during prehospital phase, other than pain control medications
Obligation	Comprehensive
Time point	During prehospital stage
Code type	Free text
No. of responses	Multiple (can enter up to 10)
Code choices	
Comments	Enter names of medications given during prehospital phase other than pain control medications.

48

Variable	Prehospital procedure for thoracic cavity
Definition	Did the patient receive invasive procedures for thoracic cavity during prehospital phase?
Obligation	Optional
Time point	During prehospital stage
Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 Thoracentesis 3 Thoracotomy 4 Pericardiocentesis 99 Unknown
Comments	Thoracentesis is a procedure to remove fluid or air from the pleural space using a cannula for diagnostic or therapeutic purposes. Thoracotomy is an incision into the pleural space of the chest. Pericardiocentesis is a procedure to aspirate fluid from the pericardium.

49

Variable	Prehospital diagnosis
Definition	Presumed prehospital diagnosis
Obligation	Optional
Time point	During prehospital stage
Code type	Numeric
No. of responses	Multiple
Code choices	1 Superficial injuries 2 Musculoskeletal injuries 3 Burn and corrosion injuries 4 Internal organ injuries - chest 5 Internal organ injuries – abdomen 6 Crushing injuries 7 Open wound injuries 8 Blood vessel injuries 9 Nerves and spinal cord injuries 10 Other and unspecified injuries 11 Skull and facial bone fracture injuries 12 Intracranial injuries 13 Head crushing injuries 14 Neck injuries 15 Other multiple body injuries



	99 Unknown
Comments	

50

Variable	Decontamination
Definition	Was decontamination done during prehospital phase?
Obligation	Optional
Time point	During prehospital stage
Code type	Numeric
No. of responses	Single
Code choices	1 Yes. Dry decontamination was done. 2 Yes. Wet decontamination was done. 3 No. Decontamination was indicated but not conducted. 4 No. Decontamination was not indicated. 99 Unknown
Comments	Decontamination is the process of reducing or removing contaminating substance such as micro-organisms or hazardous materials.



Interhospital Transfer

51

Variable	Level of referring hospital
Definition	Trauma center level of the referring hospital where the patient was initially at before transfer
Obligation	Core (Minimum)
Time point	During interhospital transfer
Code type	Numeric
No. of responses	Single
Code choices	1 Level I trauma center 2 Level II trauma center 3 Level III trauma center or below
Comments	Classification criteria for leveling hospitals in each country is to be defined by the country P.I. Suggested criteria is available in Appendix V. (Reference: American College of Surgeons)

52

Variable	Name of referring hospital
Definition	Name of the referring hospital where the patient was transferred from
Obligation	Optional
Time point	During interhospital transfer
Code type	Free text
No. of responses	Single
Code choices	
Comments	

53

Variable	Date/Time of arrival at referring hospital
Definition	When did the patient arrive at the referring hospital?
Obligation	Optional
Time point	During interhospital transfer
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

54

Variable	Date/Time of departure from referring hospital
Definition	When did the patient depart from the referring hospital?
Time point	During interhospital transfer
Obligation	Optional
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

55

Variable	Mode of interhospital transfer
Definition	What kinds of transportation was used for interhospital transfer?
Obligation	Comprehensive
Time point	During interhospital transfer
Code type	Numeric
No. of responses	Single
Code choices	1 Road ambulance



	2 Helicopter 3 Ship 88 Other 99 Unknown
Comments	

56

Variable	Reason for transfer
Definition	Reason for transfer after initial medical examination
Obligation	Comprehensive
Time point	During interhospital transfer
Code type	Numeric
No. of responses	Single
Code choices	10 Insufficient availability of wards 20 Insufficient availability of ICUs 30 Unable to provide emergency operations/procedure 4X Transfer for professional emergency care 41 Burns 42 Neurology/neurosurgery 43 Cardiothoracic surgery 44 Pediatrics/pediatric trauma 45 Hand surgery 46 Other 50 Transfer to a lower level hospital for mild illness 60 Transfer to a long-term care facility 70 Personal reasons 88 Other 99 Unknown
Comments	

57

Variable	Transfer from where
Definition	Where was the patient being treated before transfer?
Obligation	Comprehensive
Time point	During interhospital transfer
Code type	Numeric
No. of responses	Single
Code choices	1 ED 2 ICU 3 Ward (other than ICU) 99 Unknown
Comments	

58

Variable	Intervention before transfer
Definition	What kinds of intervention was delivered to the patient at the referring hospital, prior to transfer?
Obligation	Optional
Time point	During interhospital transfer
Code type	Numeric
No. of responses	Multiple
Code choices	1 ED resuscitation 2 Surgery 3 ICU care 4 Non-specific intervention 5 No intervention 99 Unknown
Comments	1 ED resuscitation includes any one of advanced airway, transfusion, and ventilation.



	2 Surgery includes any form of general surgeries performed with anesthesia. 4 Non-specific intervention includes any form of general care such as IV fluid administration and oxygen administration.
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59

Variable	GCS at referring hospital prior to transfer
Definition	GCS that was measured at the referring hospital prior to transfer
Obligation	Comprehensive
Time point	Before interhospital transfer
Code type	Numeric
No. of responses	Single
Code choices	<p>1 All GCS measured 0 Not all GCS measured 99 Unknown</p> <p>Eye: 0 Not measured 1 No eye opening 2 Eyes open only with painful stimuli 3 Eyes open to verbal command 4 Eyes open spontaneously</p> <p>Verbal: 0 Not measured 1 No verbal response 2 Incomprehensible sounds 3 Inappropriate words 4 Disoriented 5 Oriented 6 Intubated</p> <p>Motor: 0 Not measured 1 No motor response 2 Extension (decerebrate) 3 Flexion (decorticate) 4 Withdraws from pain 5 Localizes pain 6 Obeys verbal commands</p>
Comments	Total GCS score will be automatically generated if all three scores are entered.



ED and Hospital care

60

Variable	BP at triage
Definition	Initial systolic and diastolic BP measured at ED arrival or admission
Obligation	Core (Minimum)
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	Unit: mmHg Not measured : 888/888 Unknown : 999/999
Comments	Diastolic BP may be optional.

61

Variable	HR at triage
Definition	Initial heart rate measured at ED arrival or admission
Obligation	Core (Minimum)
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	Unit: /min Not measured : 888 Unknown : 999
Comments	

62

Variable	RR at triage
Definition	Initial respiratory rate measured at ED arrival or admission
Obligation	Core (Minimum)
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	Unit: /min Not measured: 888 Unknown: 999
Comments	

63

Variable	Temperature at triage
Definition	Initial temperature measured at ED arrival or admission
Obligation	Core
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	Unit: °C Not measured: 888 Unknown: 999
Comments	

64

Variable	O2Sat at triage
Definition	Initial O2Sat at ED arrival or admission
Obligation	Core (Minimum)
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	Unit: % Not measured: 888



	Unknown: 999
Comments	

65

Variable	Mental status at triage (GCS)
Definition	Initial GCS measured at ED arrival or admission
Obligation	Core
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	<p>1 All GCS measured 0 Not all GCS measured 99 Unknown</p> <p>Eye: 0 Not measured 1 No eye opening 2 Eyes open only with painful stimuli 3 Eyes open to verbal command 4 Eyes open spontaneously</p> <p>Verbal: 0 Not measured 1 No verbal response 2 Incomprehensible sounds 3 Inappropriate words 4 Disoriented 5 Oriented 6 Intubated</p> <p>Motor: 0 Not measured 1 No motor response 2 Extension (decerebrate) 3 Flexion (decorticate) 4 Withdraws from pain 5 Localizes pain 6 Obeys verbal commands</p>
Comments	Total GCS score will be automatically generated if all three scores are entered.

66

Variable	DOA
Definition	Was the patient dead on arrival at hospital?
Obligation	Core (Minimum)
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No
Comments	

67

Variable	Date/time of arrival at ED
Definition	When did the patient arrive in ED?
Obligation	Core (Minimum)
Time point	At admission
Code type	Numeric
v	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.



68

Variable	Date/time of disposition from ED
Definition	Date and time in which the patient was disposed from ED
Obligation	Core (Minimum)
Time point	At ED discharge
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

69

Variable	ED disposition
Definition	Action taken or injured person's status at ED disposition
Obligation	Core (Minimum)
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	1 Treated and discharged 2 Transfer to other hospital 3 Admitted to hospital 4 Dead 88 Other 99 Unknown
Comments	

70

Variable	Hospital discharge disposition
Definition	If a patient was hospitalized, what was the next course of action after termination of treatment?
Obligation	Core
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	10 Treated and discharged 20 Hopeless discharge 30 Discharge against advice 4X. Transfer 41 Transferred to another hospital for acute care treatment* (acute care treatment includes surgery, procedure or ward/ICU admission) 42 Transferred to a rehabilitation center after acute care treatment at the admitted hospital 43 Transferred to a nursing home after acute care treatment at the admitted hospital 50 Dead 88 Other 99 Unknown
Comments	Only for hospitalized patients; no separate coding for escape from hospital

71

Variable	Date/time of hospital discharge
Definition	Date and time of the day the patient was discharged from hospital
Obligation	Core
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm



Comments	If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.
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72

Variable	Total length of stay in ICU
Definition	Length of hospitalization in ICU for treatment of injury
Obligation	Core
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	_____ days (in calendar days)
Comments	Enter the length of hospitalization in ICU for treatment of injury (in days). If a patient was discharged and was re-admitted in ICU for multiple times, enter the overall length of stay (in calendar days). Example of how to count calendar days is available in Appendix VI.

73

Variable	Airway management
Definition	Did the patient receive airway management within 24 hours of admission?
Obligation	Core
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Multiple
Code choices	10 None 20 Oropharyngeal airway (OPA) 3X Supraglottic arway 31 Combitube 32 Laryngeal tube 33 Laryngeal mask airway (LMA) 34 Other types 40 Endotracheal tube (ETT) 88 Other 99 Unknown
Comments	

74

Variable	Fluid
Definition	Did the patient receive fluid in hospital within 24 hours of admission?
Obligation	Optional
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown If yes. enter the amount administered: _____ mL
Comments	If amount is unknown, enter -1 mL.

75

Variable	Transfusion
Definition	The amount and type of blood transfused within 24 hours of admission
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Multiple
Code choices	1 Yes 0 No



	<p>99 Unknown</p> <p>For each blood type, record the amount of blood transfused in 'cc' unit. Blood type code Whole blood: ___cc packed cells: ___cc FFP: ___cc Platelets: ___cc Platelets (apheresis) : ___cc Cryoprecipitate: ___cc</p> <p>If transfusion was not given, enter 0.</p>
Comments	<p>Total amount of blood transfused for trauma during hospitalization in ED, operating room and ward. If amount is unknown, enter -1 cc.</p>

76

Variable	Surgical airway
Definition	Did the patient receive surgical airway management within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	Methods for surgical airway management include cricothyrotomy, tracheostomy, and more.

77

Variable	Tension pneumothorax decompression
Definition	Did the patient have emergent chest decompression within 24 hours of admission for management of tension pneumothorax?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	<p>"0.No" includes the following patients:</p> <p>a) those who did not have tension pneumothorax and therefore was not treated with emergency chest decompression ; b) and those who had the condition but was not treated.</p>

78

Variable	Non-surgical external bleeding control
Definition	Did the patient have external bleeding and was treated with non-surgical bleeding control within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	<p>"0.No" includes the following patients:</p> <p>a) those who did not have external bleeding and therefore was not treated with non-surgical bleeding control. ; b) and those who had the condition but was not treated.</p>



79

Variable	Cardiocentesis
Definition	Did the patient have cardiac tamponade and was treated with cardiocentesis within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	“0.No” includes the following patients: a) those who did not have cardiac tamponade and therefore was not treated with cardiocentesis. b) and those who had the condition but was not treated.

80

Variable	Thoracostomy or Thoracotomy
Definition	Was the patient treated with Thoracostomy(chest tube insertion) or thoracotomy with the open thoracic surgery within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	A patient may receive thoracostomy or thoracotomy if he or she had hemothorax, pneumothorax, or hemopneumothorax. If the patient received thoracostomy without thoracotomy, input code 1 yes. “0.No” includes the following patients: a) those who did not have any one of the conditions above and therefore was not treated with thoracotomy ; b) and those who had the condition but was not treated.

81

Variable	Positive ventilation
Definition	Did the patient have flail chest and was treated with positive ventilation within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	“0.No” includes the following patients: a) those who did not have flail chest and therefore was not treated with positive ventilation b) and those who had the condition but was not treated.

82

Variable	Non-surgical immobilization
Definition	Did the patient have unsteady pelvis and was treated with non-surgical immobilization within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission



Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	“0.No” includes the following patients: a) those who did not have unsteady pelvis and therefore was not treated with immobilization. b) and those who had the condition but was not treated.

83

Variable	CPR
Definition	Did the patient have cardiac arrest and was treated with CPR within 24 hours of admission?
Obligation	Comprehensive
Time point	Within 24 hours of admission
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	“0.No” includes the following patients: a) those who did not have cardiac arrest and therefore was not treated with CPR. b) and those who had the condition but was not treated.

84

Variable	Operation
Definition	Whether an operation (with general anesthesia) was done in hospital for each anatomical region
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 Head 3 Face 4 Neck 5 Thorax 6 Abdomen and pelvic contents 7 Spine 8 Upper extremity 9 Lower extremity (including bony pelvis) 10 Unspecified 99 Unknown
Comments	Applicable to operations with general anesthesia

85

Variable	Operation– date/time
Definition	The time at which the first operation began for each anatomical region
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Multiple
Code choices	Mmddyyyy hh:mm
Comments	If select Y for operation code 2-10, enter: mmddyyyy hh:mm for each of the selected codes: 2 Head 3 Face



	4 Neck 5 Thorax 6 Abdomen and pelvic contents 7 Spine 8 Upper extremity 9 Lower extremity (including bony pelvis) 10 Unspecified If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.
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86

Variable	First angiography scan
Definition	Was an angiography performed for each anatomical region?
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 Head 3 Face 4 Neck 5 Thorax 6 Abdomen and pelvic contents 7 Spine 8 Upper extremity 9 Lower extremity (including bony pelvis) 10 Unspecified 99 Unknown
Comments	Angiography refers to conventional angiography and does not include CT coronary angiography.

87

Variable	First angiography scan – date/time
Definition	When was an angiography performed for each anatomical region?
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Multiple
Code choices	If select Y for “first angiography scan” code 2-10, enter: mmddyyyy hh:mm for each of the selected codes: 2 Head 3 Face 4 Neck 5 Thorax 6 Abdomen and pelvic contents 7 Spine 8 Upper extremity 9 Lower extremity (including bony pelvis) 10 Unspecified If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.
Comments	

88

Variable	Embolization
Definition	Whether an embolization was done for each anatomical region
Obligation	Comprehensive
Time point	During hospital stay



Code type	Numeric
No. of responses	Multiple
Code choices	1 None 2 Head 3 Face 4 Neck 5 Thorax 6 Abdomen and pelvic contents 7 Spine 8 Upper extremity 9 Lower extremity (including bony pelvis) 10 Unspecified 99 Unknown
Comments	

89

Variable	Embolization – date/time
Definition	The time at which the first embolization began for each anatomical region
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Multiple
Code choices	mmddyyyy hh:mm
Comments	If select Y for “first angiography scan” code 2-10, enter: mmddyyyy hh:mm for each of the selected codes: 2 Head 3 Face 4 Neck 5 Thorax 6 Abdomen and pelvic contents 7 Spine 8 Upper extremity 9 Lower extremity (including bony pelvis) 10 Unspecified If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

90

Variable	Pre-existing comorbidity
Definition	Type of underlying illness at admission (based on Charlson Comorbidity Index)
Obligation	Comprehensive
Time point	At admission
Code type	Numeric
No. of responses	Multiple
Code choices	1 Yes 0 No 99 Unknown If select 1. Yes, then select all that apply: 1 Myocardial infarction 2 Congestive heart failure 3 Peripheral vascular disease 4 Cerebrovascular disease 5 Hemoplegia 6 Pulmonary disease 7 Diabetes 7-1 End organ damage 7- 2 No end organ damage 8 Moderate to severe renal disease



	9 Chronic liver disease 9-1 Moderate to severe liver disease 9-2 Mild liver disease 10 Peptic ulcer disease 11 Cancer 11-1 Lymphoma 11-2 Leukemia 11-3 Solid tumor 11-4 Metastatic tumor 11-4-1 Breast 11-4-2 Colon 11-4-3 Prostate 11-4-4 Lung 11-4-5 Melanoma 11-4-6 Other 12 Dementia 13 Rheumatologic disease 14 HIV/AIDS
Comments	Charlson comorbidity index can be found in Appendix VII.

91

Variable	Pre-existing disability (GOS)
Definition	Glasgow Outcome Scale score evaluated before the occurrence of injury
Obligation	Core
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	1 Vegetative state; unable to move on a bed 2 Severe disability; independent activities of daily living are not possible 3 Moderate disability; independent activities of daily living are possible, but cannot resume work/school life 4 Mild or no disability; no disability reported 99 Unknown
Comments	GOS scoring system can be found in Appendices VIII and IX (Korean).

92

Variable	Modified Rankin Scale at discharge
Definition	Patient's outcome at discharge according to the Modified Rankin Scale
Obligation	Core
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	0 No symptoms at all 1 No significant disability despite symptoms; able to carry out all usual duties and activities 2 Slight disability; unable to carry out all previous activities, but able to look after own affairs without assistance 3 Moderate disability; requiring some help, but able to walk without assistance 4 Moderately severe disability; unable to walk without assistance and unable to attend to own bodily needs without assistance 5 Severe disability; bedridden, incontinent and requiring constant nursing care and attention 6 Dead 99 Unknown
Comments	Modified Rankin Scale can be found in Appendix X.

93

Variable	Pediatric patient
Definition	Was the patient younger than 19 years of age?
Obligation	Comprehensive
Time point	At admission



Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No
Comments	Patients who are 19 years of age are not considered pediatric.

94

Variable	Pediatric – weight
Definition	Weight of a pediatric patient measured at admission
Obligation	Comprehensive
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	In KG, to 1 decimal place
Comments	Measured scale or estimate are both acceptable

95

Variable	Pediatric – airway
Definition	Whether a pediatric patient received airway management at admission
Obligation	Comprehensive
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	1 Normal airway 2 Maintained airway 3 Unmaintainable (invasive) airway (i.e. intubated) 99 Unknown
Comments	

96

Variable	Pediatric – level of consciousness
Definition	Level of consciousness of a pediatric patient measured at admission
Obligation	Comprehensive
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	1 Awake 2 Obtunded or any loss of consciousness (responsive) 3 Unresponsive 99 Unknown
Comments	

97

Variable	Pediatric – fracture
Definition	Whether a pediatric patient had any fracture at admission
Obligation	Comprehensive
Time point	At admission
Code type	Numeric
No. of responses	Single
Code choices	1 None 2 Single and closed or suspected 3 Multiple closed or open 99 Unknown
Comments	

98

Variable	Pediatric – wound
Definition	Whether a pediatric patient has any cutaneous wounds at admission
Obligation	Comprehensive
Time point	At admission



Code type	Numeric
No. of responses	Single
Code choices	1 None 2 Minor; contusion, abrasion, laceration smaller than 7 cm (not through fascia) 3 Major, penetrating, or burns greater than 10% 99 Unknown
Comments	

99

Variable	Pediatric – child abuse
Definition	Whether the pediatric injury was caused by child abuse
Obligation	Optional
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	Abuse is a non-accidental inflicted injury cause by misuse of power and is most likely to be found in situations where one person has a power of authority (e.g. parent; caregiver; teacher; older child)

100

Variable	Pediatric – sport-related injury
Definition	Whether the mechanism of injury was sport-related
Obligation	Optional
Time point	At the time of injury incident
Code type	Numeric
No. of responses	Single
Code choices	1 Yes 0 No 99 Unknown
Comments	



Injury severity and outcome

101

Variable	ICD Diagnosis
Definition	Code for diagnosis after ED or hospital care
Obligation	Core (Minimum)
Time point	During hospital stay
Code type	Character
No. of responses	Multiple (can enter up to 10)
Code choices	1 ICD-10 2 ICD-9 Lists of ICD-10 and ICD-9 codes will be provided for your selection; code can be selected by using Search function at http://epatos.org .
Comments	If there are more than 10 diagnosis codes, select 10 for each anatomical region with the highest score. Note: Exclude injuries which occurred after admission (e.g. fall from a bed during hospitalization, rib fracture during CPR). PATOS uses ICD-10 codes by default. Countries that use ICD-9 codes may choose to enter ICD-9 codes instead of ICD-10 codes.

102

Variable	Abbreviated Injury Scale
Definition	Abbreviated Injury Scale of the patient, reflecting all traumatic history confirmed by medical records
Obligation	Core
Time point	During hospital stay
Code type	Numeric
No. of responses	Multiple (can enter up to 10)
Code choices	scale 1 ~ 7 A list of AIS codes will be provided for selection; code can be selected by using Search function at http://epatos.org .
Comments	If there are more than 10 AIS codes, select 10 for each anatomical region with the highest score. Note: Exclude injuries which occurred after admission (e.g. fall from a bed during hospitalization, rib fracture during CPR). For clinical conditions that do not have appropriate AIS codes, select code "000000." AIS score may be different from ICD-10 diagnosis.

103

Variable	GOS at discharge
Definition	Glasgow Outcome Scale score at discharge of a patient who were admitted for acute care treatment of injury
Obligation	Core
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	1 Dead 2 Vegetative state: unable to move on a bed 3 Severe disability: Independent activities of daily living are not possible 4 Moderate disability: Independent activities of daily living are possible, but cannot resume work/school life 5 Recovering state: mild or no disability; can resume work/school life



	99 Unknown
Comments	If no record is available in medical record, refer to physical examination results; if patient's status is not clear, select "unknown." GOS scoring system can be found in Appendices VIII and IX (Korean).



Rehabilitation

104

Variable	Date/time for first rehabilitation evaluation during hospital stay
Definition	When did the patient first receive a rehabilitation evaluation after injury?
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If a patient received a rehabilitation evaluation but time is unknown, enter "8888." If a patient did not receive a rehabilitation evaluation, enter "9999."

105

Variable	Date for first psychiatric evaluation during hospital stay
Definition	When did the patient first receive a psychiatric evaluation after injury?
Obligation	Comprehensive
Time point	During hospital stay
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	If a patient received a psychiatric evaluation but time is unknown, enter "8888." If a patient did not receive a psychiatric evaluation, enter "9999."



Outcome at 6 months

106

Variable	Current residence at 6 months
Definition	The location at which a patient is currently residing 6 months after injury
Obligation	Optional
Time point	6 months after discharge
Code type	Numeric
No. of responses	Single
Code choices	1 Home: no additional treatment and assistance required 2 Home: additional treatment and assistance required 3 General hospital 4 Rehabilitation hospital 5 Nursing home 6 Hospice 7 Dead 88 Other 99 Unknown
Comments	

107

Variable	Occupational status at 6 months
Definition	Is the patient currently working or attending school 6 months after injury?
Obligation	Optional
Time point	6 months after discharge
Code type	Numeric
No. of responses	Single
Code choices	1 Patient returned to the same workplace(school) he/she was attending prior to injury; patient is currently at the same level(grade) as before. 2 Patient returned to the same workplace(school) he/she was attending prior to injury; patient is currently at a different level(grade) as before. 3 Patient returned to the same workplace(school) he/she was attending prior to injury; patient does not know the level(grade) he/she is in. 4 Patient returned to a different workplace(school) than the one he/she was attending prior to injury; patient is currently at the same level(grade) as before. 5 Patient returned to a different workplace(school) than the one he/she was attending prior to injury; patient is currently at a different level(grade) as before. 6. Patient returned to a different workplace(school) than the one he/she was attending prior to injury; patient does not know the level(grade) he/she is in. 7 Patient never worked or attended school prior to injury. 99 Unknown
Comments	Code if patient has returned to the same level/grade of work/school before and after injury.

108

Variable	Extended Glasgow Outcome Scales (GOSE) Interview at 6 months
Definition	Extended Glasgow Outcome Scale of a patient who was admitted for an acute care treatment of an injury, measured at 6 months after discharge.
Obligation	Comprehensive
Time point	6 months after discharge
Code type	Numeric
No. of responses	Single
Code choices	1 Dead 2 Vegetative State 3 Lower Severe Disability 4 Upper Severe Disability 5 Lower Moderate Disability 6 Upper Moderate Disability 7 Lower Good Recovery 8 Upper Good Recovery



	99 Unknown
Comments	GOSE scoring system can be found in Appendix XI.

109

Variable	EQ5D at 6 months
Definition	EQ-5D score of a patient who received acute care for an injury, measured at 6 months after discharge
Obligation	Comprehensive
Time point	6 months after discharge
Code type	Numeric (mobility – self care – usual activities – pain/discomfort – anxiety/depression – VAS)
No. of responses	Single
Code choices	<p>Enter a combination of each EQ-5D score in the following order: mobility – self care – usual activities – pain/discomfort – anxiety/depression – VAS) (e.g. mobility 1, self care 3, usual activities 1, pain/discomfort 2, anxiety/depression 1, VAS 85: 1312085)</p> <p>Mobility:</p> <p>1 I have no problems walking about 2 I have slight problems walking about 3 I have moderate problems walking about 4 I have severe problems walking about 5 I am unable to walking about</p> <p>Self-care:</p> <p>1 I have no problems washing or dressing myself 2 I have slight problems washing or dressing myself 3 I have moderate problems washing or dressing myself 4 I have severe problems washing or dressing myself 5 I am unable to wash or dress myself</p> <p>Usual activities:</p> <p>1 I have no problems doing my usual activities 2 I have slight problems doing my usual activities 3 I have moderate problems doing my usual activities 4 I have severe problems doing my usual activities 5 I am unable to do my usual activities</p> <p>Pain/discomfort:</p> <p>1 I have no pain or discomfort 2 I have slight pain or discomfort 3 I have moderate pain or discomfort 4 I have severe pain or discomfort 5 I have extreme pain or discomfort</p> <p>Anxiety/depression:</p> <p>1 I am not anxious or depressed 2 I am slightly anxious or depressed 3 I am moderately anxious or depressed 4 I am severely anxious or depressed 5 I am extremely anxious or depressed</p> <p>VAS: _____</p>
Comments	EQ5D guideline in Korean can be found in Appendix XII.



Outcome at 12 months

110

Variable	Extended Glasgow Outcome Scales (GOSE) Interview at 12 months
Definition	Extended Glasgow Outcome Scale of a patient who was admitted for an acute care treatment of an injury, measured at 12 months after discharge.
Obligation	Comprehensive
Time point	12 months after discharge
Code type	Numeric
No. of responses	Single
Code choices	1 Dead 2 Vegetative State 3 Lower Severe Disability 4 Upper Severe Disability 5 Lower Moderate Disability 6 Upper Moderate Disability 7 Lower Good Recovery 8 Upper Good Recovery 99 Unknown
Comments	GOSE scoring system can be found in Appendix XI.

111

Variable	EQ5D at 12 months
Definition	EQ-5D score of a patient who received acute care for an injury, measured at 12 months after discharge
Obligation	Comprehensive
Time point	12 months after discharge
Code type	Numeric (mobility – self care – usual activities – pain/discomfort – anxiety/depression – VAS)
No. of responses	Single
Code choices	<p>Enter a combination of each EQ-5D score in the following order: mobility – self care – usual activities – pain/discomfort – anxiety/depression – VAS) (e.g. mobility 1, self care 3, usual activities 1, pain/discomfort 2, anxiety/depression 1, VAS 85: 1312085)</p> <p>Mobility: 1 I have no problems walking about 2 I have slight problems walking about 3 I have moderate problems walking about 4 I have severe problems walking about 5 I am unable to walking about</p> <p>Self-care: 1 I have no problems washing or dressing myself 2 I have slight problems washing or dressing myself 3 I have moderate problems washing or dressing myself 4 I have severe problems washing or dressing myself 5 I am unable to wash or dress myself</p> <p>Usual activities: 1 I have no problems doing my usual activities 2 I have slight problems doing my usual activities 3 I have moderate problems doing my usual activities 4 I have severe problems doing my usual activities 5 I am unable to do my usual activities</p> <p>Pain/discomfort: 1 I have no pain or discomfort 2 I have slight pain or discomfort 3 I have moderate pain or discomfort 4 I have severe pain or discomfort</p>



	<p>5 I have extreme pain or discomfort</p> <p>Anxiety/depression: 1 I am not anxious or depressed 2 I am slightly anxious or depressed 3 I am moderately anxious or depressed 4 I am severely anxious or depressed 5 I am extremely anxious or depressed</p> <p>VAS: _____</p>
Comments	EQ5D guideline can be found in Appendix XI.



Death certificate

112

Variable	Date/Time of death
Definition	When did the patient die?
Obligation	Core (Minimum)
Time point	At discharge
Code type	Numeric
No. of responses	Single
Code choices	mmddyyyy hh:mm
Comments	Record date and time of death as recorded in the death certificate. If date is unknown, enter 99:99:9999. If time is unknown, enter 99:99.

113

Variable	Primary cause of death
Definition	What is the primary cause of death?
Obligation	Core (Minimum)
Time point	At discharge
Code type	Character
No. of responses	Single
Code choices	1 Unknown diagnosis due to DOA / DNR 2 Shock bleeding / hypovolemia 3 Severe traumatic brain injury 4 Major chest or abdominal organ injury 5 Septic shock / multi-organ failure 6 Complicated medical condition (MI, Stroke, infection etc.) 88 Other 99 Unknown
Comments	Record COD recorded in the death certificate.



Appendix I. Intent of injury

(Reference: ICECI 2004)

1 Unintentional

An unforeseen incident, where there was no intent by a person to cause harm, injury or death, but which resulted in injury.

Includes:

- accidental injury event

2 Intentional self-harm

Deliberate use of physical or other force or agent against oneself, with the intent to cause harm, injury or death.

Includes:

- suicide
- parasuicide (incomplete suicide attempt)
- self-mutilation

3 Assault

An act of fatal or non fatal violence where physical or other force is used with the intent to cause harm, injury or death to another person.

Excludes:

- legal intervention (5)
- operation of war or civil conflict (6)

4 Undetermined

Available information is insufficient to make a distinction between unintentional injury event, intentional self-harm, assault or other violence.

5 Legal interventions

Physical or other force used by police or other law enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal action.

Includes:

- injury inflicted by law enforcement agent during legal action
- injury inflicted by state agency during attempts to enforce the law
- execution or injury performed at the behest of judiciary or ruling authority

Excludes:

- citizen arrest (3)

Note: The victim will typically be a suspect or bystander. If an officer is the victim, consider the injury event an assault (3), not related to legal intervention. The only exception is if the officer is injured by another officer in the line of duty.

Type of legal intervention:

5.1 Potential arrest situation



5.1.1 Traffic pursuit

Includes:

- refusal to stop or pull over

5.1.2 Investigation of a suspicious person or incident

Includes:

- execution of a search warrant

5.1.3 Execution of an arrest

5.1.8 Other specified arrest situation

5.1.9 Unspecified arrest situation

5.2 Response to a disturbance call

5.2.1 Family dispute

5.2.2 Person behaving aberrantly

5.2.8 Other specified disturbance call

Includes:

- bar fight

5.2.9 Unspecified disturbance call

5.3 Ambush situation

NOTE: Entrance or invasion of premises without warning or notice; situation with a deliberate element of surprise.

Includes:

- drug raid

5.4 Civil disorder

Includes:

- mass disobedience, riot

5.5 Handling, transporting, custody of prisoner(s)

5.6 Execution of a legal sentence

Includes:

- whipping
- other forms of corporal punishment and capital punishment as ordered by a judge

5.8 Other type of legal intervention

6. Operations of war and civil insurrection

Physical or other force used by one or more person(s) against one or more other person(s) in the course of combat activities during war or civil conflict.

6.1 Civil war/guerrilla operation

Organised conflict between groups or factions within one country.

Includes revolution, coup d'état

6.2 War

Conflict between two or more countries

6.3 Terrorism

6.4 Civil insurrection

Includes riots, protests, strikes, sit downs, blockages, etc.

6.5 Post-conflict incident

Includes explosion of devices (eg., mines) placed during the conflict



Appendix II. Mechanism of injury

(Reference: ICECI 2004)

1 Traffic injury

Traffic injury is any land transport vehicle incident occurring on the public highway [ie. originating on, terminating on, or involving a vehicle partially on the highway] and resulting in injury. Public highway includes an trafficway, street, or road that is open to the public for purposes of moving persons or property from one place to another.

Non-traffic injury is defined as any land transport vehicle incident occurring entirely in any place other than a public highway and resulting in injury. Incidents involving only off-road vehicles are classified as non-traffic events, unless specified to have been traffic events.

1.1 Transport injury event

Includes:

- Crashes and other injurious events occurring in the course of transportation
- Injury resulting from events involving a device being used primarily for conveying persons or goods from one place to another

NOTE: The inclusion criterion differs from the ICD-10 criterion by excluding injury from vehicles *not associated with their transport function*.

1.1.1 Vehicle occupant

1.1.2 Pedestrian

1.1.3 Pedal cyclist

1.1.4 Motorcyclist/ motorcycle rider

1.1.8 Other transport injury event

Includes:

- cases in which it is unknown whether the injured person was a *vehicle occupant, pedestrian, pedal cyclist, or motorcycle rider*

2 Sexual assault

An act of fatal or non fatal sexual violence where physical or other force is used with the intent to cause harm, injury or death to another person.

2.1 Sexual assault

2.1.1 Rape, attempted rape

Includes:

- penetration with an object

2.1.2 Sodomy, attempted sodomy

Includes:

- penetration with an object

2.1.3 Touching or fondling of genitals

2.1.4 Oral sex

2.1.8 Other sexual assault

3 Fall

To descend or drop by force of gravity, ie. a "nonsyncopal event not attributable to sustaining a violent blow, loss of consciousness, stroke or epileptic seizure" (Kellogg definition from: Leipzig et al. 1999). This includes falling on same level, falling from a height, falling on stairs etc.

3.1 Falling, stumbling, jumping, pushed

Includes:

- being pushed by a person
- *falling* while being carried (ie., being dropped)
- tripping

3.1.1 *Falling/stumbling* by tripping on same level



Excludes:

- spraining ankle when walking and not *falling* (ie., over-exertion, 80)

3.1.2 *Falling/stumbling by slipping on same level*

3.1.3 *Other falling/stumbling/jumping/pushed on the same level*

Includes:

- *falling* from bumping against an object

Excludes:

- crushed or pushed by a crowd or stampede (4)

3.1.4 *Falling/stumbling/jumping/pushed from a height less than 1 metre*

Includes:

- striking or hitting an object when jumping or diving
- *falling* from a child-size pedal cycle

3.1.5 *Falling/stumbling/jumping/pushed from a height 1 metre or more*

Includes:

- striking or hitting an object when jumping or diving
- *falling* from an adult-size *pedal cycle*
- *falling* while being carried by a normal-sized adult
- *falling* from a horse
- *falling* from a building or structure

Excludes:

- collapse of a non-burning building or structure (4)

3.1.6 *Falling/stumbling/jumping/pushed from an unspecified height*

3.1.7 *Falling/stumbling/jumping/pushed on stairs/steps*

3.1.8 *Other falling/stumbling/jumping/pushed*

Excludes:

- collapse of a non-burning building or structure (4)

4 Struck/hit by person or object

Blunt force is defined as any external force that produces a change in the speed or direction of a moving object or that causes a stationary object to deform or move and that does not involve piercing/penetrating force or machinery.

Abrading (rubbing) is defined as Injury caused by scraping or wearing away with pressure and friction, mainly by repeated back and forward movement of an object/substance over the surface of human skin or other tissue.

4.1 Contact with object or animal

Excludes:

- contact with machinery (81)

4.1.1 Contact with moving object

Includes:

- hit or struck by sports equipment (eg., hockey stick) or a blunt weapon (eg., cudgel)

Excludes:

- being shot with a firearm (5) or by arrow/bolt (5)

4.1.2 Contact with static object

Includes:

- walking into a wall

Excludes:

- walking into a wall and being injured by falling down (3)

4.1.3 Struck by thrown or *falling* object

Includes:

- *falling* rock, stone, or tree
- cave-in
- collapse of a building other than by fire
- being struck by a thrown ball while standing still



Excludes:

- being shot by a firearm (5) or other weapon (5)

4.1.4 Struck by moving object before which person moved/was moved

Includes:

- person moving in front of a moving object (eg., someone being hit by a ball as they moved to try and catch it)

Excludes:

- transport injuries (1)
- being shot by a firearm (5) or other weapon (5)

4.1.5 Contact with animal: non-piercing or non-penetrating

Includes:

- person struck or kicked by animal

Excludes:

- being bitten (5), stung (5), or scratched/clawed by an animal (5)

4.1.8 Other specified contact with object or animal

4.1.9 Unspecified contact with object or animal

4.2 Contact with person

Includes:

- application of bodily force

4.2.1 Struck or kicked by a person

Includes:

- hit (with fist), struck, kicked, shaken, butted with head, or twisted by another person – whether intentional or not (eg., during horse play)
- force applied by self (eg. hitting one's own head with one's fist)

Excludes:

- being scratched by a person (5)

4.2.8 Other specified contact with a person

Excludes:

- fall due to collision of a pedestrian with another *pedestrian* (3)

4.2.9 Unspecified contact with a person

4.3 Crushing

Excludes:

- crushing caused by machinery (81)

4.3.1 Pinching, crushing between objects

Includes:

- crushed beneath an object
- caught or jammed between moving and stationary objects (eg., getting one's hand caught in a car door)

Excludes:

- transport injuries (1)

4.3.2 Crushing between persons

Includes:

- crushed by a crowd or stampede

4.3.8 Other specified crushing

4.3.9 Unspecified crushing

4.4 Abrading, rubbing

Excludes:

- abrasion caused by contact with machinery (81)

5 Stab or cut

Piercing or penetrating force is defined as a force that makes a hole in or through, that punctures, or forces a way through or into human tissue.



5.1 Scratching, cutting, tearing, severing

Excludes:

- cutting or puncturing during surgical or medical care (83)

5.1.1 Scratched or clawed by a person

5.1.2 Scratched or clawed by an animal

5.1.3 Cut, slice, slash

Includes:

- being cut (eg., cutting one's finger with a knife, broken glass or the edge of paper)

Excludes:

- being cut, sliced, or slashed by *machinery* (81)

5.1.4 Tear, rip, saw

Excludes:

- having a body part ripped/torn by machinery (81)
- tearing a ligament due to tripping, slipping, or over-exertion (80)

5.1.5 Sever, hack off

Includes:

- severing a body part with an axe, panga, machete, or cutlass

5.2 Puncturing, stabbing

Includes:

- being shot by a firearm or other weapon

Excludes:

- cutting or puncturing during surgical or medical care (83)
- cutting or puncturing due to explosion (88)

5.2.1 Stabbed

Includes:

- cases where the skin was cut and where there was deep penetration of underlying tissue
- stabbed with a knife, sword or other sharp-edged instrument

5.2.9 Unspecified puncturing

5.3 Biting, stinging, invenomating

5.3.1 Bitten by person

Includes:

- being bitten by oneself (eg., biting one's own tongue)
- cases where the bite does not break the skin

5.3.2 Bitten by non-venomous animal

Includes:

- being bitten by a horse, dog, shark, etc.

Excludes:

- human bite
- a bite that has become infected – not an injury

5.3.3 Bitten by venomous animal

Includes:

- being bitten by a venomous snake

5.3.4 Bitten or stung by non-venomous insect or other invertebrate

Includes:

- being bitten by a non-venomous spider
- being stung by a mosquito

Excludes:

- a sting that has become infected – not an *injury*

5.3.5 Bitten or stung by venomous insect or other invertebrate

Includes:

- being stung by a bee, wasp, or scorpion
- being bitten by a venomous spider
- being stung by a jellyfish



- anaphylactic shock following a bee sting, etc.
- 5.3.8 Other specified biting, stinging, invenomating**
- 5.3.9 Unspecified biting, stinging, invenomating**
Includes:
 - biting/stinging where unknown whether or not animal/insect was poisonous or not

6 Gun shot

6.1 Gun shot

6.1.1 Shot by firearm

Includes:

- struck by a bullet or other projectile from a gun using a powder or explosive charge

Excludes:

- non-shooting *injury* by a firearm (eg., struck by gun, 4)

6.1.3 Shot by BB or pellet gun

6.1.4 Shot by other weapon

Includes:

- arrow from bow and bolt/arrow from crossbow
- slug from a spring-actuated weapon

7 Fire, flames or heat

7.1 Heating

7.1.1 Contact with hot liquid, steam, other hot gas

Includes:

- hot water in a bath, bucket, or tub
- hot water running out of a hose or tap
- water/liquids heated on a stove
- inhalation of hot air and gases
- contact with molten metal

Excludes:

- molten lava (82)

7.1.2 Contact with hot object or solid substance

Includes:

- contact with a hot household appliance (eg., cooker, kettle, stove, iron, etc.)
- contact with a hot heating appliance (eg., radiator, heater, etc.)
- contact with a hot engine, tool, or machinery
- contact with an object that is not normally hot, but is made hot (eg., by a house fire, by prolonged sun exposure)

7.1.3 Contact with fire or flame

Includes:

- forest fire, campfire, fire in a fireplace or stove, fire in a burning building
- ignition of highly flammable material (eg., gasoline, kerosene, petrol)
- ignition or melting of clothing (eg., nightwear)
- fire caused by lightning
- fire caused by/following explosion

Excludes:

- volcanic fires (82)

7.1.4 Heating, whole body: natural source

Includes:

- heat stroke, sunstroke

7.1.5 Heating, whole body: man-made

Includes:



- being confined in room (over)heated by artificial means
- 7.1.6 Inhalation of smoke from burning object/substance**
- 7.1.8 Other specified heating**
- 7.1.9 Unspecified heating**

8 Choking or hanging

8.1 Mechanical threat to breathing

- 8.1.1 Hanging**
- 8.1.2 Strangling**
- 8.1.3 External compression of airway, chest**
Includes:
 - effect of cave-in
- 8.1.4 Obstruction of airway by inhaled object/substance**
Includes:
 - choking on food, a toy, etc.
 Excludes:
 - carbon monoxide poisoning (10)
- 8.1.5 Obstruction of airway by object covering mouth and nose**
Includes:
 - suffocation by putting a plastic bag over one's head
 - suffocation by a pillow being put over one's face
- 8.1.8 Other specified mechanical threat to breathing**
- 8.1.9 Unspecified mechanical threat to breathing**

9 Drowning or near-drowning

9.1 Drowning/near drowning

- 9.1.1 *Drowning/near drowning* following fall into water**
Includes:
 - fall into a bucket, bath tub, swimming pool, or natural body of water
 - fall off a watercraft or part thereof
 - fall off a dock, pier, jetty
- 9.1.2 *Drowning/near drowning* while in a body of water**
Includes:
 - being in a bucket, bath tub, swimming pool, or natural body of water
 - *Drowning/near drowning* due to collision with a *watercraft* or part thereof while in body of water
- 9.1.8 Other specified drowning/near drowning**
- 9.1.9 Unspecified drowning/near drowning**
Includes:
 - cases where it was unknown whether the injured person fell into a body of water or was already in a body of water

10 Poisoning

10.1 Poisoning by chemical or other substance

- 10.1.1 Poisoning by solid substance**
Includes:
 - ingestion of tablets, pills, etc.
- 10.1.2 Poisoning by liquid substance**
Includes:
 - substances dissolved in water or alcohol and ingested
 - substances injected intravenously or subcutaneously



10.1.3 Poisoning by gaseous substance

Includes:

- inhaled motor vehicle exhaust gasses
- inhaled chemical dust molecules
- inhaled aerosol

10.1.8 Poisoning by other specified chemical or other substance

10.1.9 Poisoning by unspecified chemical or other substance

88 Other

80 Physical over-exertion

Includes:

- lifting heavy objects or weights
- running a marathon
- rowing

80.1 Acute over-exertion, over-extension

Includes:

- twisting an ankle

80.8 Other physical over-exertion

Includes:

- conditions of gradual and/or delayed onset
- conditions due to cumulative effects of multiple episodes of activity

81 Cooling

81.1 Cooling: natural source

Includes:

- frostbite, hypothermia due to natural cold
- exposure to cold due to weather conditions

81.2 Cooling: man-made source

Includes:

- contact with or inhalation of dry ice, liquid air, nitrogen, or hydrogen
- prolonged exposure to deep freeze unit

81.8 Other cooling

82 Exposure to (effect of) weather, natural disaster or other force of nature

82.1 Exposure to (effect of) precipitation

Includes:

- rain, storm, cloudburst, hurricane, cyclone, monsoon, typhoon, hailstorm, or flood

82.2 Exposure to (effect of) wind condition

Includes:

- tornado, windstorm, dust storm, or blizzard

82.3 Exposure to (effect of) earth or ocean movement

Includes:

- earthquake, mudslide, avalanche, or tidal wave

82.4 Exposure to volcanic eruptions

Includes:

- fire/flame caused by lava

82.5 Exposure to lightning

82.8 Exposure to other (effect of) weather,

83 Complications of health care

Health care (including medical or surgical care) unintentionally leading to injury or other harm. This includes acts of omission as well as acts of commission.

83.1 Adverse effects related to drugs, medicaments, or biological substances



- 83.2 Foreign object left in body during surgical/medical care**
- 83.3 Adverse incidents associated with medical devices**
- 83.4 Unintentional cut, puncture, perforation during surgical/medical care**
- 83.5 Failure of sterile precautions during surgical/medical care**
- 83.6 Abnormal reaction of the patient or later complication caused by surgical operations or other surgical/medical procedures, without mention of misadventure at the time of the procedure, NEC**
- 83.7 Non-administration of surgical/medical care**
- 83.8 Other complications of health care**

84 Corrosion by chemical or other substance

Includes:

- tissue damage due to chemical effects of a strong acid, alkali, etc.

Excludes:

- rubbing, chafing, abrading (f)
- damage due to the temperature of a substance (7)

84.1 Corrosion by solid, liquid, or gaseous substance

84.2 Corrosion by other substance

84.8 Other effect of exposure to chemical or other substance

Includes:

- non-corroding irritation (eg., paint in the eyes)

88 Other mechanism of injury

88.1 Contact with foreign body

Contact between human tissue and an object not belonging where it is found, eg. a piece of grit in the eye, a button found in the outer ear, etc.

Excludes:

- foreign object left in body during surgical/medical care (84)
- inhalation of foreign body with obstruction of airway (8)
- rape, sodomy (2)

88.2 Exposure to electricity, radiation

88.3 Exposure to sound, vibration

Exposure to air pressure

Includes:

- being sucked into the skimmer box of a swimming pool filtration system, having hair sucked into the suction points of a spa
- changes as a result of rapid descent or ascent in water, aircraft, or underground
- resident or prolonged visit at high altitude

88.4 Neglect, abandonment, or lack of necessities of life (food, water)

88.5 Struck by explosive blast

Includes:

- air pressure caused by a blast
- objects/debris projected by a blast

88.8 Other mechanism of injury



Appendix III. Type (nature) of injury
(Reference: Oxford Medical Dictionary; ICECI 2004)

1 Fracture

Breakage of a bone, either complete or incomplete.

2 Sprain, strain or dislocation

Sprain is Injury to a ligament, caused by sudden overstretching.

Strain is excessive stretching or working of a muscle, resulting in pain and swelling of muscle.

Dislocation is displacement from their normal position of bones meeting at a joint such that there is complete loss of contact of the joint surfaces.

3 Cuts, bites or open wound

Piercing or penetrating force makes a hole in or through, punctures, or forces a way through or into body tissue. An open wound involves a break in body tissue, usually involving the skin.

4 Bruise or superficial injury

Bruise is marked by an area of skin discoloration caused by the escape of blood from ruptured underlying vessels following injury. Superficial injury includes an injury situated at or close to the surface of the skin.

5 Burns

Tissue damage caused by agents such as heat, cold, chemicals, electricity, ultraviolet light, or nuclear radiation.

6 Concussion

A condition caused by injury to the head, characterized by headache, confusion, and amnesia. There may be no recognizable structural damage to the brain, but scans may reveal evidence of contusion (bruising) within the brain.

7 Organ system injury

Organ system injury is an injury to the organs in body. It may be blunt or penetrating and may involve damage to the internal organs.



Appendix IV. Place of injury

(Reference: ICECI 2004)

1 Home, including garden and out buildings

Includes:

- house, apartment
- farmhouse
- weekend cottage
- residential caravan (trailer), tent, *hut*, lean-to
- boarding house
- garage
- *home* garden or yard
- *home* driveway, within property boundary line or *home* driveway NOS
- *home* playground
- swimming pool in/around *home*
- transport vehicle used as residence (eg., houseboat, motor home, mobile *home*)
- common area (eg., elevator, lobby, corridor, stairwell) of multi-residence building
- occupied house under construction/renovation
- residence of foster children in *home* environment
- parts of *home* used for *home* office
- cottage industry
- any place where plants and/or animals are grown or raised primarily for personal use by a farmer/rancher and his or her family

Excludes:

- residential institution (4), eg., nursing home (4), prison (4)
- home under construction but not yet occupied (7)
- abandoned or derelict house (8)
- home driveway, beyond property boundary line (6)

2 School, including kindergarten and schoolyard

Location designed primarily for, and being used at the time primarily for, education purposes, including buildings and adjacent grounds.

Excludes:

- *school* dormitory (4)
- building under construction (7)

2.1 School, university

Includes:

- college
- institute for higher education
- military *school*
- private, public, or state *school*
- schoolyard, campus

Excludes:

- reform *school* (4)
- sports and athletics area (5)

2.2 Day care, kindergarten

Includes:

- day nursery
- crèche
- after *school* care
- place where young children are cared for (usually while their parents are



- at work)
- preschool
- 2.3 Sports and athletics area at school, educational area**
- 2.4 Playground at school, educational area**
- 2.8 Other school, educational area**

3 Street/highway

Includes:

- public highway, street or road

Excludes:

- Highway, street or road specified as private (eg. private factory road, 7)

3.1 Roadway

Includes:

- freeway
- motorway
- *street* parking

3.2 Sidewalk

Includes:

- designated walkway
- footpath next to *road*
- *home* driveway beyond property boundary
- line pavement

Excludes:

- home driveway within property boundary line or *home* driveway NOS(1)

3.3 Cycleway

Includes:

- cycle path next to road
- lane marked on road for use by cyclists

3.8 Other public highway

4 Residential institution

Establishment replacing a person's usual residence, including buildings and adjacent grounds.

Includes:

- sports and athletics area at residential institution

4.1 Home for the elderly

Includes:

- institution in which generally healthy old people live and are cared for
- old people's *home*
- pensioners' *home*

4.2 Nursing home

Includes:

- residential facility for people who cannot take care of themselves because of permanent or long-term physical or mental illness or handicap and who require care by nurses or other care professionals
- institution where people recover from illness or injury (ie., convalescent *home*, *home* for the sick)

4.3 Prison

Includes:

- jail
- reformatory, reform *school*
- correctional institution



- police cell
- military prison

Excludes:

- other areas of police station not specifically designed for the detention of prisoners or suspects eg. Interview room (9)

4.4 Shelter for battered women and their children

Includes:

- women's refuge

4.5 Military institution

Includes:

- military camp
- military base
- military training area/ground

Excludes:

- military hospital (9)
- training facilities that are independently recognised as *educational* institutions (2)

4.8 Other residential institution area

Includes:

- children's *home*
- orphanage
- dormitory
- hospice

5 Sports and athletics area

Location designed primarily for, and being used at the time primarily for, sports and exercise or athletics, including buildings and adjacent grounds.

Excludes:

- swimming pool, tennis court in private home or garden (1)
- sports and athletics area at residential institution area (eg., workout room in prison, 4)
- sports and athletics area at school, educational area (2)
- sports and athletics area at recreational, cultural area, or public building (eg., swimming pool in holiday park, (81)
- sports and athletics area at commercial area (eg. swimming pool in hotel, 9)

5.1 Sporting grounds (outdoor)

Includes:

- baseball field
- basketball court
- cricket ground
- football field
- golf course
- hockey field
- outdoor tennis court
- running track
- stadium (with retractable roof)

5.2 Sporting hall (indoor)

Includes:

- tennis hall
- fitness centre
- gymnasium
- squash court

5.3 Public swimming centre

5.4 Racetrack, racecourse



Includes:

- motorcycle track
- car racing track
- coursing track
- dog track
- horse track
- bicycle track

5.5 Equestrian facility

Includes:

- pony club
- riding school

Excludes:

- private equestrian area such as an equestrian area set up on a farm (8)
- showground ring (81)

5.6 Skating rink, ice palace

Includes:

- skate park
- skate arena
- roller rink
- roller-skating park

Excludes:

- frozen lake (12.1)
- roller skating outside of dedicated area, eg roller skating on roadway (6.1) or on pavement/sidewalk (6.2)

5.7 Skiing or snowboarding area

NOTE: Refers only to areas specifically designated for snow skiing and snow boarding. Snow skiing and snowboarding outside of designated areas should be coded to the place where set up, eg., farm (8), shopping mall (9)

Includes:

- ski run
- ski jump
- cross-country ski trail
- ski facilities

Excludes:

- artificial demonstration ski slope (code to place where set up)
- water skiing area (code to appropriate body of water)

5.8 Other sports and athletics area

6 Other transport area

Includes:

- other *transport area* specified as public
- other *transport area* not specified as public

Excludes:

- other transport area specified as private (eg., private factory parking area, 9)

6.1 Parking area

Includes:

- parking lot
- commercial parking garage

Excludes:

- *street* parking

6.2 Public transport area/facility

Includes:

- bus terminal
- underground station



- railway station
- airport terminal
- ferry terminal

6.8 Other transport area: other

Includes:

- pedestrian mall
- railway line

7 Industrial/construction

Refers to relevant buildings, other structures, excavations and adjacent grounds.

7.1 Building under construction

Includes:

- home under construction but not yet occupied

7.2 Demolition site

Includes:

- derelict building/house

7.3 Factory/plant

Includes:

- building and premises (eg., roadway, parking area, industrial yard)
- warehouse
- gasworks
- workshop
- small scale industry

Excludes:

- cottage industry (1)
- home industry (1)

7.4 Mine and quarry

Includes:

- underground mine
- quarry
- coal pit
- gravel and sand pit

7.5 Oil or gas extraction facility

Includes:

- off-shore installation
- oil rig

7.6 Shipyard

Includes:

- dockyard
- dry dock
- slipyard

Excludes:

- harbour used as non-commercial area (88)

7.7 Power station

Includes:

- coal power station
- nuclear power station
- hydro power station
- oil power station

7.8 Other industrial or construction area

Includes:

- coal/container terminal
- harbour used for commercial maritime activity
- port
- tunnel under construction



Excludes:

- harbour used as non-commercial area (88)
- sewer system (88)

8 Farm, excluding home

Any place of primary production that produces at least one of the following products intended for sale: crops, vegetables, horticultural specialities and nursery products, trees, fruit, nuts, animals and animal products, including buildings and adjacent grounds.

Includes:

- ranch
- small farm
- farm equipment buildings
- barn
- land under cultivation
- field
- private farm road
-

Excludes:

- farmhouse, yard, and other home premises of farm (1)
- any place where plants and/or animals are grown primarily for personal use by a farmer/rancher and his or her family (1)
- farm or agricultural based tourist park (81)

8.1 Area for growing crops, market gardening, horticulture

Includes:

- beverage crops
- cereal grains
- cotton
- flowers
- fruit
- horticultural specialities and nursery products
- maple syrup products
- mushrooms
- nuts
- rubber
- spice crops
- sugar beets, sugar cane
- tobacco
- trees (eg., Christmas trees)
- vegetables

Excludes:

- forestry, growing standing timber (usually 10)
- logging, felling timber, and producing wood (usually 10)

8.2 Area for raising or care of animals

Includes:

- animal products (eg., eggs, honey)
- beef cattle
- dairy farming (eg., milk)
- deer
- horses, asses, mules, hinnies
- pigs, swine
- poultry
- semi-domesticated or wild live animals (eg., birds, rabbits)
- sheep, goats



Excludes:

- fish (usually 10)
- 8.3 Area for growing crops combined with raising/care of animals (mixed farming)**
- 8.8 Other farm or other place of primary production**

9 Commercial

Location being used at the time primarily for business-related activities that are non-industrial, non-recreational, non-cultural and not public, including buildings and adjacent grounds.

Includes:

- sports and athletics area at commercial area (non-recreational)

9.1 Shop, store

Includes:

- shopping mall
- supermarket
- market and market stall
- bank
- post office

9.2 Commercial garage

Includes:

- gas station, petrol station
- service station

Excludes:

- garage of private home (1)
- commercial parking garage (6)

9.3 Office building

Includes:

- office

Excludes:

- health professional's office (80)

9.4 Café, hotel, restaurant

Includes:

- casino
- bar, pub
- dance club, night club, dance hall
- swimming pool of hotel

9.8 Other commercial area (non-recreational)

Includes:

- radio/TV station

10 Countryside, water, sea

Refers to open nature area not classified elsewhere.

10.1 Area of still water

Includes:

- pond
- pool
- natural ice
- farm dam

10.2 Stream of water

Includes:

- river
- rivulet



- stream
- brook
- trickle
- canal
- creek
- flooded area
- natural ice

10.3 Large area of water

Includes:

- lake
- sea
- ocean
- bay
- natural ice
- dam
- estuary
- reservoir

Excludes:

- harbour used for commercial maritime activities (9)
- harbour used as a non-commercial area, harbour NOS (88)
- port (9)

10.4 Marsh, swamp

10.5 Beach, shore, bank of a body of water

Includes:

- foreshore

10.6 Forest

Includes:

- paths
- tracks
- hiking trails

10.7 Desert

Includes:

- paths
- tracks
- hiking trails

10.8 Other countryside

Includes:

- prairie
- mountain (if not forest)
- cave

88 Other

80 Medical service area

80.1 Hospital

Excludes:

- hospice (2.8)
- nursing *home* (2.2)

80.2 Outpatient clinic, health centre

Includes:

- community health centre
- mobile blood bank

80.3 Health professional's office

Includes:

- consultation room
- examination room



80.8 Other medical service area

81 Recreational area, cultural area, or public building

Includes:

- sports and athletics area at recreation area, cultural area or public building

81.1 Public playground

Excludes:

- playground at home (1)
- playground at school, educational area (2)

10.2 Amusement park, theme park

Includes:

- Tivoli
- circus
- fair
- zoo
- luna park
- tourist farm
- agricultural theme park

10.3 Public park

Includes:

- botanical gardens
- recreation reserve
- picnic area
- public square
- showground

Excludes:

- large national parks (10)

10.4 Public building, non-cultural

Includes:

- courthouse
- police station
- public hall
- town hall

Excludes:

- police cell (4)

10.5 Holiday park, campground

Includes:

- camp site, recreational caravan site
- swimming pool

10.6 Public religious place

Includes:

- cathedral
- church
- temple
- parish hall
- mosque
- synagogue

10.8 Other recreational, cultural area, or public building

Includes:

- museum
- gallery
- library
- music hall, opera house
- cinema, movie house
- theatre
- youth centre



88 Other place of occurrence

Includes:

- harbour used as a non-*commercial area*, harbour NOS
- sewer system

Excludes:

- harbour used for commercial maritime activities (9)



Appendix V. Level of trauma center

(Reference: Committee on Trauma American College of Surgeons)

Level I

Level I Trauma Center is a comprehensive regional resource that is a tertiary care facility central to the trauma system. A Level I Trauma Center is capable of providing total care for every aspect of injury – from prevention through rehabilitation.

Elements of Level I Trauma Centers Include:

24-hour in-house coverage by general surgeons, and prompt availability of care in specialties such as orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, internal medicine, plastic surgery, oral and maxillofacial, pediatric and critical care.

Referral resource for communities in nearby regions.

Provides leadership in prevention, public education to surrounding communities.

Provides continuing education of the trauma team members.

Incorporates a comprehensive quality assessment program.

Operates an organized teaching and research effort to help direct new innovations in trauma care.

Program for substance abuse screening and patient intervention.

Meets minimum requirement for annual volume of severely injured patients.

Level II

A Level II Trauma Center is able to initiate definitive care for all injured patients.

Elements of Level II Trauma Centers Include:

24-hour immediate coverage by general surgeons, as well as coverage by the specialties of orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology and critical care.

Tertiary care needs such as cardiac surgery, hemodialysis and microvascular surgery may be referred to a Level I Trauma Center.

Provides trauma prevention and to continuing education programs for staff.

Incorporates a comprehensive quality assessment program.

Level III

A Level III Trauma Center has demonstrated an ability to provide prompt assessment, resuscitation, surgery, intensive care and stabilization of injured patients and emergency operations.

Elements of Level III Trauma Centers Include:

24-hour immediate coverage by emergency medicine physicians and the prompt availability of general surgeons and anesthesiologists.

Incorporates a comprehensive quality assessment program

Has developed transfer agreements for patients requiring more comprehensive care at a Level I or Level II Trauma Center.

Provides back-up care for rural and community hospitals.

Offers continued education of the nursing and allied health personnel or the trauma team.

Involved with prevention efforts and must have an active outreach program for its referring communities.



Appendix VI. Calendar days

(Reference: American College of Surgeons, 2015.)

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