

Trauma Data Collection File Specification

For XML Data Filers

August 2008

Version 2.1

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Revision History

03/06/2008 Altered the Record Specification Elements to allow for Multiple Entry for Glasgow Coma Score Assessment Qualifier in the ED and Drug Use Indicators.

03/06/2008 Altered the lookup values for GCS Assessment Qualifiers (table 8) they appeared to be out dated.

03/06/2008 Altered the sample file for multiple Drug Use Indicators and GCS Assessment Qualifiers and Patient Street Address.

03/06/2008 Removed Hospital Discharge Date and Time and Incident Zip and Discharge Date from Transferring from sample file and xsd.

03/06/2008 Altered Header of XSD.

03/10/2008 Altered Sample File at end of specification to add closing brackets on InterfacilityTransfer and SBP.

04/09/2008 Changed severity of FilingOrgID and SiteOrgID from A Error to Drop File

04/22/2008 Revised "Data to Include..." section, Incident City (remove reference to incident zip) and Drug Use Indicator (make all occurrences conditional) , added Incident State and Transport Mode.

06/03/2008 Revised the Incident City to be the text description of the city instead of the FIPS Code.

06/23/2008 Revised the Patient City to be the text description of the city instead of the FIPS Code. Revised Incident State to be the 2 digit postal code instead of the FIPS Code.

06/30/2008 Revised to synchronize required flags

07/02/2008 Revised to make remove reference to remove reference to patient's industry and patient's occupation

07/02/2008 Revised to change the field name Inpatient or Observation Date and Time to ED/Hospital Arrival Date and Time

07/11/2008 Revised date of document, submittal schedule, added an option "9-Unknown" for Transport Mode added "9 Not possible to assign" to AIS

08/06/2008 Revised Drug Use Indicator and CoMorbidity lookup table values. Child Specific restraint altered to not accept multiple values. Complication Max Occurs = 10

11/23/2009 Correction to differences Between Trauma File Specification Version 1.0 and Version 2.0, Primary Ecode is required in current and all previous specification versions.

Trauma Data Submission Overview

Data To Include in Trauma Data Electronic Submissions.

Trauma data shall be reported for all trauma cases having a principal ICD-9-CM diagnostic code of 800 - 959.9 or 994.1 or 994.7

AND

- Hospital inpatient admission; **OR**
- Observation stay admission; **OR**
- Transfer patient via EMS transport (including air ambulance) from one hospital to another hospital (includes inpatient or observation or emergency department); **OR**
- Death (independent of hospital admission source or hospital transfer status)

Definitions

Terms used in this bulletin are defined in the regulation's general definition section (105 CMR 130.850) or are defined in this bulletin. If a term is not otherwise defined, use any applicable definitions from the other sections of the regulation.

Data File Format

The data for Trauma Data must be submitted in a XML file consistent with the .XSD in Appendix A.

Data Transmission Media Specifications

Data will be transferred to the Division via the Internet using the DHCFP's data collection Web site (INET). In order to do that in a secure manner the Division's Secure Encryption and Decryption System (SENDs) must be utilized. You must first download a copy of the Secure Encryption and Decryption System (SENDs) from the DHCFP web site. There is a separate installation guide for installing the SENDs program. SENDs will take your submission file and compress, encrypt and rename it in preparation of transmitting to the Division. The newly created encrypted file shall be transferred to the Division via its INET website.

Trauma Data Quality Standards

The data will be edited for compliance with the edit specifications set forth in this document. The standards to be employed for rejecting data submissions from hospitals will be based upon the presence of Category A or B errors as listed for each data element under the following conditions:

All errors will be recorded for each patient Record and for the Submission as a whole. An Edit Report will be provided to the data submitter, displaying detail for all errors found in the Submission.

A Trauma **Record** will be rejected if there is:

- Presence of one or more errors for Category A elements.
- Presence of two or more errors for Category B elements.

A Trauma data **Submission** will be rejected (Dropped) if:

- The file format is not correct
- FilingOrgID on the Record Type 10 does not match the OrgID of the Organization who files the submission on INET
- 1% or more of Trauma are rejected or
- 50 consecutive records are rejected.

Acceptance of data under the edit check procedures identified in this document shall not be deemed acceptance of the factual accuracy of the data contained therein.

Differences Between Trauma File Specification Version 1.0 and Version 2.0 (this version)

Version 1.0 Fixed Length File

Version 1.0 did not allow for an XML based file, rather the only format available was the specified fixed length file format.

Edits based on Submitting Entity Type

The trauma registry will consist of two tiers edits performed on the submitted data. The edits performed will be different based on data submitted by trauma centers and that submitted by non-trauma center acute care hospitals that treat trauma centers. The edit differences will be noted in the file specification section below. The trauma registry data and its edits will be generally compatible with the ACS's National Trauma Data Bank (NTDB).

Fields no Longer Required

The following fields were required in Trauma File Specification Version 1.0 but are no longer required.

Fields No Longer Required

Discharge Date from Transferring Hospital
ED Admission Date
ED Admission Time
ED Discharge Date
ED Discharge Time
ED Patient Status/Disposition
ED Death
Source of Discharge
Billing Number
Patient Country
Patient State
Patients Occupational Industry
Patients Occupation
Employer Name

Incident Location Zip Code
 Activity Code
 Sports Activity
 Additional Circumstances of Injury
 Additional (Secondary) ECode
 ISS

Trauma Data Record Specification

Record Specification Elements

The Trauma Data File is modeled after the National Trauma Data Bank's National Trauma Data Standard Version 1.1.1 Revised in May 2007. Since Massachusetts does not require the collection many of the data elements within the National Trauma Data Standard and has several fields that are specific to Massachusetts, the National Trauma Data Standard has been modified to account for these differences. Every effort has been made to keep the definition of elements found in the National Trauma Data Standard consistent in this specification.

Filing Data

<u>F#</u>	<u>Field Name</u>	<u>Must be Filed by Trauma Centers</u>	<u>Must be Filed by Non- Trauma Centers</u>	<u>National Element</u>	<u>XSD Field Name</u>	<u>XSD Data Type</u>	<u>Multiple Entry</u>	<u>Required</u>	<u>Edit Specification</u>	<u>Field Definition</u>	<u>Error Type</u>

1	FilingOrgId	X	X	Yes	FacilityID	xs:string	No	R	Must be present. Characters must be numeric. Must be valid entry as specified in Data Code Tables. (Table I)	The Organization ID assigned by the Massachusetts Division of Health Care Finance and Policy (DHCFP) to the provider filing the submission.	Drop File
2	SiteOrgID	X	X	No	FacilitySiteID	xs:string	No	R	Must be present. Characters must be numeric. Must be valid entry as specified in Data Code Tables. (Table I) Must be equal to the FilingOrgID if the Site and Filing Organization are the same Organization.	The Organization ID assigned by the Massachusetts Division of Health Care Finance and Policy (DHCFP) to the provider of care for the trauma.	Drop File
3	Inter-Facility Transfer	X	X	Yes	InterFacilityTransfer	xs:integer	No	R	Must be Present. Must be a 1 or 2.	Was the patient transferred <u>to</u> your facility from another acute care facility? 1 = Yes 2 = No Patients transferred from a private doctor's office, stand-alone ambulatory	A

										surgery center, or delivered to your hospital by a non-EMS transport is not considered an inter-facility transfer.	
4	SiteOrgID of Transferring Hospital	X	X	No	FacilitySiteID of Transferring Hospital	xs:integer	No	C	Must be present if Inter-Facility Transfer is '1' If present, and the Transferring Hospital is in-state, must be valid entry as specified in Data Code Tables. (Table 1) If the Transferring Hospital is out of state enter '9999999'.	The Organization ID assigned by the Massachusetts Division of Health Care Finance and Policy (DHCFP) to the site from which the patient was transferred.	A
5	Discharge Time from Transferring Hospital	X	X	No	DischargeTime Transferring	xs:time	No	C	May be present if Inter-Facility Transfer is '1' Must be numeric. Must range from 00:00 to 23:59	Time the patient left the originating hospital if a transfer patient	A
6	ED/Hospital Arrival Date	X	X	Yes	HospitalArrival Date	xs:date	No	R	Must be a valid date format (CCYY-MM-DD).	The date the patient arrived to the ED/Hospital.	A
7	ED/Hospital Arrival Time	X	X	Yes	HospitalArrivalTime	xs:time	No	R	Must be numeric. Must range from 00:00 to 23:59	The time the patient arrived to the ED/Hospital.	A
8	Location of Direct	X	X	No	LocationOfDirectAdmission	xs:string	No	C	Must be a valid code as specified	The location the patient was	A

	Admission								in Data Code Tables (Table 10)	directly taken to if direct admission.	
9	Medical Record Number	X	X	No	MedicalRecordNumber	xs:string	No	R	Must be present.	Patient's hospital Medical Record Number	A
10	Social Security Number	X	X	Yes (PatientID in NTDS XSD)	PatientID	xs:string	No	R	Must be present if known. Must be numeric. Must be a valid social security number or '000000001' if Unknown	Patient's Social Security Number	A
11	Date of Birth	X	X	Yes	DateOfBirth	xs:date	No	R	Must be present. Must be a valid date format (CCYYMMDD).	Patient's Date of Birth	A
12	Gender	X	X	Yes	Sex	xs:integer	No	R	Must be present. Must be 1-Male, 2-Female	Patient Gender.	A
13	Patient Street Address	X	X	No	PatientStreetAddress	xs:string	No	R	Must be present.	The patient's home street address.	A
14	Patient City	X	X	Yes	HomeCity	xs:string	No	R	Must be present and must be the text value of the patient's home City name.	The patient's city (or township, or village) of residence.	A
15	Patient Zip Code	X	X	Yes	HomeZip	xs:string	No	R	Must be present unless Patient Country is not the United States. Must be numeric. Must be a valid	The patient's home ZIP code of primary residence. 4-Digit zip code extension can be applied.	A

									postal code.		
16	Injury Incident Date	X	X	Yes	IncidentDate	xs:date	No	C	May be present. If present, must be a valid date format (CCYY-MM-DD).	The date the injury occurred. Estimates of date of injury should be based upon report by patient, witness, family, or health care provider. Other proxy measures (e.g., 911 call time) should not be used. If date of injury is "Not Recorded" or "Not Known", the null value is blank (or empty).	A
17	Injury Incident Time	X		Yes	IncidentTime	xs:time	No	C	May be present. If present, must range from 00:00 to 23:59.	The time the injury occurred. Collected as HH:MM. HH:MM should be collected as military time. Estimates of time of injury should be based upon report by patient, witness, family, or health care provider. Other proxy measures (e.g., 911 call	A

										time) should not be used. If time of injury is "Not Reported" or "Not Known," the null value is blank (or empty).	
18	Work-related	X	X	Yes	WorkRelated	xs:integer	No	C	May be present. If present, must be a 1 or 2.	Indication of whether the injury occurred during paid employment. 1 = Yes 2 = No	A
19	Incident City	X	X	Yes	IncidentCity	xs:string	No	R	Must be present and must be the text value of the Incident City name.	The city or township where the patient was found or to which the unit responded (or best approximation).	A
20	Incident State	X	X	Yes	IncidentState	Xs:string	No	R	Must be present and must be a valid 2-digit postal state code.	The state, territory, or province where the patient was found or to which the unit responded (or best approximation).	A
21	Alcohol Use Indicator	X		Yes	AlcoholUseIndicators	xs:integer	No	C	May be present. Must be a valid code as specified in Data Code	Use of alcohol by the patient.	A

									Tables (Table 11).		
22	Drug Use Indicator	X		Yes	DrugUseIndicators	xs:integer	Yes Max 2	C	May be present. Must be a valid code as specified in Data Code Tables (Table 12).	Use of drugs by the patient.	A
23	Primary ECode	X	X	Yes	PrimaryECode	xs:string	No	R	Must be present. Must be a valid ICD-9-CM Ecode. (exclude decimal point) E800 through E999. Exclude E849.0 – E849.9, E869.4, E870 – E879, E930 – E949 and E967 as they are not valid for Primary ECode.	ECode used to describe the mechanism (or external factor) that caused the injury event. (If two or more events cause separate injuries, an E code should be assigned for each cause. The first-listed E code should correspond to the cause of the most serious diagnosis due to an assault, accident, or self-harm. A code for the ICD-9-CM external cause of injury that permits classification of environmental events, circumstances, and conditions as the cause of injury, poisoning, and other	

										adverse effects.)	
24	Location ECode	X	X	Yes	LocationECode	xs:string	No	R	Must be present. Must be a valid ICD-9-CM Ecode 849.X (exclude decimal point) as specified in Data Code Tables (Table 13)	E-code used to describe the place/site/location of the injury event (E 849.X). Relevant ICD-9-CM code value for injury event	A
25	Initial Glasgow Eye Component in ED	X		Yes	GcsEye	xs:integer	No	C	May be present. If present must be numeric and must be valid entry as specified in Data Code Tables. (Table 5)	Glasgow Coma Scale for Eye Opening.	A
26	Initial Glasgow Verbal Component in ED	X		Yes	GcsVerbal	xs:integer	No	C	May be present. If present must be numeric and must be valid entry as specified in Data Code Tables. (Table 6)	Glasgow Coma Scale for Best Verbal Response	A
27	Initial Glasgow Motor Component in ED	X		Yes	GcsMotor	xs:integer	No	C	May be present. If present must be numeric and must be valid entry as specified in Data Code Tables. (Table 7)	The initial Glasgow Coma Scale Motor Response in ED.	A

28	Glasgow Coma Score Total in the ED	X		Yes	TotalGcs	xs:integer	No	C	May be present. If present must be numeric and must be the sum of Eye, Verbal and Motor.	First recorded Glasgow Coma Score (total) in the ED/hospital. The Glasgow Coma Scale is used to quantify level of consciousness by totaling Glasgow Eye plus Verbal plus Motor	A
29	Glasgow Coma Score Assessment Qualifier in the ED	X		Yes	GcsQualifiers	xs:integer	Yes Max 3	C	May be present. If present must be numeric and must be valid entry as specified in Data Code Tables.(Table 8)	Other confounding factors which alter the patients level of consciousness interfere with the Glasgow scale's ability to accurately reflect the severity measurement	A
30	Respiration Rate	X	X	Yes	RespiratoryRate	xs:integer	No	R	Must be present. Must be numeric. Must be between 0 and 100. If not recorded within 15 minutes of arrival, code ND for not documented.	First recorded respiratory rate in the ED/hospital (expressed as a number per minute).	A
31	Blood Pressure	X	X	Yes	Sbp	xs:integer	No	R	Must be present. Must be numeric. Must be between 0	The initial assessment in the ED of the systolic blood pressure in either	A

									and 299. If not recorded within 15 minutes of arrival, code ND for not documented.	arm by auscultation or palpation measured in mm (Hg) by manual or automatic method.	
32	Pulse Rate	X	X	Yes	PulseRate	xs:integer	No	R	Must be present. Must be numeric. Must be between 0 and 299. If not recorded within 15 minutes of arrival, code ND for not documented.	First Recorded pulse in the ED or hospital (palpated or auscultated, expressed as a number per minute.)	A
33	Diagnosis Code	X	X	Yes	InjuryDiagnoses/InjuryDiagnos	xs:string	Yes	R	Must be present. Must be valid ICD-9-CM code. (exclude decimal point).	Patient Diagnosis Code	A
34	AIS	X		No	AIS	xs:string	Yes	R	Must be present for each Diagnosis Code. Must be a valid AIS code. Must consist of 6 numbers followed by a decimal point followed by 1 number. The number following the decimal point must be as specified in	AIS numerical injury identifier.	A

									Data Code Tables. (Table 9) (1-6)		
35	AIS Version	X		No	AISVersion	xs:integer	Yes	R	Must be present for each Diagnosis Code. Must be 85, 90 or 98.	Indicates which version of AIS is used to calculate AIS90. Only the 1998 revision of AIS90 or an earlier version are accepted.	A
36	Protective Devices	X		Yes	ProtectiveDevices/ProtectiveDevice	xs:integer	Yes	R	Must be present. Must be numeric. Must be valid entry as specified in Data Code Tables. (Table 2)	Protective devices (safety equipment) in use or worn by the patient at the time of the injury	A
37	Child Specific restraint	X		No	ChildSpecificRestraint	xs:integer	Yes	C	Must be present if Protective Devices = 6 (Child Restraint). Must be valid entry as specified in Data Code Tables. (Table 3)	Protective child restraint devices used by patient at the time of injury.	A
38	Airbag Deployment	X		Yes	AirBagDeployments/AirBagDeployment	xs:integer	Yes	C	Must be present if Protective Devices = 8 (Airbag). Must be valid entry as specified in Data Code Tables. (Table 4)	Indication of an airbag deployment during a motor vehicle crash	A
39	Co-Morbid Condition	X		Yes	CoMorbidityConditions/CoMorbidityCondition	xs:integer	Yes Max 5	R	Must be present. Must be valid entry as specified in Data Code Tables. (Table 14)	Pre-existing co morbid factors present before patient arrival at the ED/hospital.	A

40	Complication	X		Yes	HospitalComplications/Hospital Complication	xs:integer	Yes Max 10	R	Must be present if Record Type 50 is present. Must be valid entry as specified in Data Code Tables. (Table 15)	Pre-existing co morbid factors present before patient arrival at the ED/hospital.	A
41	Transport Mode	X	X	Yes	TransportMode	xs:string	No	R	Must be present. When present must be numeric and must be valid entry as specified in Data Code Tables.(Table 17)	The mode of transport delivering the patient to the hospital.	

Trauma Data Code Tables

1. DHCFP Organization IDs for Hospitals

OrgID	Organization Name
1	Anna Jaques Hospital
2	Athol Memorial Hospital
6	Baystate Mary Lane Hospital
4	Baystate Medical Center
7	Berkshire Medical Center - Berkshire Campus

	9	Berkshire Medical Center - Hillcrest Campus
	53	Beth Israel Deaconess Hospital - Needham
	10	Beth Israel Deaconess Medical Center - East Campus
	140	Beth Israel Deaconess Medical Center - West Campus
	144	Boston Medical Center - East Newton Campus
	16	Boston Medical Center - Harrison Avenue Campus
	22	Brigham and Women's Hospital
	25	Brockton Hospital
	27	Cambridge Health Alliance - Cambridge Campus
	143	Cambridge Health Alliance - Somerville Campus
	142	Cambridge Health Alliance - Whidden Memorial Campus
	39	Cape Cod Hospital
	42	Caritas Carney Hospital
	62	Caritas Good Samaritan Medical Center - Brockton Campus
	4460	Caritas Good Samaritan Medical Center - Norcap Lodge Campus
	75	Caritas Holy Family Hospital and Medical Center
	41	Caritas Norwood Hospital
	126	Caritas St. Elizabeth's Medical Center

46	Children's Hospital Boston
132	Clinton Hospital
50	Cooley Dickinson Hospital
51	Dana-Farber Cancer Institute
57	Emerson Hospital
8	Fairview Hospital
40	Falmouth Hospital
59	Faulkner Hospital
5	Franklin Medical Center
66	Hallmark Health System - Lawrence Memorial Hospital Campus
141	Hallmark Health System - Melrose-Wakefield Hospital Campus
68	Harrington Memorial Hospital
8548	Health Alliance Hospital -- Burbank Campus
8509	Health Alliance Hospital -- Leominster Campus
73	Heywood Hospital
77	Holyoke Medical Center
78	Hubbard Regional Hospital
79	Jordan Hospital
136	Kindred Hospital Boston

135	Kindred Hospital Boston North Shore
81	Lahey Clinic -- Burlington Campus
4448	Lahey Clinic Northshore
83	Lawrence General Hospital
85	Lowell General Hospital
133	Marlborough Hospital
88	Martha's Vineyard Hospital
89	Massachusetts Eye and Ear Infirmary
91	Massachusetts General Hospital
118	Mercy Medical Center - Providence Behavioral Health Hospital Campus
119	Mercy Medical Center - Springfield Campus
70	Merrimack Valley Hospital
49	MetroWest Medical Center - Framingham Campus
457	MetroWest Medical Center - Leonard Morse Campus
97	Milford Regional Medical Center
98	Milton Hospital
99	Morton Hospital and Medical Center
100	Mount Auburn Hospital
101	Nantucket Cottage Hospital

52	Nashoba Valley Medical Center
103	New England Baptist Hospital
105	Newton-Wellesley Hospital
106	Noble Hospital
107	North Adams Regional Hospital
116	North Shore Medical Center, Inc. - Salem Campus
3	North Shore Medical Center, Inc. - Union Campus
109	Northeast Hospital Corporation - Addison Gilbert Campus
110	Northeast Hospital Corporation - Beverly Campus
112	Quincy Medical Center
114	Saint Anne's Hospital
127	Saint Vincent Hospital
115	Saints Memorial Medical Center
122	South Shore Hospital
123	Southcoast Hospitals Group - Charlton Memorial Campus
124	Southcoast Hospitals Group - St. Luke's Campus
145	Southcoast Hospitals Group - Tobey Hospital Campus
129	Sturdy Memorial Hospital
104	Tufts-New England Medical Center

	130	UMass Memorial Medical Center - Memorial Campus
	131	UMass Memorial Medical Center - University Campus
	138	Winchester Hospital
	139	Wing Memorial Hospital and Medical Centers

2. Safety Equipment/Protective Devices

Valid Entries	Definition
1	None
2	Lap Belt
3	Personal Flotation Device
4	Protective Non-clothing Gear (e.g., shin guard)
5	Eye Protection
6	Child Restraint (booster seat, child car seat)
7	Helmet (e.g., bicycle, skiing, motorcycle)
8	Airbag
9	Protective Clothing (e.g., padded leather pants)
10	Shoulder Belt

Valid Entries	Definition
11	Other

3. Child Restraint - Safety Equipment/Protective Devices

Valid Entries	Definition
1	Child car seat
2	Infant car seat
3	Child booster seat

4. Airbag Deployment - Safety Equipment/Protective Devices

Valid Entries	Definition
1	No airbag deployed
2	Airbag deployed front
3	Airbag deployed side
4	Airbag deployed other (knee, airbelt, curtain. etc)

5. Glasgow Coma Score - Eye

Valid Entries	Definition
1	No eye movement when assessed
2	Opens eyes in response to painful stimulation
3	Opens eyes in response to verbal stimulation
4	Opens eyes spontaneously

6a. Glasgow Coma Score – Verbal (Pediatric < 2 years old)

Valid Entries	Definition
1	No vocal response
2	Inconsolable, agitated
3	Inconsistently consolable, moaning
4	Cries but consolable, inappropriate interactions
5	Smiles, oriented to sounds, follows objects, interacts

6b. Glasgow Coma Score – Verbal (Adult)

Valid Entries	Definition
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Valid Entries	Definition
1	No verbal response
2	Incomprehensible sounds
3	Inappropriate words
4	Confused
5	Oriented

7a. Glasgow Coma Score – Motor (Pediatric < 2 years old)

Valid Entries	Definition
1	No motor response
2	Extension to pain
3	Flexion to pain
4	Withdrawal from pain
5	Localizing pain
6	Appropriate response to stimulation

7b. Glasgow Coma Score – Motor (Adult)

Valid Entries	Definition
1	No motor response
2	Extension to pain
3	Flexion to pain
4	Withdrawal from pain
5	Localizing pain
6	Obeys commands

8. GCS Assessment Qualifier

Valid Entries	Definition
1	Patient chemically sedated
2	Obstruction to the Patient's eye
3	Patient Intubated

9. AIS (Abbreviated Injury Scale)

Valid Entries	Definition
1	Minor injury
2	Moderate injury

3	Serious injury, not life threatening
4	Severe injury, life threatening, but survival probable
5	Critical injury, survival uncertain
6	Maximum injury, untreatable and virtually unsurvivable
9	Not Possible to assign

10. Location of Direct Admission

Valid Entries	Definition
1	Non-Intensive floor bed
2	Observation
3	Telemetry/Step Down Unit
7	Operating Room
8	Intensive Care Bed

11. Alcohol Use

Valid Entries	Definition
1	No (not suspected)
2	No (confirmed by test)
3	Yes (confirmed by test [trace levels])
4	Yes (confirmed by test [beyond legal limit])

12. Drug Use

Valid Entries	Definition
1	No (not suspected, not tested)
2	No (confirmed by test)
3	Yes (confirmed by test [prescription drug])
4	Yes (confirmed by test [illegal use drug])

13. ICD-9-CM Location Ecodes

Valid Entries	Definition
E8490	Home
E8491	Place of occurrence, farm
E8492	Place of occurrence, mine and quarry
E8493	Place of occurrence, industrial places and premises
E8494	Place of occurrence, place for recreation and sport
E8495	Place of occurrence, street and highway
E8496	Place of occurrence, public building
E8497	Place of occurrence, residential institution
E8498	Other specified place of occurrence
E8499	Unspecified place of occurrence

14.Co-Morbidity Codes

Valid Entries	Definition
1	No NTDS co-morbidities are present
2	Alcoholism
3	Ascites within 30 days
4	Bleeding disorder
5	Chemotherapy for cancer within 30 days
6	Congenital Anomalies
7	Congestive heart failure
8	Current smoker
9	Currently requiring or on dialysis
10	CVA/residual neurological deficit
11	Diabetes mellitus
12	Disseminated cancer
13	Do not resuscitate (DNR) status
14	Esophageal varices
15	Functionally dependant health status

16	History of angina with past 1 month
17	History of myocardial infarction within past 6 months
18	History of revascularization / amputation for PVD
19	Hypertension requiring medication
20	Impaired sensorium
21	Prematurity
22	Obesity
23	Respiratory Disease
24	Steroid Use

15. Hospital Complication

Valid Entries	Definition
1	No medical complication occurred
2	Abdominal compartment syndrome
3	Abdominal fascia left open
4	Acute renal failure
5	Acute respiratory distress syndrome (ARDS)
6	Base deficit
7	Bleeding
8	Cardiac arrest with CPR
9	Coagulopathy
10	Coma
11	Decubitus ulcer
12	Deep surgical site infection
13	Drug or alcohol withdrawal syndrome
14	Deep Vein Thrombosis (DVT)/thrombophlebitis
15	Extremity compartment syndrome
16	Graft/prosthesis/flap failure
17	Intracranial pressure
18	Myocardial infarction

19	Organ/space surgical site infection
20	Pneumonia
21	Pulmonary embolism
22	Stroke / CVA
23	Superficial surgical site infection
24	Systemic sepsis
25	Unplanned intubation
26	Wound disruption

16.Postal State Codes

Valid Entries	Definition
AL	Alabama
AK	Alaska
AZ	Arizona
AR	Arkansas
CA	California
CO	Colorado
CT	Connecticut
DE	Delaware
DC	District of Columbia
FL	Florida
GA	Geogia
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine

MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NY	New York
NC	North Carolina
ND	North Dakota
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming

17.Transport Mode

Valid Entries	Definition
1	Ground Ambulance
2	Helicopter Ambulance
3	Fixed-wing Ambulance
4	Private/Public Vehicle/Walk-in
5	Police
6	Other
9	Unknown

Submittal Schedule

Trauma Data File **must be submitted quarterly** to the DHCFP and must be submitted within 45 days of the close of the quarter. Include records whose final discharge date must be within the quarter of submission.

Quarter 1	Close December 31 st	Due by March 15 th
Quarter 2	Close March 31 st	Due by June 15 th
Quarter 3	Close June 30 th	Due by September 15 th
Quarter 4	Close September 30 th	Due by December 15 th

Compliance

Any licensed Trauma Center not complying with *regulation 105 CMR 130.850* shall be subject to the penalties specified in said regulation. The Division shall consider a trauma center out of compliance with *105 CMR 130.850* in the following circumstances:

- a) A rejected submission, on a monthly basis, is excluded from the data base by the Division because the records do not pass critical edit checks as specified in these specifications and the hospital fails to submit satisfactorily corrected records within 30 days or
- b)) the trauma center fails to submit the required data in accordance with the dates specified above.

Protection of Confidentiality of Data

The Division shall institute appropriate administrative procedures and mechanisms to ensure that it is in compliance with the provisions of M.G.L. c. 66A, the Fair Information Practices Act, to the extent that the data collected there under are "personal data" within the meaning of that statute. In addition, the Division shall ensure that any contract entered into with other parties for the purposes of processing and analysis of this data shall contain assurances such other parties shall also comply with the provisions of M.G.L.c. 66A.

Massachusetts Trauma .XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:element name="MDPHTraumaRecords">
    <xs:annotation>
      <xs:documentation>Root Tag</xs:documentation>
    </xs:annotation>
    <xs:complexType>
      <xs:sequence>
        <xs:element name="MDPHTraumaRecord">
          <xs:complexType>
            <xs:all>
              <xs:element name="PatientId">
                <xs:annotation>
                  <xs:documentation>Patient's Social Security Number.</xs:documentation>
                </xs:annotation>
                <xs:simpleType>
                  <xs:restriction base="xs:string"/>
                </xs:simpleType>
              </xs:all>
            </xs:complexType>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:schema>
```

```

    </xs:element>
    <xs:element name="FacilityId">
      <xs:annotation>
        <xs:documentation>Facility ID</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="FacilitySiteId">
      <xs:annotation>
        <xs:documentation>Facility Site ID</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="InterFacilityTransfer">
      <xs:annotation>
        <xs:documentation>Determination if the patient was transferred from another acute care facility.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="FacilitySiteIdOfTransferringHospital">
      <xs:annotation>
        <xs:documentation>Facility Site ID of Transferring Hospital</xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string"/>
      </xs:simpleType>
    </xs:element>
    <xs:element name="DischargeTimeTransferring">
      <xs:annotation>
        <xs:documentation>Time the patient left the originating hospital if a transfer patient.</xs:documentation>
      </xs:annotation>
    </xs:element>

```

```

        <xs:element name="HospitalArrivalDate">
            <xs:annotation>
<xs:documentation>The date and time the patient arrived to the ED/hospital.</xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="HospitalArrivalTime">
            <xs:annotation>
<xs:documentation>The date and time the patient arrived to the ED/hospital.</xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:element name="LocationOfDirectAdmission">
            <xs:annotation>
<xs:documentation>The location the patient was directly taken to if direct admission. Must be a valid code as specified in Data Code Tables (Table
10).</xs:documentation>
            </xs:annotation>
        </xs:element>
        <xs:simpleType>
            <xs:restriction base="xs:string"/>
        </xs:simpleType>
    </xs:element>
    <xs:element name="MedicalRecordNumber">
        <xs:annotation>
            <xs:documentation>Patient's Social Security Number.</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
            <xs:restriction base="xs:string"/>
        </xs:simpleType>
    </xs:element>
    <xs:element name="DateOfBirth">
        <xs:annotation>
            <xs:documentation>The patient's date of birth.</xs:documentation>
        </xs:annotation>
    </xs:element>
    <xs:element name="Sex">
        <xs:annotation>
            <xs:documentation>The patient's sex.</xs:documentation>

```

```

        </xs:annotation>
        </xs:element>
    <xs:element name="PatientStreetAddress">
        <xs:annotation>
            <xs:documentation>The patient's home street address</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
            <xs:restriction base="xs:string"/>
        </xs:simpleType>
    </xs:element>
    <xs:element name="HomeCity">
        <xs:annotation>
<xs:documentation>The patient's home city (or township, village) of residence.</xs:documentation>
        </xs:annotation>
    </xs:element>

    <xs:element name="HomeZip">
        <xs:annotation>
            <xs:documentation>The patient's home ZIP code of residence</xs:documentation>
        </xs:annotation>
    </xs:element>
    <xs:element name="IncidentDate">
        <xs:annotation>
            <xs:documentation>The date the injury occurred.</xs:documentation>
        </xs:annotation>
    </xs:element>
    <xs:element name="IncidentTime">
        <xs:annotation>
            <xs:documentation>The time the injury occurred.</xs:documentation>
        </xs:annotation>
    </xs:element>
    <xs:element name="WorkRelated">
        <xs:annotation>
<xs:documentation>Indication of whether the injury occurred during paid employment.</xs:documentation>
        </xs:annotation>
    </xs:element>

```

```

<xs:element name="IncidentState">
    <xs:annotation>
<xs:documentation>The state, territory, or province where the patient was found or to which the unit responded (or best
approximation).</xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="IncidentCity">
    <xs:annotation>
<xs:documentation>The city or township where the patient was found or to which the unit responded (or best approximation).</xs:documentation>
    </xs:annotation>
</xs:element>

<xs:element name="AlcoholUseIndicators">
    <xs:annotation>
        <xs:documentation>Use of alcohol by the patient.</xs:documentation>
    </xs:annotation>
</xs:element>
<xs:element name="DrugUseIndicators">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="item" maxOccurs="2">
                <xs:complexType>
                    <xs:sequence>
                        <xs:element name="DrugUseIndicator">
                            <xs:annotation>
<xs:documentation>Use of drugs by the patient.</xs:documentation>
                            </xs:annotation>
                        </xs:element>
                    </xs:sequence>
                </xs:complexType>
            </xs:element>
        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="PrimaryECode">
    <xs:annotation>

```

```

<xs:documentation>E-code used to describe the mechanism (or external factor) that caused the injury event.</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="LocationECode">
    <xs:annotation>
      <xs:documentation>E-code used to describe the place/site/location of the injury event (E 849.X).</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="GcsEye">
    <xs:annotation>
      <xs:documentation>First recorded Glasgow Coma Score (Eye) in the ED/hospital.</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="GcsVerbal">
    <xs:annotation>
      <xs:documentation>First recorded Glasgow Coma Score (Verbal) in the ED/hospital.</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="GcsMotor">
    <xs:annotation>
      <xs:documentation>First recorded Glasgow Coma Score (Motor) in the ED/hospital.</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="TotalGcs">
    <xs:annotation>
      <xs:documentation>First recorded Glasgow Coma Score (total) in the ED/hospital.</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="GcsQualifiers">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="item" maxOccurs="3">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="GcsQualifier">

```



```

<xs:documentation>Documentation of factors potentially affecting the first assessment of GCS upon arrival in the ED/hospital.</xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<!--<xs:element name="GcsQualifier2">
</xs:annotation>
<xs:documentation>Documentation of factors potentially affecting the first assessment of GCS upon arrival in the ED/hospital.</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="GcsQualifier3">
</xs:annotation>
<xs:documentation>Documentation of factors potentially affecting the first assessment of GCS upon arrival in the ED/hospital.</xs:documentation>
</xs:annotation>
</xs:element>-->
<xs:element name="RespiratoryRate">
</xs:annotation>
<xs:documentation>First recorded respiratory rate in the ED/hospital (expressed as a number per minute).</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="Sbp">
</xs:annotation>
<xs:documentation>First recorded systolic blood pressure in the ED/Hospital</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="PulseRate">
</xs:annotation>
<xs:documentation>First recorded systolic blood pressure in the ED/hospital.</xs:documentation>
</xs:annotation>

```

```

</xs:element>

<xs:element name="InjuryDiagnoses">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="item" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="InjuryDiagnosis">
              <xs:annotation>

<xs:documentation>Diagnoses related to all identified injuries.</xs:documentation>

              </xs:annotation>
            </xs:element>
            <xs:element name="AIS90">
              <xs:annotation>

<xs:documentation>AIS numerical injury identifier.Must be a valid AIS 90 code. Must consist of 6 numbers followed by a decimal point followed by 1
number. The number following the decimal point must be as specified in Data Code Tables. (Table 10) (1-6).</xs:documentation>

              </xs:annotation>
            </xs:element>
            <xs:element name="AISVersion">
              <xs:annotation>

<xs:documentation>Indicates which version of AIS is used to calculate AIS90. Only the 1998 revision of AIS90 or an earlier version are accepted.Must
be present for each Diagnosis Code. Must be 85, 90 or 98.</xs:documentation>

              </xs:annotation>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ProtectiveDevices">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="item" maxOccurs="unbounded">

```

```

        <xs:complexType>
          <xs:sequence>
            <xs:element name="ProtectiveDevice">
              <xs:annotation>
<xs:documentation>Protective devices (safety equipment) in use or worn by the patient at the time of the injury.</xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ChildSpecificRestraint">
  <xs:annotation>
<xs:documentation>Protective child restraint devices used by patient at the time of injury.</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="TransportMode">
  <xs:annotation>
<xs:documentation>The mode of transport delivering the patient to the hospital.</xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="AirbagDeployments">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="item" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="AirbagDeployment">
              <xs:annotation>
<xs:documentation>Indication of an airbag deployment during a motor vehicle crash.</xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:sequence>

```

```

        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ComorbidConditions">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="item" maxOccurs="5">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="ComorbidCondition">
              <xs:annotation>
<xs:documentation>Pre-existing comorbid factors present at patient arrive to ED/hospital.</xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="HospitalComplications">
  <xs:complexType>
    <xs:all>
      <xs:element name="item" maxOccurs="10">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="HospitalComplication">
              <xs:annotation>
                <xs:documentation>Diagnoses related to all
                identified injuries.</xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:sequence>

```

```

        </xs:complexType>
      </xs:element>
    </xs:all>
  </xs:complexType>
</xs:element>
</xs:all>
</xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute name="MDPHTraumaVersion" use="required" fixed="v1.0.0"/>
</xs:complexType>
</xs:element>
</xs:schema>

```

Sample Massachusetts Trauma XML

```

<?xml version="1.0"?>
<MDPHTraumaRecords MDPHTraumaVersion="v1.0.0">
  <MDPHTraumaRecord>
    <PatientId>015702345</PatientId>
    <FacilityId>1225</FacilityId>
    <FacilitySiteId>1225</FacilitySiteId>
    <InterFacilityTransfer>1</InterFacilityTransfer>
    <FacilitySiteIdOfTransferringHospital>16</FacilitySiteIdOfTransferringHospital>
    <DischargeTimeTransferring>16:10</DischargeTimeTransferring>
    <HospitalArrivalDate>1991-05-05</HospitalArrivalDate>
    <HospitalArrivalTime>05:05</HospitalArrivalTime>
    <LocationOfDirectAdmission>7</LocationOfDirectAdmission>
    <MedicalRecordNumber>567765345</MedicalRecordNumber>
    <DateOfBirth>1978-04-24</DateOfBirth>
    <Sex>1</Sex>
    <PatientStreetAddress>100 Main Street</PatientStreetAddress>
    <HomeCity>Assonet</HomeCity>
    <HomeZip>02702</HomeZip>
    <IncidentDate>1991-05-05</IncidentDate>
  </MDPHTraumaRecord>
</MDPHTraumaRecords>

```

<IncidentTime>13:02</IncidentTime>
<WorkRelated>1</WorkRelated>
<IncidentState>MA</IncidentState>
<IncidentCity>Dorchester</IncidentCity>
<AlcoholUseIndicators>2</AlcoholUseIndicators>
<DrugUseIndicators>
 <item>
 <DrugUseIndicator>3</DrugUseIndicator>
 </item>
 <item>
 <DrugUseIndicator>2</DrugUseIndicator>
 </item>
</DrugUseIndicators>
<PrimaryECode> E8491</PrimaryECode>
<LocationECode> E8491</LocationECode>
<GcsEye>1</GcsEye>
<GcsVerbal>2</GcsVerbal>
<GcsMotor>4</GcsMotor>
<TotalGcs>7</TotalGcs>
<GcsQualifiers>
 <item>
 <GcsQualifier>1</GcsQualifier>
 </item>
 <item>
 <GcsQualifier>2</GcsQualifier>
 </item>
 <item>
 <GcsQualifier>3</GcsQualifier>
 </item>
</GcsQualifiers>
<RespiratoryRate>60</RespiratoryRate>
<Sbp>120</Sbp>
<PulseRate>125</PulseRate>
<InjuryDiagnoses>
 <item>

```
<InjuryDiagnosis>9599</InjuryDiagnosis>
    <AIS90>767877.9</AIS90>
    <AISVersion>98</AISVersion>
</item>
</InjuryDiagnoses>
<ProtectiveDevices>
<item>
    <ProtectiveDevice>1</ProtectiveDevice>
</item>
<item>
    <ProtectiveDevice>7</ProtectiveDevice>
</item>
</ProtectiveDevices>
<ChildSpecificRestraint>1</ChildSpecificRestraint>
<AirbagDeployments>
<item>
    <AirbagDeployment>3</AirbagDeployment>
</item>
</AirbagDeployments>
<ComorbidConditions>
<item>
    <ComorbidCondition>20</ComorbidCondition>
</item>
</ComorbidConditions>
<HospitalComplications>
<item>
    <HospitalComplication>123456</HospitalComplication>
</item>
</HospitalComplications>
<TransportMode>1</TransportMode>
</MDPHTraumaRecord>
</MDPHTraumaRecords>
```