

Common Data Elements in Traumatic brain Injury Pilot Study

Department of Neurosurgery

Narayana Medical College, Nellore

Demographics

Clinical Details

Injury Details

Pre-Hospital and ED Care

Investigations

Management

Outcome

PatientID

Title

☐ Mr. ☐ Mrs. ☐ Miss.

First Name

Middle Name

Last

Age

Gender

☐ Male ☐ Female ☐ Unknown.

Address

City

Contact Number

Education

☐ Illiterate ☐ Graduate

☐ Primary ☐ Post graduate

☐ Secondary ☐ Not appropriate (Age < 5 years)

☐ Matriculation ☐ Not known

☐ Intermediate

Employment status

☐ Employee in service ☐ Not applicable ☐ Unknown

☐ Farmer ☐ Retired employee

☐ Housewife ☐ Student

☐ Laborer ☐ Unemployed

Marital

☐ Never been married ☐ Married ☐ Divorced ☐ Widowed

Driving license

☐ Yes ☐ No ☐ Not known ☐ Not applicable

Source of information

☐ Clinical interview ☐ Medical chart ☐ Not available

Identification marks

Nationality

Informant_broughtby

☐ Patient ☐ Relatives

☐ Witness ☐ Co-habitants

☐ Not known ☐ Special habits

☐ Wife ☐ Close friends

☐ Husband ☐ Room Mates

DateAdmission

TimeAdmission

Time

Hospital Stay

Referra Idetails

☐ Direct ☐ Medical College

☐ General Practitioner ☐ Police

☐ Private Hospital ☐ Nursing Home

☐ Government Hospital ☐ Not known

MLC Number

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History of Traumatic Brain Injury

Loss of consciousness ☐ Nasal bleed ☐ Rhinorrhoea ☐
Vomiting ☐ Oral bleed ☐ Otorrhoea ☐
Nausea ☐ Headache ☐ Post traumatic amnesia ☐
Ear bleed ☐ Seizures ☐

Loss of consciousness duration

☐ None ☐ 30 to 59 minutes ☐ more than 24 hour
☐ Less than one minute ☐ Less than one hour ☐ 1 to 7 days
☐ 1 to 29 minutes ☐ 1 to 24 hour ☐ More than 7 days

Lucid interval ☐ Yes ☐ No

Diabetes ☐ Hypertension ☐ Smoking ☐ Alcohol ☐

Pre injury ASA Physical Status
☐ ASA-PS 1. A normal healthy patient
☐ ASA-PS 2. A patient with mild systemic disease
☐ ASA-PS 3. A patient with severe systemic disease
☐ ASA-PS 4. A patient with severe systemic disease that is life
☐ ASA-PS 5. A moribund patient who is not expected to operation
☐ ASA-PS 6. A declared brain-dead patient whose organs for donor purposes
☐ Unknown

Influence of alcohol ☐ None ☐ Suspected ☐ Confirmed ☐ Unknown

Examination

Pulse rate _____ Temperature _____
Blood pressure systolic _____ Respiratory rate _____
Blood pressure diastolic _____ Glasgow coma scale _____
Decorticate posturing ☐ Best eye response _____
Decerebrate posturing ☐ Best verbal response _____
Best motor response _____

PupilsRightSize _____

PupilsRightReaction ☐ Normal ☐ Can not assess
☐ Sluggish
☐ Non-reactive

PupilsLeftSize _____

PupilsLeftReaction ☐ Normal ☐ Can not assess
☐ Sluggish
☐ Non-reactive

Oculocephalic ReflexRight ☐ Present ☐ Not Tested
☐ Absent

Oculocephalic ReflexLeft ☐ Present ☐ Not Tested
☐ Absent

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Date of injury		Time of injury		Place of injury									
Type of injury													
<input type="radio"/> Closed <input type="radio"/> Blast <input type="radio"/> Penetrating <input type="radio"/> Laceration <input type="radio"/> Blunt <input type="radio"/> Crush <input type="radio"/> Unknown													
Mechanism of													
<input type="radio"/> Motor vehicle accident <input type="radio"/> Airplane <input type="radio"/> Low energy fall at the same level													
<input type="radio"/> Motorcycle accident <input type="radio"/> Railway train <input type="radio"/> High energy fall from a higher level													
<input type="radio"/> Bicycle accident <input type="radio"/> Firearm <input type="radio"/> Blast injury													
<input type="radio"/> Pedestrian <input type="radio"/> Penetrating brain injury <input type="radio"/> Unknown													
<input type="radio"/> Ship <input type="radio"/> Hit by blunt object													
Location of injury													
<input type="radio"/> Home <input type="radio"/> Mine <input type="radio"/> Sports <input type="radio"/> Residential Institution <input type="radio"/> Highway <input type="radio"/> Road Traffic Accident <input type="radio"/> Road Traffic Deceleration <input type="radio"/> Non-intentional injury													
<input type="radio"/> Farm <input type="radio"/> Industrial Place <input type="radio"/> Recreational <input type="radio"/> Street <input type="radio"/> Not known <input type="radio"/> Road Traffic Acceleration <input type="radio"/> Incidental Direct fall													
Body regions involved													
<input type="checkbox"/> Head <input type="checkbox"/> Neck <input type="checkbox"/> Brain <input type="checkbox"/> Face <input type="checkbox"/> Thorax <input type="checkbox"/> Chest <input type="checkbox"/> Abdomen <input type="checkbox"/> Pelvis <input type="checkbox"/> Extremities <input type="checkbox"/> Pelvic contents <input type="checkbox"/> C-spine <input type="checkbox"/> D-spine <input type="checkbox"/> L-spine <input type="checkbox"/>													
Any life threatening injuries		AIS		Head neck		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Airway Obstruction <input type="checkbox"/>		Aortic rupture <input type="checkbox"/>		Brain injury		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Tension pneumothorax <input type="checkbox"/>		Tracheobronchial rupture <input type="checkbox"/>		Cervical spine		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Open pneumothorax <input type="checkbox"/>				External skin		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Massive haemothorax <input type="checkbox"/>		Pulmonary contusion <input type="checkbox"/>		Face		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Flail chest <input type="checkbox"/>				Thorax chest		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Cardiac tamponade <input type="checkbox"/>		Blunt cardiac injury <input type="checkbox"/>		Thoracic spine		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
Simple pneumo haemothorax <input type="checkbox"/>		Diaphragmatic rupture <input type="checkbox"/>		Abdomen pelvis		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							
				Lumbar spine		<input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Serious <input type="checkbox"/> Severe <input type="checkbox"/> Critical <input type="checkbox"/> Unsurvivable							

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				Airway	<div><div><input type="radio"/> Clear</div><div><input type="radio"/> Adjunctive airway</div><div><input type="radio"/> Unknown</div><div><input type="radio"/> Obstructed</div><div><input type="radio"/> Intubated</div></div>	
First aid	<div><div><input type="radio"/> Yes</div><div><input type="radio"/> No</div><div><input type="radio"/> Not known</div><div><input type="radio"/> Not applicable</div></div>			Breathing	<div><div><input type="radio"/> Unknown</div><div><input type="radio"/> Spontaneous, adequate</div><div><input type="radio"/> Spontaneous, insufficient</div><div><input type="radio"/> Manual support with bag, valve, mask</div><div><input type="radio"/> Mechanical ventilation</div></div>	
Helemt	<div><div><input type="radio"/> Yes</div><div><input type="radio"/> No</div><div><input type="radio"/> Not known</div><div><input type="radio"/> Not applicable</div></div>			Circulation	<div><div><input type="radio"/> No specific treatment</div><div><input type="radio"/> Vasopressors</div><div><input type="radio"/> IV fluids</div><div><input type="radio"/> CPR</div><div><input type="radio"/> Crystalloids</div><div><input type="radio"/> Unknown</div><div><input type="radio"/> Hypertonic saline - Colloids - Blood</div></div>	
Seat belt	<div><div><input type="radio"/> Yes</div><div><input type="radio"/> No</div><div><input type="radio"/> Not known</div><div><input type="radio"/> Not applicable</div></div>			Airway management	<div><div><input type="radio"/> No specific treatment</div><div><input type="radio"/> Supplemental oxygen via nasal tube or mask</div><div><input type="radio"/> Adjunctive airway</div><div><input type="radio"/> Temporary support with bag, valve, mask (for exampl</div><div><input type="radio"/> Intubation</div><div><input type="radio"/> Mechanical ventilation</div><div><input type="radio"/> Unknown</div></div>	
Pre hospital Cardiac Arrest	<div><div><input type="radio"/> Yes</div><div><input type="radio"/> No</div><div><input type="radio"/> Not known</div><div><input type="radio"/> Not applicable</div></div>			Discharge destination from ER	<div><div><input type="radio"/> Discharge home</div><div><input type="radio"/> Discharge other facility</div><div><input type="radio"/> Admission to hospital – ward</div><div><input type="radio"/> Admission to hospital – intermediate/high care unit</div><div><input type="radio"/> Admission to hospital – ICU</div><div><input type="radio"/> Admission to hospital – OT</div><div><input type="radio"/> Admission to hospital – other (e.g. observation unit)</div><div><input type="radio"/> Admission to hospital – Rehabilitation</div><div><input type="radio"/> Unknown</div><div><input type="radio"/> Death</div></div>	
GCS at scene	<div><div></div></div>					
GCS motor component at scene	<div><div></div></div>					
GCS upon arrival in hospital	<div><div></div></div>					
GCS Motor Component upon arrival in hospital	<div><div></div></div>					
Highest Level of Pre Hospital Care Provided	<div><div></div></div>					
Pre Hospital Airway Management	<div><div><input type="radio"/> Yes</div><div><input type="radio"/> No</div><div><input type="radio"/> Not known</div><div><input type="radio"/> Not applicable</div></div>					
Type of Transportation	<div><div><div><div><input type="radio"/> Ground ambulance</div><div><input type="radio"/> Walk-in</div></div><div><input type="radio"/> Helicopter ambulance</div><div><input type="radio"/> Police</div></div><div><div><input type="radio"/> Fixed-wing ambulance</div><div><input type="radio"/> Other</div></div><div><div><input type="radio"/> Private/public vehicle</div><div><input type="radio"/> Unknown</div></div></div>					

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Blood Investigations

Hemoglobin	_____	Blood Sugar Fasting	_____	Blood Sugar PP	_____
Total leucocyte count	_____	Blood Sugar Random	_____	Blood Group	_____

CT Brain

DateCT	_____	TimeCT	_____	Scheduled for operation	_____
CTClassificationCategory	<input type="checkbox"/> Diffuse Injury-I	<input type="checkbox"/> Diffuse Injury-III	<input type="checkbox"/> Evacuated Mass Lesion		
	<input type="checkbox"/> Diffuse Injury -II	<input type="checkbox"/> Diffuse Injury-IV	<input type="checkbox"/> Nonevacuated Mass Lesion		
Extradural hemorrhage	<input type="radio"/>	Intraventricular hemorrhage	<input type="radio"/>	Depressed fracture	<input type="radio"/>
Cerebral contusion	<input type="radio"/>	Mass effect pressure	<input type="radio"/>	Hydrocephalus	<input type="radio"/>
Subarachmoid hemorrhage	<input type="radio"/>	Midline shift	<input type="radio"/>	Intracranial air	<input type="radio"/>
Fischers grade	<input type="radio"/> 1 No hemorrhage evident				
	<input type="radio"/> 2 Subarachnoid hemorrhage less than 1 mm thick				
	<input type="radio"/> 3 Subarachnoid hemorrhage more than 1 mm thick				
	<input type="radio"/> 4 Subarachnoid hemorrhage of any thickness with intra-ventricular hemorrhage (IVH) or parenchymal extension				

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Conservative management

Urinary catheter ☐ Crystalloids ☐ Blood transfusion ☐ Cervical traction ☐ Steroids ☐ Tetanus toxoid ☐
Nasogastric tube ☐ Colloids ☐ Cervical collar ☐ Bed rest ☐ Ventilation ☐

ICP Monitoring

☐ Yes ☐ No ☐ Not known ☐ Not applicable Days on Ventilator ☐ Yes ☐ No [

Intracranial Surgery ☐ Yes ☐ No [Extracranial Surgery ☐ Yes ☐ No Date Surgery _____

Cranial Surgery Codes

Aneurysm_non trauma ☐ Optic nerve decompression ☐
Acute SDH ☐ Posterior fossa surgery ☐
Contusion ☐ Ventriculostomy for CSF drainage ☐
Craniofacial surgery ☐ Debridement –minimal for penetrating injuries ☐
CSF shunt ☐ Debridement_extensive for penetrating injuries ☐
Chronic SDH ☐ Foreign body removal ☐
Decompressive craniectomy ☐ Bone flap replacement ☐
Depressed skull fracture ☐ Cranioplasty ☐
Epidural hematoma ☐ Intracranial Surgery Other ☐
Intracerebral hematoma ☐
Infection ☐

Extracranial Surgery Codes

Maxillofacial ☐ Pelvic fracture_internal fixation ☐
Extremity fracture lower limb_internal fixation ☐ Pelvic fracture_external fixation ☐
Extremity fracture lower limb_external fixation ☐ Spinal stabilization_cervical ☐
Extremity fracture upper limb_internal fixation ☐ Spinal stabilization_thoracic ☐
Extremity fracture upper limb_external fixation ☐ Spinal stabilization_lumbar ☐
Fasciotomy ☐ Thoracotomy ☐
Laparotomy_abdomen ☐ Tracheostomy ☐
Vascular_operative ☐
Vascular_endovascular treatment ☐
Wound closure_graft ☐
Extracranial Surgery Other ☐

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Discharge DateDischarge _____ Discharge Destination Hospital <input type="radio"/> <u>Discharge home</u> <input type="radio"/> <u>Discharge other facility</u> <input type="radio"/> <u>Admission to hospital – ward</u> <input type="radio"/> <u>Admission to hospital – intermediate/high care unit</u> <input type="radio"/> <u>Admission to hospital – ICU</u> <input type="radio"/> <u>Admission to hospital – OT</u> <input type="radio"/> <u>Admission to hospital – other (e.g. observation unit)</u> <input type="radio"/> <u>Admission to hospital – Rehabilitation</u> <input type="radio"/> <u>Unknown</u> <input type="radio"/> <u>Death</u> Glasgow Outcome Scale Score at Discharge <input type="radio"/> <u>Good recovery</u> <input type="radio"/> <u>Persistent vegetative state</u> <input type="radio"/> <u>Moderate disability</u> <input type="radio"/> <u>Death</u> <input type="radio"/> <u>Severe disability</u> Follow up _____ Mortality <input type="radio"/> <u>Found Dead</u> <input type="radio"/> <u>Died at Scene</u> <input type="radio"/> <u>Died on arrival at Hospital</u> <input type="radio"/> <u>Died in Hospital</u> <input type="radio"/> <u>Died after Discharge</u>			Diagnosis S02.0 Fracture of vault of skull <input type="checkbox"/> S02.1 Fracture of base of skull <input type="checkbox"/> S02.3 Fracture of the orbital floor <input type="checkbox"/> S02.7 Multiple fractures involving skull and facial bones <input type="checkbox"/> S02.8 Fractures of other skull and facial bones <input type="checkbox"/> S02.9 Fracture of skull and facial bones, part unspecified <input type="checkbox"/> S06.0 Concussion <input type="checkbox"/> S06.1 Traumatic cerebral oedema <input type="checkbox"/> S06.2 Diffuse brain injury <input type="checkbox"/> S06.3 Focal brain injury <input type="checkbox"/> S06.4 Epidural haemorrhage <input type="checkbox"/> S06.5 Traumatic subdural haemorrhage <input type="checkbox"/> S06.6 Traumatic subarachnoid haemorrhage <input type="checkbox"/> S06.7 Intracranial injury with prolonged coma <input type="checkbox"/> S06.8 Other intracranial injuries <input type="checkbox"/> S06.9 Intracranial injury, unspecified <input type="checkbox"/> S07.1 Crushing injury of skull <input type="checkbox"/>			