National Trauma Data Standard

DATA DICTIONARY

2010 Admissions

NTDB
NATIONAL TRAUMA DATA BANK

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Introduction

Traumatic injury, both unintentional and intentional, is the leading cause of death in the first four decades of life, according to the National Center for Health Statistics.\(^1\) Trauma typically involves young adults and results in the loss of more productive work years than both cancer and heart disease combined.\(^2\) Each year, more than 140,000 Americans die and approximately 80,000 are permanently disabled as a result of injury.\(^3\) The loss of productivity and health care costs account for 100 billion dollars annually.\(^4\)

Research provides evidence of the effectiveness of trauma and EMS systems in reducing mortality, morbidity, and lost productivity from traumatic injuries. Almost three decades of research consistently suggests that in-hospital (and post-discharge) mortality rates are reduced by 20 to 25% among severely injured patients treated in trauma centers organized into a regional or statewide trauma system.\(^5\)-\(^9\) Nevertheless, much of the work investigating the effectiveness of trauma system (center) development has been hampered by the lack of consistent, quality data to demonstrate differences in mortality over time or between hospitals, regions, or states.

Hospital-based trauma registries are the basis for much of the research and quality assessment work that has informed clinicians and policy makers about methods to optimize the care of injured patients. Yet, the actual data points contained in independent hospital registries are often so different in content and structure that comparison across registries is nearly impossible.\(^10\) Database construction for trauma registries is often completed in isolation with no nationally recognized standard data dictionary to ensure consistency across registries. Efforts to standardize hospital registry content have been published\(^11\),\(^12\), yet studies continue to document serious variation and misclassification between hospital-based registries.\(^13\),\(^14\)

Recently, federal agencies have made investments to fortify the establishment of a national trauma registry.\(^15\),\(^16\) Much of this funding has focused on the National Trauma Data Standard™ (NTDS), which represents a concerted and sustained effort by the American College of Surgeons Committee on Trauma (ACSCOT) to provide an extensive collection of trauma registry data provided primarily by accredited/designated trauma centers across the U.S.\(^17\) Members of ACSCOT and staff associated with the NTDB have long recognized that the NTDB inherits the individual deficiencies of each contributing registry.\(^18\)

During 2004 through 2006, the ACSCOT Subcommittee on Trauma Registry Programs was supported by the U.S. Health Resources and Services Administration (HRSA) to devise a uniform set of trauma registry variables and associated variable definitions. The ACSCOT Subcommittee also characterized a core set of trauma registry inclusion criteria that would maximize participation by all state, regional and local trauma registries. This data dictionary
represents the culmination of this work. Institutionalizing the basic standards provided in this document will greatly increase the likelihood that a national trauma registry would provide clinical information beneficial in characterizing traumatic injury and enhancing our ability to improve trauma care in the United States.

To realize this objective, it is important that this subset of uniform registry variables are incorporated into all trauma registries, regardless of trauma center accreditation/designation (or lack thereof). Local, regional or state registries are then admonished to provide a yearly download of these uniform variables to the NTDB for all patients satisfying the inclusion criteria described in this document. This subset of variables, for all registries, will represent the contents of the new National Trauma Data Bank (NTDB) in the future.

Technical Notes Regarding NTDS Implementation

The NTDS Dictionary is designed to establish a national standard for the exchange of trauma registry data, and to serve as the operational definitions for the National Trauma Data Bank (NTDB). It is expected (and encouraged) that local and state trauma registry committees will move towards extending and/or modifying their registries to adopt NTDS-based definitions. However, it is also recognized that many local and state trauma registry data sets will contain additional data points as well as additional response codes beyond those captured in NTDS. It is important to note that systems that deviate from NTDS can be fully compliant with NTDS via the development of a "mapping" process provided by their vendor which maps each variable (and response codes) in the registry to the appropriate NTDS variable (and response code).

There are numerous ways in which mappings may allow variations in hospital or state data sets to conform to the NTDS data fields:

1. Additional response codes for a variable (for example, source of payment) may be collected, but then collapsed (i.e., mapped) into existing NTDS response codes when data are submitted to the NTDB.

2. A local or state registry may collect both a “patient’s home city” and “patient’s home ZIP code”, but the NTDS requires one or the other. A mapping program may ensure only one variable is submitted to the NTDB.

In sum, the NTDS Data Dictionary provides the exact standard for submission of trauma registry data to the NTDB. This standard may be accomplished through abstraction precisely as described in this document, or through mapping provided by a vendor. If variables are mapped, trauma managers/registrars should consult with their vendor to ensure that the mapping is
accurate. In addition, if variables are mapped, it is important that a registrar abstract data as described by the vendor to ensure the vendor-supplied NTDS mapping works properly to enforce the exact rules outlined in the NTDS data dictionary.

The benefits of having a national trauma registry standard that can support comparative analyses across all facilities are enormous. The combination of having the NTDS standard as well as vendor-supplied mappings (to support that standard) will allow local and state registry data sets to include individualized detail while still maintaining compatibility with the NTDS national standard.

References


<table>
<thead>
<tr>
<th>Variable</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED/HOSPITAL ARRIVAL TIME</td>
<td>64</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL SYSTOLIC BLOOD PRESSURE</td>
<td>65</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL PULSE RATE</td>
<td>66</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL TEMPERATURE</td>
<td>67</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL RESPIRATORY RATE</td>
<td>68</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL RESPIRATORY ASSISTANCE</td>
<td>69</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL OXYGEN SATURATION</td>
<td>70</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL SUPPLEMENTAL OXYGEN</td>
<td>71</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL GCS - EYE</td>
<td>72</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL GCS - VERBAL</td>
<td>73</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL GCS - MOTOR</td>
<td>74</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL GCS - TOTAL</td>
<td>75</td>
</tr>
<tr>
<td>INITIAL ED/HOSPITAL GCS ASSESSMENT QUALIFIERS</td>
<td>76</td>
</tr>
<tr>
<td>ALCOHOL USE INDICATOR</td>
<td>77</td>
</tr>
<tr>
<td>DRUG USE INDICATOR</td>
<td>78</td>
</tr>
<tr>
<td>ED DISCHARGE DISPOSITION</td>
<td>79</td>
</tr>
<tr>
<td>ED DEATH</td>
<td>80</td>
</tr>
<tr>
<td>ED DISCHARGE DATE</td>
<td>81</td>
</tr>
<tr>
<td>ED DISCHARGE TIME</td>
<td>82</td>
</tr>
<tr>
<td>HOSPITAL PROCEDURE INFORMATION</td>
<td>83</td>
</tr>
<tr>
<td>HOSPITAL PROCEDURES</td>
<td>84</td>
</tr>
<tr>
<td>HOSPITAL PROCEDURE START DATE</td>
<td>85</td>
</tr>
<tr>
<td>HOSPITAL PROCEDURE START TIME</td>
<td>86</td>
</tr>
<tr>
<td>DIAGNOSES INFORMATION</td>
<td>87</td>
</tr>
<tr>
<td>CO-MORBID CONDITIONS</td>
<td>88</td>
</tr>
<tr>
<td>INJURY DIAGNOSES</td>
<td>89</td>
</tr>
<tr>
<td>INJURY SEVERITY INFORMATION</td>
<td>90</td>
</tr>
<tr>
<td>AIS PREDOT CODE</td>
<td>91</td>
</tr>
<tr>
<td>AIS SEVERITY</td>
<td>92</td>
</tr>
<tr>
<td>ISS BODY REGION</td>
<td>93</td>
</tr>
<tr>
<td>AIS VERSION</td>
<td>94</td>
</tr>
<tr>
<td>LOCALLY CALCULATED ISS</td>
<td>95</td>
</tr>
<tr>
<td>OUTCOME INFORMATION</td>
<td>96</td>
</tr>
<tr>
<td>TOTAL ICU LENGTH OF STAY</td>
<td>97</td>
</tr>
<tr>
<td>TOTAL VENTILATOR DAYS</td>
<td>98</td>
</tr>
<tr>
<td>HOSPITAL DISCHARGE DATE</td>
<td>99</td>
</tr>
<tr>
<td>HOSPITAL DISCHARGE TIME</td>
<td>100</td>
</tr>
<tr>
<td>HOSPITAL DISCHARGE DISPOSITION</td>
<td>101</td>
</tr>
<tr>
<td>FINANCIAL INFORMATION</td>
<td>102</td>
</tr>
<tr>
<td>PRIMARY METHOD OF PAYMENT</td>
<td>103</td>
</tr>
<tr>
<td>QUALITY ASSURANCE INFORMATION</td>
<td>104</td>
</tr>
<tr>
<td>HOSPITAL COMPLICATIONS</td>
<td>105</td>
</tr>
<tr>
<td>APPENDIX 1: AUTO CALCULATED VARIABLES BASED UPON EXISTING DATA ELEMENTS</td>
<td>106</td>
</tr>
<tr>
<td>VARIABLES AUTO-CALCULATED BASED ON EXISTING DATA ELEMENTS</td>
<td>107</td>
</tr>
<tr>
<td>APPENDIX 2: NTDB FACILITY DATASET</td>
<td>114</td>
</tr>
<tr>
<td>THE PURPOSE OF VARIABLES DEFINING HOSPITAL CHARACTERISTICS</td>
<td>114</td>
</tr>
<tr>
<td>APPENDIX 3: EDIT CHECKS FOR THE NATIONAL TRAUMA DATA</td>
<td>118</td>
</tr>
<tr>
<td>INJURY INFORMATION</td>
<td>123</td>
</tr>
<tr>
<td>PRE-HOSPITAL INFORMATION</td>
<td>127</td>
</tr>
<tr>
<td>EMERGENCY DEPARTMENT INFORMATION</td>
<td>131</td>
</tr>
</tbody>
</table>
National Trauma Data Standard Dataset Patient Inclusion Criteria

Definition:

To ensure consistent data collection across States into the National Trauma Data Standard, a trauma patient is defined as a patient sustaining a traumatic injury and meeting the following criteria:

At least one of the following injury diagnostic codes defined in the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)*:

800–959.9

Excluding the following isolated injuries:

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

AND MUST INCLUDE ONE OF THE FOLLOWING IN ADDITION TO (ICD-9-CM 800–959.9):

- Hospital admission as defined by your trauma registry inclusion criteria; OR
- Patient transfer via EMS transport (including air ambulance) from one hospital to another hospital; OR
- Death resulting from the traumatic injury (independent of hospital admission or hospital transfer status)
National Trauma Data Standard Inclusion Criteria

Did the patient sustain one or more traumatic injuries? 

Yes

Does the diagnostic code for any injury included in the following range; 
\textit{ICD-9-CM: 800-959.9}? 

No

Yes

Did the patient sustain at least one injury with a diagnostic code outside the range of codes listed below? 
\textit{ICD-9-CM codes: 905-909.9, 910-924.9, or 930-939.9}? 

No

Yes

Did injury result in death? 

OR

Was the patient transferred to (or from) your hospital via another hospital using EMS or air ambulance? 

OR

Was the patient considered an admission based on your trauma registry inclusion criteria? 

For ALL three

No

Yes

Patient \textbf{INCLUDED} in the National Trauma Data Standard

Patient \textbf{NOT INCLUDED} in the National Trauma Data Standard
COMMON NULL VALUES

Data Format [combo] single-choice

National Element

Definition
These values are to be used with each of the National Trauma Data Standard Data Elements described in this document which have been defined to accept the Null Values.

Field Values
1 Not Applicable

2 Not Known/Not Recorded

Additional Information

● For any collection of data to be of value and reliably represent what was intended, a strong commitment must be made to ensure the correct documentation of incomplete data. When data elements associated with the National Trauma Data Standard are to be electronically stored in a database or moved from one database to another using XML, the indicated null values should be applied.

● Not Applicable: This null value code applies if, at the time of patient care documentation, the information requested was “Not Applicable” to the patient, the hospitalization or the patient care event. For example, variables documenting EMS care would be “Not Applicable” if a patient self-transported to the hospital.

● Not Known/Not Recorded: This null value applies if, at the time of patient care documentation, information was “Not Known” (to the patient, family, health care provider) or no value for the element was recorded for the patient. This documents that there was an attempt to obtain information but it was unknown by all parties or the information was missing at the time of documentation. For example, injury date and time may be documented in the hospital patient care report as “Unknown”. Another example, Not Known/Not Recorded should also be coded when documentation was expected, but none was provided (i.e., no EMS run sheet in the hospital record for patient transported by EMS).

References to Other Databases

● Compare with NHTSA V.2.10 - E00
Demographic Information
PATIENT’S HOME ZIP CODE

Data Format [text]  National Element

Definition
The patient’s home ZIP code of primary residence.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:zip</th>
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</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>HomeZip</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element

Additional Information
- Can be stored as a 5 or 9 digit code (XXXXX-XXXX).
- May require adherence to HIPAA regulations.
- If zip code is "Not Applicable", complete variable: Alternate Home Residence.
- If zip code is "Not Recorded/Not Known", complete variables: Patient’s Home Country; Patient’s Home State; Patient’s Home County and; Patient’s Home City.

Data Source Hierarchy
1. Billing Sheet / Medical Records Coding Summary Sheet
2. ED Admission Form
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

Uses
- Allows data to be sorted based upon the geographic location of the patient’s home.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Common Null Values
- Patient’s Home Country
- Patient’s Home State
- Patient’s Home County
- Patient’s Home City
- Alternate Home Residence

References to Other Databases
- NHTSA V.2.2 - E06_08
PATIENT’S HOME COUNTRY

Data Format [combo] single-choice

National Element

Definition
The country where the patient resides.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
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<tbody>
<tr>
<td>Multiple Entry Configuration</td>
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<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>HomeCountry</td>
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<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element (two digit alpha country code)

Additional Information
- Only completed when ZIP code is “Not Recorded/Not Known”.
- Values are two character fields representing a country (e.g., US).

Data Source Hierarchy
1. Billing Sheet / Medical Records Coding Summary Sheet
2. ED Admission Form
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

Uses
- Allows data to be sorted based upon the geographic location of the patient’s home.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Common Null Values
- Patient’s Home State
- Patient’s Home County
- Patient’s Home City
- Alternate Home Residence

References to Other Databases
- NHTSA 2.2 - E06_09
PATIENT'S HOME STATE

Data Format [combo] single-choice

**National Element**

**Definition**
The state (territory, province, or District of Columbia) where the patient resides.

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<thead>
<tr>
<th>XSD Data Type</th>
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<tr>
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<td>No</td>
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<td>Required in XSD</td>
<td>Yes</td>
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</tbody>
</table>

**Field Values**
- Relevant value for data element (two digit numeric FIPS code)

**Additional Information**
- *Only completed when ZIP code is "Not Recorded/Not Known".*
- Used to calculate FIPS code.

**Data Source Hierarchy**
1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

**Uses**
- Allows data to be sorted based upon the geographic location of the patient's home.

**Data Collection**
- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**
- Common Null Values
- Patient's Home Country
- Patient's Home County
- Patient's Home City
- Alternate Home Residence

**References to Other Databases**
- NHTSA 2.2 - E06_07
### PATIENT'S HOME COUNTY

**Data Format** [combo] single-choice

**National Element**

**Definition**
The patient’s county (or parish) of residence.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
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</tr>
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</table>

**XSD Element / Domain (Simple Type)** `HomeCounty`

**Field Values**
- Relevant value for data element (three digit FIPS code)

**Additional Information**
- *Only completed when ZIP code is "Not Recorded/Not Known".*
- Used to calculate FIPS code.

**Data Source Hierarchy**
1. Billing Sheet / Medical Records Coding Summary Sheet
2. ED Admission Form
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

**Uses**
- Allows data to be sorted based upon the geographic location of the patient’s home.

**Data Collection**
- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**
- Common Null Values
- Patient’s Home Country
- Patient’s Home State
- Patient’s Home City
- Alternate Home Residence

**References to Other Databases**
- NHTSA 2.2 - E06_06
PATIENT’S HOME CITY

Data Format [combo] single-choice

National Element

Definition
The patient’s city (or township, or village) of residence.

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<thead>
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</tr>
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</tr>
</tbody>
</table>

Field Values
- Relevant value for data element (five digit FIPS code)

Additional Information
- *Only completed when ZIP code is “Not Recorded/Not Known”.*
- Used to calculate FIPS code.

Data Source Hierarchy
1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

Uses
- Allows data to be sorted based upon the geographic location of the patient’s home.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Common Null Values
- Patient’s Home Country
- Patient’s Home State
- Patient’s Home County
- Alternate Home Residence

References to Other Databases
- NHTSA V.2.2 - E06_05
### ALTERNATE HOME RESIDENCE

**Data Format** [combo] single-choice  

**National Element**

<table>
<thead>
<tr>
<th><strong>Definition</strong></th>
<th>Documentation of the type of patient without a home zip code.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>XSD Data Type</strong></td>
<td>xs:integer</td>
</tr>
<tr>
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<tr>
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</tr>
<tr>
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<tr>
<td><strong>Accepts Null Value</strong></td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

**Field Values**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Homeless</td>
</tr>
<tr>
<td>2</td>
<td>Undocumented Citizen</td>
</tr>
<tr>
<td>3</td>
<td>Migrant Worker</td>
</tr>
<tr>
<td>4</td>
<td>Foreign Visitor</td>
</tr>
</tbody>
</table>

**Additional Information**

- Only completed when ZIP code is “Not Applicable”.
- Homeless is defined as a person who lacks housing. The definition also includes a person living in transitional housing or a supervised public or private facility providing temporary living quarters.
- Undocumented Citizen is defined as a national of another country who has entered or stayed in another country without permission.
- Migrant Worker is defined as a person who temporarily leaves his/her principal place of residence within a country in order to accept seasonal employment in the same country.
- Foreign Visitor is defined as any person visiting a country other than his/her usual place of residence for any reason without intending to receive earnings in the visited country.

**Data Source Hierarchy**

1. Billing Sheet / Medical Records Coding Summary Sheet
2. ED Admission Form
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

**Uses**

- Allows data to be sorted based upon type of residence

**Data Collection**

- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**

- Patient’s Home Country
- Patient’s Home State
- Patient’s Home County
- Patient’s Home City
DATE OF BIRTH

Data Format [date]  National Element

Definition
The patient’s date of birth.

XSD Data Type  xs:date  XSD Element / Domain (Simple Type)  DateOfBirth
Multiple Entry Configuration  No  Accepts Null Value  Yes, common null values
Required in XSD  Yes  Minimum Constraint  1,890  Maximum Constraint  2,030

Field Values
- Relevant value for data element

Additional Information
- Collected as YYYY-MM-DD.
- If age is less than 24 hours, complete variables: Age and; Age Units.
- If "Not Recorded/Not Known" complete variables: Age and; Age Units.
- Used to calculate patient age in days, months, or years then deleted.

Data Source Hierarchy
1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

Uses
- Allows data to be sorted based on age.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Patient Age
- Age Units

References to Other Databases
- NHTSA V.2.2 - E06_16
**AGE**

**Data Format** [number]  

**National Element**

**Definition**

The patient’s age at the time of injury (best approximation).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>Field Values</th>
<th>Additional Information</th>
<th>Data Source Hierarchy</th>
<th>Uses</th>
<th>Data Collection</th>
<th>Other Associated Elements</th>
<th>References to Other Databases</th>
</tr>
</thead>
</table>
| xs:integer   | Age                               | Relevant value for data element | Used to calculate patient age in hours, days, months, or years.  
|               |                                   |               | Only completed when Date of Birth is “Not Recorded/Not Known” or age is less than 24 hours”.  
|               |                                   |               | Must also complete variable: Age Units | 1. ED Admission Form  
|               |                                   |               |                         | 2. Billing Sheet / Medical Records Coding Summary Sheet  
|               |                                   |               |                         | 3. EMS Run Sheet  
|               |                                   |               |                         | 4. Triage Form / Trauma Flow Sheet  
|               |                                   |               |                         | 5. ED Nurses Notes  
|               |                                   |               |                         |  | EMS or hospital records or electronically through linkage with the EMS/medical record.  
|               |                                   |               |                         |  |  |  | Date of Birth  
|               |                                   |               |                         |  |  |  | Age Units  
|               |                                   |               |                         |  |  |  |  
|               |                                   |               |                         |  |  |  | NHTSA V.2.2 - E06_14  

**Section D_08 Demographic Information**

National Trauma Data Standard Dataset V 2010 Admissions

Page 22 of 161
AGE UNITS

Data Format [combo] single-choice

National Element

Definition
The units used to document the patient's age (Years, Months, Days, Hours).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hours</td>
</tr>
<tr>
<td>3 Months</td>
</tr>
<tr>
<td>2 Days</td>
</tr>
<tr>
<td>4 Years</td>
</tr>
</tbody>
</table>

Additional Information
- Used to calculate patient age in hours, days, months, or years.
- Only completed when age is less than 24 hours or, “Not Recorded/Not Known”.
- Must also complete variable: Age

Data Source Hierarchy
1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. Triage Form / Trauma Flow Sheet
4. EMS Run Sheet
5. ED Nurses Notes

Uses
- Allows data to be sorted based upon age.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Date of Birth
- Age

References to Other Databases
- NHTSA V.2.2 - E06_15
### RACE

**Data Format** [combo] multiple-choice

### National Element

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 2</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Values</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Asian</td>
<td>4 American Indian</td>
</tr>
<tr>
<td>2 Native Hawaiian or Other Pacific Islander</td>
<td>5 Black or African American</td>
</tr>
<tr>
<td>3 Other Race</td>
<td>6 White</td>
</tr>
</tbody>
</table>

### Additional Information
- Patient race should be based upon self-report or identified by a family member.
- The maximum number of races that may be reported for an individual patient is 2.

### Data Source Hierarchy
1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. Triage Form / Trauma Flow Sheet
4. EMS Run Sheet
5. ED Nurses Notes

### Uses
- Allows data to be sorted based upon race.

### Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

### References to Other Databases
- NHTSA V.2.2 - E06_12
ETHNICITY

Data Format [combo] single-choice

National Element

Definition
The patient’s ethnicity.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>Ethnicity</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

Field Values
1 Hispanic or Latino
2 Not Hispanic or Latino

Additional Information
- Patient ethnicity should be based upon self-report or identified by a family member.
- The maximum number of ethnicities that may be reported for an individual patient is 1.

Data Source Hierarchy
1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. Triage Form / Trauma Flow Sheet
4. EMS Run Sheet
5. ED Nurses Notes

Uses
- Allows data to be sorted based upon ethnicity.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

References to Other Databases
- NHTSA V.2.2 - E06_13
SEX

Data Format [combo] single-choice

National Element

Definition
The patient’s sex.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values

1 Male
2 Female

Additional Information

- Patients who have undergone a surgical and/or hormonal sex reassignment should be coded using the current assignment.

Data Source Hierarchy

1. ED Admission Form
2. Billing Sheet / Medical Records Coding Summary Sheet
3. EMS Run Sheet
4. Triage Form / Trauma Flow Sheet
5. ED Nurses Notes

Uses

- Allows data to be sorted based upon gender.

Data Collection

- EMS or hospital records or electronically through linkage with the EMS/medical record.

References to Other Databases

- NHTSA V.2.2 - E06_11
Injury Information
INJURY INCIDENT DATE

Data Format [date]  National Element

Definition
The date the injury occurred.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:date</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>IncidentDate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1,990</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>2,030</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Collected as YYYY-MM-DD.
- Estimates of date of injury should be based upon report by patient, witness, family, or health care provider. Other proxy measures (e.g., 911 call time) should not be used.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Important to identify when the injury event started to better analyze resource utilization and outcomes.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

References to Other Databases
- NHTSA V.2.2 - E05_01
INJURY INCIDENT TIME

Data Format [time]  National Element

Definition
The time the injury occurred.

XSD Data Type xs:time  XSD Element / Domain (Simple Type) IncidentTime
Multiple Entry Configuration No  Accepts Null Value Yes, common null values
Required in XSD Yes

Field Values
- Relevant value for data element.

Additional Information
- 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 time) should not be used.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Important to identify when the injury event started to better analyze resource utilization and outcomes.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

References to Other Databases
- NHTSA V.2.2 - E05_01
**WORK-RELATED**

**Data Format** [combo] single-choice  

**National Element**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Indication of whether the injury occurred during paid employment.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>WorkRelated</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

**Field Values**

1. Yes  
2. No

**Additional Information**

- *If work related, two additional data fields must be completed: Patient’s Occupational Industry and Patient’s Occupation.*

**Data Source Hierarchy**

1. EMS Run Sheet  
2. Triage Form / Trauma Flow Sheet  
3. ED Nurses Notes

**Uses**

- Allows one to characterize injuries associated with job environments.

**Data Collection**

- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**

- Patient’s Occupational Industry  
- Patient’s Occupation

**References to Other Databases**

- NHTSA V.2.2 - E07_15
PATIENT'S OCCUPATIONAL INDUSTRY

Data Format [combo] single-choice

National Element

Definition
The occupational industry associated with the patient’s work environment.

XSD Data Type xs:integer
XSD Element / Domain (Simple Type) PatientsOccupationalIndustry
Multiple Entry Configuration No
Accepts Null Value Yes, common null values
Required in XSD Yes

Field Values

1 Finance, Insurance, and Real Estate
2 Manufacturing
3 Retail Trade
4 Transportation and Public Utilities
5 Agriculture, Forestry, Fishing
6 Professional and Business Services
7 Education and Health Services
8 Construction
9 Government
10 Natural Resources and Mining
11 Information Services
12 Wholesale Trade
13 Leisure and Hospitality
14 Other Services

Additional Information
- Code as Not Applicable if injury is not work-related.
- If work related, also complete Patient’s Occupation.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. EMS Run Sheet
3. ED Nurses Notes

Uses
- Can be used to better describe injuries associated with work environments.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Work-related
- Patient’s occupation

References to Other Databases
- NHTSA V.2.2 - E07_16
PATIENT'S OCCUPATION

Data Format [combo] single-choice

National Element

Definition
The occupation of the patient.

XSD Data Type xs:integer
XSD Element / Domain (Simple Type) PatientsOccupation
Multiple Entry Configuration No
Accepts Null Value Yes, common null values
Required in XSD Yes

Field Values
1 Business and Financial Operations Occupations
2 Architecture and Engineering Occupations
3 Community and Social Services Occupations
4 Education, Training, and Library Occupations
5 Healthcare Practitioners and Technical Occupations
6 Protective Service Occupations
7 Building and Grounds Cleaning and Maintenance
8 Sales and Related Occupations
9 Farming, Fishing, and Forestry Occupations
10 Installation, Maintenance, and Repair Occupations
11 Transportation and Material Moving Occupations
12 Management Occupations
13 Computer and Mathematical Occupations
14 Life, Physical, and Social Science Occupations
15 Legal Occupations
16 Arts, Design, Entertainment, Sports, and Media
17 Healthcare Support Occupations
18 Food Preparation and Serving Related
19 Personal Care and Service Occupations
20 Office and Administrative Support Occupations
21 Construction and Extraction Occupations
22 Production Occupations
23 Military Specific Occupations

Additional Information
- Only completed if injury is work-related.
- If work related, also complete Patient's Occupational Industry.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. EMS Run Sheet
3. ED Nurses Notes

Uses
- Can be used to better describe injuries associated with work environments.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Work-related
- Patient's occupational industry

References to Other Databases
- NHTSA V.2.2 - E07_17

Section I_05 Injury Information
National Trauma Data Standard Dataset V 2010 Admissions
PRIMARY E-CODE
Data Format [number] National Element

Definition
E-code used to describe the mechanism (or external factor) that caused the injury event.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>PrimaryEcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant ICD-9-CM code value for injury event.

Additional Information
- The Primary E-code should describe the main reason a patient is admitted to the hospital.
- E-codes are used to auto-generate two calculated fields: Trauma Type: (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix).
- ICD-9-CM Codes were retained over ICD-10 due to CMS’s continued use of ICD-9.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. Billing Sheet / Medical Records Coding Summary Sheet
4. ED Nurses Notes

Uses
- Allows injuries to be characterized by mechanism causing the injury.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Location E-code
- Additional E-code
LOCATION E-CODE

Data Format [number]  National Element

Definition
E-code used to describe the place/site/location of the injury event (E 849.X).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>LocationEcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>9</td>
</tr>
</tbody>
</table>

Field Values
- Relevant ICD-9-CM code value for injury location.

Additional Information
- ICD-9-CM Codes were retained over ICD-10 due to CMS’s continued use of ICD-9.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. Billing Sheet / Medical Records Coding Summary Sheet
4. ED Nurses Notes

Uses
- Allows injuries to be characterized by the place/site/location of the injury.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Primary E-code
- Additional E-code
**ADDITIONAL E-CODE**

**Data Format** [number]  

**National Element**

**Definition**  
Additional E-code used to describe, for example, a mass casualty event, or other external cause.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>AdditionalEcode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Field Values**  
- Relevant ICD-9-CM code value for injury event

**Additional Information**  
- E-codes are used to auto-generate two calculated fields: Trauma Type: (Blunt, Penetrating, Burn) and Intentionality (based upon CDC matrix).
- ICD-9-CM Codes were retained over ICD-10 due to CMS’s continued use of ICD-9.

**Data Source Hierarchy**  
1. EMS Run Sheet  
2. Triage Form / Trauma Flow Sheet  
3. Billing Sheet / Medical Records Coding Summary Sheet  
4. ED Nurses Notes

**Uses**  
- Allows injuries to be characterized by external cause or presence of a mass casualty event.

**Data Collection**  
- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**  
- Primary E-code  
- Location E-code
INCIDENT LOCATION ZIP CODE

Data Format [text]  National Element

Definition
The ZIP code of the incident location.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:zip</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>InjuryZip / Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element

Additional Information
- Can be stored as a 5 or 9 digit code (XXXXX-XXXX).
- If "Not Applicable" or, "Not Recorded/Not Known" complete variables: Incident State; Incident County; Incident City; and Incident Country.
- May require adherence to HIPAA regulations.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Allows data to be sorted based upon the geographic location of the injury event.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

References to Other Databases
NHTSA V.2.2 - E08_15
INCIDENT COUNTRY

**Definition**

The country where the patient was found or to which the unit responded (or best approximation).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>IncidentCountry</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

**Field Values**

- Relevant value for data element (two digit alpha country code)

**Additional Information**

- Only completed when *Incident Location ZIP code is “Not Applicable” or “Not Recorded/Not Known”.*
- Values are two character fields representing a country (e.g., US).

**Data Source Hierarchy**

1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

**Uses**

- Allows data to be sorted based upon the geographic location of the injury event.

**Data Collection**

- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**

- Incident State
- Incident County
- Incident City
INCIDENT STATE

Data Format [combo] single-choice

National Element

Definition
The state, territory, or province where the patient was found or to which the unit responded (or best approximation).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>IncidentState</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element (two digit numeric FIPS code)

Additional Information
- Only completed when Incident Location ZIP code is "Not Applicable" or, "Not Recorded/Not Known".
- Used to calculate FIPS code.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Allows data to be sorted based upon the geographic location of the injury event.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Incident Country
- Incident County
- Incident City

References to Other Databases
- NHTSA 2.2 - E08_14
INCIDENT COUNTY

Data Format [combo] single-choice

National Element

Definition
The county or parish where the patient was found or to which the unit responded (or best approximation).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element (three digit FIPS code).

Additional Information
- Only completed when Incident Location ZIP code is "Not Applicable" or, "Not Recorded/Not Known".
- Used to calculate FIPS code.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Allows data to be sorted based upon the geographic location of the injury event.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Incident Country
- Incident State
- Incident City

References to Other Databases
- NHTSA 2.2 - E08_13
INCIDENT CITY

Data Format [combo] single-choice

National Element

Definition

The city or township where the patient was found or to which the unit responded.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>IncidentCity</td>
</tr>
</tbody>
</table>

Field Values

- Relevant value for data element (five digit FIPS code)

Additional Information

- Only completed when Incident Location ZIP code is "Not Applicable" or, "Not Recorded/Not Known".
- Used to calculate FIPS code.
- If incident location resides outside of formal city boundaries, report nearest city/town.

Data Source Hierarchy

1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses

- Allows data to be sorted based upon the geographic location of the injury event.

Data Collection

- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements

- Incident Country
- Incident State
- Incident County

References to Other Databases

- NHTSA V.2.2 - E08_12
PROTECTIVE DEVICES

Definition
Protective devices (safety equipment) in use or worn by the patient at the time of the injury.

Field Values
1 None
2 Lap Belt
3 Personal Floatation 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 Present
9 Protective Clothing (e.g., padded leather pants)
10 Shoulder Belt
11 Other

Additional Information
- Check all that apply.
- If “Child Restraint” is present, complete variable “Child Specific Restraint.”
- If “Airbag” is present, complete variable “Airbag Deployment.”
- Evidence of the use of safety equipment may be reported or observed.
- Lap Belt should be used to include those patients that are restrained, but not further specified.
- If chart indicates “3 point restraint” choose 2 and 10.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Used to better define injury cause and characterize injury patterns.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Airbag Deployment
- Child Specific Restraint

References to Other Databases
- Compare to NHTSA V.2.2 – E10_08
CHILD SPECIFIC RESTRAINT

Data Format [combo] single-choice

National Element

Definition
Protective child restraint devices used by patient at the time of injury.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>ChildSpecificRestraint</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
1 Child Car Seat
2 Infant Car Seat
3 Child Booster Seat

Additional Information
- Evidence of the use of child restraint may be reported or observed.
- Only completed when Protective Devices include “Child Restraint”

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Used to better define injury cause and characterize injury patterns.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Protective Devices
AIRBAG DEPLOYMENT

Data Format [combo] multiple-choice

National Element

Definition
Indication of an airbag deployment during a motor vehicle crash.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>AirbagDeployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 4</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

Field Values
1 Airbag Not Deployed
2 Airbag Deployed Front
3 Airbag Deployed Side
4 Airbag Deployed Other (knee, airbelt, curtain, etc.)

Additional Information
- Check all that apply.
- Evidence of the use of airbag deployment may be reported or observed.
- *Only completed when Protective Devices include “Airbag”*
- Airbag Deployed Front should be used for patients with documented airbag deployments, but are not further specified.

Data Source Hierarchy
1. EMS Run Sheet
2. Triage Form / Trauma Flow Sheet
3. ED Nurses Notes

Uses
- Used to better define injury cause and characterize injury patterns.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Protective Devices

References to Other Databases
- NHTSA V.2.2 – E10_09
Pre-hospital Information
**EMS DISPATCH DATE**

**Data Format** [date]  
**National Element**

**Definition**
The date the unit *transporting to your hospital* was notified by dispatch.

- For inter facility transfer patients, this is the date on which the unit transporting the patient to your facility from the transferring facility was notified by dispatch or assigned to this transport.
- For patients transported from the scene of injury to your hospital, this is the date on which the unit transporting the patient to your facility from the scene was dispatched.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:dateTime</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>XSD Element / Domain</strong></td>
<td><strong>EmpsNotifyDate</strong></td>
</tr>
<tr>
<td><strong>Multiple Entry Configuration</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Accepts Null Value</strong></td>
<td>Yes, common null values</td>
</tr>
<tr>
<td><strong>Required in XSD</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Minimum Constraint</strong></td>
<td>1990</td>
</tr>
<tr>
<td><strong>Maximum Constraint</strong></td>
<td>2030</td>
</tr>
</tbody>
</table>

**Field Values**
- Relevant value for data element.

**Additional Information**
- Collected as YYYY-MM-DD
- Used to auto-generate an additional calculated field: Total EMS Time (elapsed time from EMS dispatch to hospital arrival).

**Data Source Hierarchy**
1. EMS Run Sheet

**Uses**
- Allows data to be sorted based upon EMS agency time intervals.

**Data Collection**
- 911 or Dispatch Center and electronically or verbally transmitted to the EMS agency.

**Other Associated Elements**
- EMS Unit Arrival on Scene Date and Time
- EMS Unit Left Scene Date and Time

**References to Other Databases**
- NHTSA V.2.2 - E05_04
EMS DISPATCH TIME

Data Format [time] National Element

Definition
The time the unit transporting to your hospital was notified by dispatch.

- For inter facility transfer patients, this is the time at which the unit transporting the patient to your facility from the transferring facility was notified by dispatch.
- For patients transported from the scene of injury to your hospital, this is the time at which the unit transporting the patient to your facility from the scene was dispatched.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:time</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EmsNotifyTime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Collected as HH:MM.
- HH:MM should be collected as military time.
- Used to auto-generate an additional calculated field: Total EMS Time (elapsed time from EMS dispatch to hospital arrival).

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Allows data to be sorted based upon EMS agency time intervals.

Data Collection
- 911 or Dispatch Center and electronically or verbally transmitted to the EMS agency.

Other Associated Elements
- EMS Unit Arrival on Scene Date and Time
- EMS Unit Left Scene Date and Time

References to Other Databases
- NHTSA V.2.2 - E05_04
**EMS UNIT ARRIVAL DATE AT SCENE OR TRANSFERRING FACILITY**

**Data Format** [date/time]  
**National Element**

### Definition

The date the unit *transporting to your hospital* arrived on the scene/transferring facility (the time the vehicle stopped moving).

- For inter facility transfer patients, this is the date on which the unit transporting the patient to your facility from the transferring facility arrived at the transferring facility (arrival is defined at date/time when the vehicle stopped moving).
- For patients transported from the scene of injury to your hospital, this is the date on which the unit transporting the patient to your facility from the scene arrived at the scene (arrival is defined at date/time when the vehicle stopped moving).

### XSD Data Type

- xs:date

### XSD Element / Domain (Simple Type)

- EmsArrivalDate

### Multiple Entry Configuration

- No

### Accepts Null Value

- Yes, common null values

### Required in XSD

- Yes

### Minimum Constraint

- 1990

### Maximum Constraint

- 2030

### Field Values

- Relevant value for data element.

### Additional Information

- Collected as YYYY-MM-DD
- Used to auto-generate two additional calculated fields: Total EMS Response Time (elapsed time from EMS dispatch to scene arrival) & Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).

### Data Source Hierarchy

1. EMS Run Sheet

### Uses

- Allows data to be sorted based upon EMS agency time intervals.

### Data Collection

- 911 or Dispatch Center and electronically or verbally transmitted to the EMS agency.

### Other Associated Elements

- EMS Unit Dispatch Date and Time
- EMS Unit Left Scene Date and Time

### References to Other Databases

- NHTSA V.2.2 - E05_06
EMS UNIT ARRIVAL TIME AT SCENE OR TRANSFERRING FACILITY
Data Format [date/time]  National Element

Definition
The time the unit *transporting to your hospital* arrived on the scene (the time the vehicle stopped moving).

- For inter facility transfer patients, this is the time at which the unit transporting the patient to your facility from the transferring facility arrived at the transferring facility (arrival is defined at date/time when the vehicle stopped moving).
- For patients transported from the scene of injury to your hospital, this is the time at which the unit transporting the patient to your facility from the scene arrived at the scene (arrival is defined at date/time when the vehicle stopped moving).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:time</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EmsArrivalTime</th>
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<tbody>
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<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Collected as HH:MM.
- HH:MM should be collected as military time.
- Used to auto-generate two additional calculated fields: Total EMS Response Time (elapsed time from EMS dispatch to scene arrival) & Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Allows data to be sorted based upon EMS agency time intervals.

Data Collection
- 911 or Dispatch Center and electronically or verbally transmitted to the EMS agency.

Other Associated Elements
- EMS Unit Dispatch Date and Time
- EMS Unit Left Scene Date and Time

References to Other Databases
- NHTSA V.2.2 - E05_06
Definition
The date the unit transporting to your hospital left the scene (the time the vehicle started moving).

- For inter facility transfer patients, this is the date on which the unit transporting the patient to your facility from the transferring facility departed from the transferring facility (departure is defined at date/time when the vehicle started moving).
- For patients transported from the scene of injury to your hospital, this is the date on which the unit transporting the patient to your facility from the scene departed from the scene (arrival is defined at date/time when the vehicle started moving).

Field Values
- Relevant value for data element.

Additional Information
- Collected as YYYY-MM-DD
- Used to auto-generate an additional calculated field: Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Allows data to be sorted based upon EMS agency time intervals.

Data Collection
- 911 or Dispatch Center and electronically or verbally transmitted to the EMS agency.

Other Associated Elements
- EMS Dispatch Date and Time
- EMS Unit Arrival on Scene Date and Time

References to Other Databases
- NHTSA V.2.2 - E05_09
Definition
The time the unit *transporting to your hospital* left the scene (the time the vehicle started moving).

- For inter facility transfer patients, this is the time at which the unit transporting the patient to your facility from the transferring facility departed from the transferring facility (departure is defined at date/time when the vehicle started moving).
- For patients transported from the scene of injury to your hospital, this is the time at which the unit transporting the patient to your facility from the scene departed from the scene (arrival is defined at date/time when the vehicle started moving).

Field Values
- Relevant value for data element.

Additional Information
- Collected as HH:MM.
- HH:MM should be collected as military time.
- Used to auto-generate an additional calculated field: Total EMS Scene Time (elapsed time from EMS scene arrival to scene departure).

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Allows data to be sorted based upon EMS agency time intervals.

Data Collection
- 911 or Dispatch Center and electronically or verbally transmitted to the EMS agency.

Other Associated Elements
- EMS Dispatch Date and Time
- EMS Unit Arrival on Scene Date and Time

References to Other Databases
- NHTSA V.2.2 - E05_09
**TRANSPORT MODE**

**Data Format** [combo] single-choice

**National Element**

**Definition**
The mode of transport delivering the patient to your hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**XSD Element / Domain (Simple Type)** TransportMode

**Accepts Null Value** Yes, common null values

**Field Values**
1. Ground Ambulance
2. Helicopter Ambulance
3. Fixed-wing Ambulance
4. Private/Public Vehicle/Walk-in
5. Police
6. Other

**Data Source Hierarchy**
1. EMS Run Sheet

**Uses**
- Allows data to be evaluated based on mode of transport utilized to reach the hospital.

**Data Collection**
- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**
- Inter-facility Transfer
- Other Transport Mode
OTHER TRANSPORT MODE

Data Format: [combo] multiple-choice

National Element

Definition
All other modes of transport used during patient care event (prior to arrival at your hospital), except the mode delivering the patient to the hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>OtherTransportMode</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 5</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
1. Ground Ambulance
2. Helicopter Ambulance
3. Fixed-wing Ambulance
4. Private/Public Vehicle/Walk-in
5. Police
6. Other

Additional Information
- Include in “other” unspecified modes of transport.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Allows data to be evaluated based on mode of transport utilized to reach the hospital.
- A total of five other transport segments (different or similar modes) may be recorded.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Inter-facility Transfer
- Transport Mode
INITIAL FIELD SYSTOLIC BLOOD PRESSURE

Data Format [number] National Element

Definition
First recorded systolic blood pressure measured at the scene of injury

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>EmsSbp</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Used to auto-generate an additional calculated field: Revised Trauma Score - EMS (adult & pediatric).
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Pulse Rate
- Initial Field Respiratory Rate
- Initial Field SaO2
- Initial Field GCS - Eye
- Initial Field GCS - Verbal
- Initial Field GCS - Motor
- Initial Field GCS - Total

References to Other Databases
- Compare to NHTSA 2.2 – E14_04
INITIAL FIELD PULSE RATE

Data Format [number]  National Element

Definition
First recorded pulse measured at the scene of injury (palpated or auscultated), expressed as a number per minute.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>EmsPulseRate</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Minimum Constraint</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>299</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Systolic Blood Pressure
- Initial Field Respiratory Rate
- Initial Field SaO2
- Initial Field GCS - Eye
- Initial Field GCS - Verbal
- Initial Field GCS - Motor
- Initial Field GCS - Total

References to Other Databases
- Compare to NHTSA 2.2 – E14_07
INITIAL FIELD RESPIRATORY RATE

Data Format [number]  

National Element

Definition
First recorded respiratory rate measured at the scene of injury (expressed as a number per minute).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EmsRespiratoryRate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>99</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Used to auto-generate an additional calculated field: Revised Trauma Score - EMS (adult & pediatric).
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Systolic Blood Pressure
- Initial Field Pulse Rate
- Initial Field SaO2
- Initial Field GCS - Eye
- Initial Field GCS - Verbal
- Initial Field GCS - Motor
- Initial Field GCS- Total

References to Other Databases
- Compare to NHTSA 2.2 – E14_11
INITIAL FIELD OXYGEN SATURATION

Data Format [number]  National Element

Definition
First recorded oxygen saturation measured at the scene of injury (expressed as a percentage).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>EmsPulseOximetry</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>Minimum Constraint</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>100</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.
- Value should be based upon assessment before administration of supplemental oxygen.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Systolic Blood Pressure
- Initial Field Pulse Rate
- Initial Field Respiratory Rate
- Initial Field GCS - Eye
- Initial Field GCS - Verbal
- Initial Field GCS - Motor
- Initial Field GCS- Total

References to Other Databases
- Compare to NHTSA 2.2 – E14_09
INITIAL FIELD GCS - EYE

Data Format [number]  National Element

Definition
First recorded Glasgow Coma Score (Eye) measured at the scene of injury.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EmsGcsEye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>4</td>
</tr>
</tbody>
</table>

Field Values
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

Additional Information
- Used to calculate Overall GCS - EMS Score.
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Systolic Blood Pressure
- Initial Field Pulse Rate
- Initial Field respiratory rate
- Initial Field SaO2
- Initial Field GCS - Verbal
- Initial Field GCS - Motor
- Initial Field GCS- Total

References to Other Databases
- NHTSA 2.2 – E14_15
INITIAL FIELD GCS - VERBAL

**Data Format** [number]

**National Element**

**Definition**
First recorded Glasgow Coma Score (Verbal) measured at the scene of injury.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EmsGcsVerbal</th>
</tr>
</thead>
<tbody>
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<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>5</td>
</tr>
</tbody>
</table>

**Field Values**

**Pediatric (≤ 2 years):**

1. No vocal response
2. Inconsolable, agitated
3. Inconsistently consolable, moaning

**Adult:**

1. No verbal response
2. Incomprehensible sounds
3. Inappropriate words

**Additional Information**
- Used to calculate Overall GCS - EMS Score.
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

**Data Source Hierarchy**

1. EMS Run Sheet

**Uses**
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

**Data Collection**
- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**
- Initial Field Systolic Blood Pressure
- Initial Field respiratory rate
- Initial Field Pulse Rate
- Initial Field SaO2
- Initial Field GCS - Eye
- Initial Field GCS - Motor
- Initial Field GCS- Total

**References to Other Databases**
- NHTSA 2.2 – E14_16
INITIAL FIELD GCS - MOTOR

Data Format [number]

National Element

Definition
First recorded Glasgow Coma Score (Motor) measured at the scene of injury.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EmsGcsMotor</th>
</tr>
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<tbody>
<tr>
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<td>Yes, common null values</td>
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<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>6</td>
</tr>
</tbody>
</table>

Field Values

Pediatric (≤ 2 years):
1. No motor response
2. Extension to pain
3. Flexion to pain

Adult:
1. No motor response
2. Extension to pain
3. Flexion to pain

Additional Information
- Used to calculate Overall GCS - EMS Score.
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as Not Known/Not Recorded.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Systolic Blood Pressure
- Initial Field respiratory rate
- Initial Field Pulse Rate
- Initial Field SaO2
- Initial Field GCS - Eye
- Initial Field GCS - Verbal
- Initial Field GCS - Total

References to Other Databases
- NHTSA 2.2 – E14_17
INITIAL FIELD GCS - TOTAL

Data Format [number] National Element

Definition
First recorded Glasgow Coma Score (total) measured at the scene of injury.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
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<tr>
<td>Required in XSD</td>
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</tr>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>EmsTotalGcs</td>
</tr>
<tr>
<td>Accepts Null Value</td>
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<tr>
<td>Minimum Constraint</td>
<td>3</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>15</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- *Utilize only if total score is available without component scores.*
- Used to auto-generate an additional calculated field: Revised Trauma Score - EMS (adult & pediatric).
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded*.
- If a patient does not have a numeric GCS recorded, but with documentation related to their level of consciousness such as “AAOx3”, “awake alert and oriented”, or “patient with normal mental status”, interpret this as GCS of 15 IF there is not other contraindicating documentation.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy
1. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Initial Field Systolic Blood Pressure
- Initial Field Pulse Rate
- Initial Field respiratory rate
- Initial Field SaO2
- Initial Field GCS - Eye
- Initial Field GCS - Verbal
- Initial Field GCS - Motor

References to Other Databases
- Compare to NHTSA 2.2 – E14_19
INTER-FACILITY TRANSFER

**Data Format** [combo] single-choice

**National Element**

---

**Definition**
Was the patient transferred to your facility from another acute care facility?

---

<table>
<thead>
<tr>
<th>XSD Data Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
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<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

**Field Values**

1. Yes
2. No

---

**Additional Information**
- Patients transferred from a private doctor’s office, stand-alone ambulatory surgery center, or delivered to your hospital by a non-EMS transport is not considered an inter-facility transfer.
- Outlying facilities purporting to provide emergency care services or utilized to stabilize a patient are considered acute care facilities.

---

**Data Source Hierarchy**

1. EMS Run Sheet

---

**Uses**
- Allows data to be evaluated based on presence of an inter-facility transfer.

---

**Data Collection**
- EMS or hospital records or electronically through linkage with the EMS/medical record.

---

**Other Associated Elements**
- Transport Mode
- Other Transport Mode
Emergency Department Information
ED/HOSPITAL ARRIVAL DATE

Data Format [date]

National Element

Definition
The date the patient arrived to the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:date</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>HospitalArrivalDate</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
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</tr>
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<td>Accepts Null Value</td>
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</tr>
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<td>Minimum Constraint</td>
<td>1990</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>2030</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- If the patient was brought to the ED, enter date patient arrived at ED. If patient was directly admitted to the hospital, enter date patient was admitted to the hospital.
- Collected as YYYY-MM-DD.
- Used to auto-generate two additional calculated fields: Total EMS Time: (elapsed time from EMS dispatch to hospital arrival) and Total Length of Hospital Stay (elapsed time from ED/Hospital Arrival to ED/Hospital Discharge).

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record
3. Billing Sheet / Medical Records Coding Summary Sheet
4. Hospital Discharge Summary

Uses
- Allows data to be sorted based upon total length of hospital stay.

Data Collection
- Hospital records or electronically available through linkage with medical records.

Other Associated Elements
- EMS Dispatch Date
- EMS Dispatch Time
- EMS Unit Arrival on Scene Date
- EMS Unit Arrival on Scene Time
ED/HOSPITAL ARRIVAL TIME

**Data Format** [time]  
**National Element**

### Definition
The time the patient arrived to the ED/hospital.

### XSD Data Type
`xs:time`

### XSD Element / Domain (Simple Type)
`HospitalArrivalTime`

### Multiple Entry Configuration
No

### Accepts Null Value
Yes, common null values

### Required in XSD
Yes

### Field Values
- Relevant value for data element.

### Additional Information
- If the patient was brought to the ED, enter time patient arrived at ED. If patient was directly admitted to the hospital, enter time patient was admitted to the hospital.
- Collected as HH:MM.
- HH:MM should be collected as military time.
- Used to auto-generate two additional calculated fields: Total EMS Time: (elapsed time from EMS dispatch to hospital arrival) and Total Length of Hospital Stay (elapsed time from ED/Hospital Arrival to ED/Hospital Discharge).

### Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record
3. Billing Sheet / Medical Records Coding Summary Sheet
4. Hospital Discharge Summary

### Uses
- Allows data to be sorted based upon total length of hospital stay.

### Data Collection
- Hospital records or electronically available through linkage with medical records.

### Other Associated Elements
- EMS Dispatch Date
- EMS Dispatch Time
- EMS Unit Arrival on Scene Date
- EMS Unit Arrival on Scene Time
**INITIAL ED/HOSPITAL SYSTOLIC BLOOD PRESSURE**

**Data Format** [number]  
**National Element**

**Definition**  
First recorded systolic blood pressure in the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>Sbp</th>
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</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
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<td>Minimum Constraint</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>300</td>
</tr>
</tbody>
</table>

**Field Values**  
- Relevant value for data element.

**Additional Information**  
- Used to auto-generate an additional calculated field: Revised Trauma Score - ED (adult & pediatric).

**Data Source Hierarchy**  
1. Triage Form / Trauma Flow Sheet  
2. ED Record

**Uses**  
- Provides documentation of assessment and care.  
- Used in quality management for the evaluation of care and EMS Agency Performance.

**Data Collection**  
- Hospital records or electronically through linkage with EMS/medical record or medical device.

**Other Associated Elements**  
- Initial ED/Hospital Pulse Rate  
- Initial ED/Hospital Respiratory Rate  
- Initial ED/Hospital Temperature  
- Initial ED/Hospital SaO2  
- Initial ED/Hospital GCS - Eye  
- Initial ED/Hospital GCS - Verbal  
- Initial ED/Hospital GCS - Motor  
- Initial ED/Hospital GCS- Total  
- Alcohol Use Indicator  
- Drug Use Indicator
INITIAL ED/HOSPITAL PULSE RATE

Data Format [number] National Element

Definition
First recorded pulse in the ED/hospital (palpated or auscultated), expressed as a number per minute.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>PulseRate</th>
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<td>Accepts Null Value</td>
<td>Yes, common null values</td>
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<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>0 Maximum Constraint</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records or electronically through linkage with EMS/medical record or medical device.

Other Associated Elements
- Initial ED/Hospital Systolic Blood Pressure
- Initial ED/Hospital Respiratory Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS- Total
- Alcohol Use Indicator
- Drug Use Indicator
**INITIAL ED/HOSPITAL TEMPERATURE**

**Data Format** [number]  
**National Element**

### Definition
First recorded temperature (in degrees Celsius [centigrade]) in the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:decimal</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>Temperature</th>
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</thead>
<tbody>
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<td>Multiple Entry</td>
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<td>Accepts Null Value</td>
<td>Yes, common null values</td>
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<td></td>
<td>Yes</td>
<td>0.0</td>
<td>45.0</td>
</tr>
</tbody>
</table>

### Field Values
- Relevant value for data element.

### Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

### Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

### Data Collection
- Hospital records or electronically through linkage with EMS/medical record or medical device.

### Other Associated Elements
- Initial ED/Hospital Systolic Blood Pressure
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital respiratory rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS- Total
- Alcohol Use Indicator
- Drug Use Indicator
INITIAL ED/HOSPITAL RESPIRATORY RATE

**Data Format [number]**

**National Element**

**Definition**
First recorded respiratory rate in the ED/hospital (expressed as a number per minute).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>XSD Element / Domain (Simple Type)</strong></td>
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<td><strong>Accepts Null Value</strong></td>
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<td><strong>Required in XSD</strong></td>
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<td><strong>Minimum Constraint</strong></td>
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</tr>
<tr>
<td><strong>Maximum Constraint</strong></td>
<td>99</td>
</tr>
</tbody>
</table>

**Field Values**
- Relevant value for data element.

**Additional Information**
- *If available, complete additional field: “Initial ED/Hospital Respiratory Assistance.”*
- Used to auto-generate an additional calculated field: Revised Trauma Score - ED (adult & pediatric).

**Data Source Hierarchy**
1. Triage Form / Trauma Flow Sheet
2. ED Record

**Uses**
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

**Data Collection**
- Hospital records or electronically through linkage with EMS/medical record or medical device.

**Other Associated Elements**
- Initial ED/Hospital Respiratory Assistance
- Initial ED/Hospital Systolic Blood Pressure
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS - Total
- Alcohol Use Indicator
- Drug Use Indicator
INITIAL ED/HOSPITAL RESPIRATORY ASSISTANCE

Data Format [combo] single-choice

National Element

Definition
Determination of respiratory assistance associated with the initial ED/hospital respiratory rate.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>RespiratoryAssistance</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
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</tr>
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<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
1 Unassisted Respiratory Rate
2 Assisted Respiratory Rate

Additional Information
- Only completed if a value is provided for “Initial ED/Hospital Respiratory Rate."
- Respiratory Assistance is defined as mechanical and/or external support of respiration.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records.

Other Associated Elements
- Initial ED/Hospital Respiratory Rate
INITIAL ED/HOSPITAL OXYGEN SATURATION

Data Format [number] National Element

Definition
First recorded oxygen saturation in the ED/hospital (expressed as a percentage).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
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<tbody>
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<td>Accepts Null Value</td>
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</tr>
<tr>
<td>Required in XSD</td>
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<td>Minimum Constraint</td>
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</tr>
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<td>Maximum Constraint</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- If available, complete additional field: "Initial ED/Hospital Supplemental Oxygen".

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records or electronically through linkage with EMS/medical record or medical device.

Other Associated Elements
- Initial ED/Hospital Supplemental Oxygen
- Initial ED/Hospital Systolic Blood Pressure
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital Respiratory Rate
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS- Total
- Alcohol Use Indicator
- Drug Use Indicator
INTERNATIONAL ED/HOSPITAL SUPPLEMENTAL OXYGEN
Data Format [combo] single-choice  National Element

Definition
Determination of the presence of supplemental oxygen during assessment of initial ED/hospital oxygen saturation level.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
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</thead>
<tbody>
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<td>Multiple Entry Configuration</td>
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<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
1 No Supplemental Oxygen  2 Supplemental Oxygen

Additional Information
- Only completed if a value is provided for “Initial ED/Hospital Oxygen Saturation.”

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records.

Other Associated Elements
- Initial ED/Hospital Oxygen Saturation
INITIAL ED/HOSPITAL GCS - EYE
Data Format [number]  National Element

Definition
First recorded Glasgow Coma Score (Eye) in the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>GcsEye</th>
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</thead>
<tbody>
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</tr>
<tr>
<td>Required in XSD</td>
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<td>Minimum Constraint</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Maximum Constraint</td>
<td>4</td>
</tr>
</tbody>
</table>

Field Values
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

Additional Information
- Used to calculate Overall GCS - ED Score.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records or electronically through linkage with EMS/medical record.

Other Associated Elements
- Initial Systolic Blood Pressure
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital respiratory rate
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS- Total
- Initial ED/Hospital GCS Assessment Qualifiers
- Alcohol Use Indicator
- Drug Use Indicator
INITIAL ED/HOSPITAL GCS - VERBAL

Data Format [number] National Element

Definition
First recorded Glasgow Coma Score (Verbal) in the ED/hospital.

XSD Data Type xs:integer
XSD Element / Domain (Simple Type) GcsVerbal

Multiple Entry Configuration No
Accepts Null Value Yes, common null values
Required in XSD Yes
Minimum Constraint 1
Maximum Constraint 5

Field Values

Pediatric (≤ 2 years):

1 No vocal response
4 Cries but is consolable, inappropriate interactions

2 Inconsolable, agitated
5 Smiles, oriented to sounds, follows objects, interacts

3 Inconsistently consolable, moaning

Adult:

1 No verbal response
4 Confused

2 Incomprehensible sounds
5 Oriented

3 Inappropriate words

Additional Information

- Used to calculate Overall GCS - ED Score.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses

- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection

- Hospital records or electronically through linkage with EMS/medical record.

Other Associated Elements

- Initial Systolic Blood Pressure
- Initial ED/Hospital respiratory rate
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS - Total
- Initial ED/Hospital GCS Assessment Qualifiers
- Alcohol Use Indicator
- Drug Use Indicator
INITIAL ED/HOSPITAL GCS - MOTOR

Data Format [number]  National Element

Definition
First recorded Glasgow Coma Score (Motor) in the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
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<tr>
<td>Required in XSD</td>
<td>Yes</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>XSD Element / Domain (Simple Type)</th>
<th>GcsMotor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Minimum Constraint</td>
<td>1</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>6</td>
</tr>
</tbody>
</table>

Field Values

**Pediatric (≤ 2 years):**

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

**Adult:**

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

Additional Information

- Used to calculate Overall GCS – ED Score.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy

1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses

- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection

- Hospital records or electronically through linkage with EMS/medical record.

Other Associated Elements

- Initial Systolic Blood Pressure
- Initial ED/Hospital Respiratory Rate
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS – Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS- Total
- Initial ED/Hospital GCS Assessment Qualifiers
- Alcohol Use Indicator
- Drug Use Indicator
INITIAL ED/HOSPITAL GCS - TOTAL

Data Format [number]  National Element

Definition
First recorded Glasgow Coma Score (total) in the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
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<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
<tr>
<td>Minimum Constraint</td>
<td>3</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>15</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Utilize only if total score is available without component scores.
- Used to auto-generate an additional calculated field: Revised Trauma Score - ED (adult & pediatric.)
- If a patient does not have a numeric GCS recorded, but with documentation related to their level of consciousness such as "AAOx3", "awake alert and oriented", or "patient with normal mental status", interpret this as GCS of 15 IF there is no other contraindicating documentation.
- If a patient does not have a numeric GCS score recorded, but written documentation closely (or directly) relates to verbiage describing a specific level of functioning within the GCS scale, the appropriate numeric score may be listed. E.g. chart indicates: "patient withdraws from a painful stimulus", a Motor GCS of 4 may be recorded, IF there is no other contradicting documentation.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records or electronically through linkage with EMS/medical record.

Other Associated Elements
- Initial ED/Hospital Systolic Blood Pressure
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital respiratory rate
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS Assessment Qualifiers
- Alcohol Use Indicator
- Drug Use Indicator
INITIAL ED/HOSPITAL GCS ASSESSMENT QUALIFERS

Definition
Documentation of factors potentially affecting the first assessment of GCS upon arrival in the ED/hospital.

XSD Data Type xs:integer
XSD Element / Domain (Simple Type) GcsQualifier
Multiple Entry Configuration Yes, max 3
Accepts Null Value Yes, common null values
Required in XSD Yes

Field Values
1 Patient Chemically Sedated
2 Obstruction to the Patient's Eye
3 Patient Intubated

Additional Information
- Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.).
- If patient was not chemically sedated, intubated, and did not have eye obstruction then code as Not Applicable.

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. ED Record
3. EMS Run Sheet

Uses
- Provides documentation of assessment and care.
- Used in quality management for the evaluation of care and EMS Agency Performance.

Data Collection
- Hospital records or electronically through linkage with EMS/medical record.

Other Associated Elements
- Initial ED/Hospital Systolic Blood Pressure
- Initial ED/Hospital Pulse Rate
- Initial ED/Hospital Temperature
- Initial ED/Hospital Respiratory Rate
- Initial ED/Hospital SaO2
- Initial ED/Hospital GCS - Eye
- Initial ED/Hospital GCS - Verbal
- Initial ED/Hospital GCS - Motor
- Initial ED/Hospital GCS- Total
- Alcohol Use Indicator
- Drug Use Indicator
ALCOHOL USE INDICATOR

Data Format [combo] single-choice

National Element

Definition
Use of alcohol by the patient.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>AlcoholUseIndicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- 1 No (not tested)
- 2 No (confirmed by test)
- 3 Yes (confirmed by test [trace levels])
- 4 Yes (confirmed by test [beyond legal limit])

Additional Information
- Blood alcohol concentration (BAC) may be documented at any facility (or setting) treating this patient event.
- “Trace levels” is defined as any alcohol level below the legal limit, but not zero.
- “Beyond legal limit” is defined as a blood alcohol concentration above the legal limit for the state in which the treating institution is located. Above any legal limit, DUI, DWI or DWAI, would apply here.
- If alcohol use is suspected, but not confirmed by test, record null value “Not Known/Not Recorded”.

Data Source Hierarchy
1. Lab Results
2. ED Physician Notes

Uses
- Allows data to be sorted based upon alcohol and drug indicators.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Drug Use Indicator
DRUG USE INDICATOR

Data Format [combo] multiple-choice

National Element

Definition
Use of drugs by the patient.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>DrugUseIndicator</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 2</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
1. No (not tested)
2. No (confirmed by test)
3. Yes (confirmed by test [prescription drug])
4. Yes (confirmed by test [illegal use drug])

Additional Information
- Drug use may be documented at any facility (or setting) treating this patient event.
- "Illegal use drug" includes illegal use of prescription drugs.
- If drug use is suspected, but not confirmed by test, record null value "Not Known/Not Recorded".
- This data element refers to drug use by the patient and does not include medical treatment.

Data Source Hierarchy
1. Lab Results
2. ED Physician Notes

Uses
- Allows data to be sorted based upon alcohol and drug indicators.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Alcohol Use Indicator
ED DISCHARGE DISPOSITION

Data Format [combo] single-choice

National Element

Definition
The disposition of the patient at the time of discharge from the ED.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>Multiple Entry Configuration</th>
<th>Accepts Null Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>xs:integer</td>
<td>EdDischargeDisposition</td>
<td>No</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

Field Values
1. Floor bed (general admission, non specialty unit bed)
2. Observation unit (unit that provides < 24 hour stays)
3. Telemetry/step-down unit (less acuity than ICU)
4. Home with services
5. Died
6. Other (jail, institutional care, mental health, etc.)
7. Operating Room
8. Intensive Care Unit (ICU)
9. Home without services
10. Left against medical advice
11. Transferred to another hospital

Additional Information
- Based upon UB-04 disposition coding.
- If reported as “Died” complete variable “ED Death.”
- If the patient is directly admitted to the hospital, code as N/A.
- If ED Discharge Disposition is 4, 5, 6, 9, 10,11, then Hospital Discharge Date, Time, and Disposition should be NA.

Data Source Hierarchy
1. Discharge Sheet
2. Nursing Progress Notes
3. Social Worker Notes

Uses
- Can be used to roughly characterize functional status at hospital discharge.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- ED Discharge Date and Time
ED DEATH

Definition
The type of death incurred while the patient was in the ED.

Field Values
1 DOA: Declared dead on arrival with minimal or no resuscitation attempt (no invasive procedures attempted)
2 Death after failed resuscitation attempt (failure to respond within 15 minutes)
3 Died in ED (other than failed resuscitation attempt)

Additional Information
- Only completed when ED Discharge Disposition is completed as “Died”
- Patients treated in accordance with a “Do Not Resuscitate” (DNR) order should be coded under “Died in ED (other than failed resuscitation attempt)”. Patients with a DNR status should also be coded with a co-morbid condition (see DG_01)

Data Source Hierarchy
1. Triage Form / Trauma Flow Sheet
2. Physician’s Progress Notes
3. ED Nurses Notes

Uses
- Can be used to roughly characterize the condition of the patient upon arrival at the ED.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- ED Discharge Disposition
- ED Discharge Date
- ED Discharge Time
ED DISCHARGE DATE

Data Format [date]  National Element

Definition
The date the patient was discharged from the ED.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:date</th>
<th>XSD Element / Domain (Simple Type) EdDischargeDate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint 1990 Maximum Constraint 2030</td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Collected as YYYY-MM-DD.
- Used to auto-generate an additional calculated field: Total ED Time: (elapsed time from ED admit to ED discharge).
- If the patient is directly admitted to the hospital, code as N/A

Data Source Hierarchy
1. Hospital Discharge Summary
2. Billing Sheet / Medical Records Coding Summary Sheet
3. Physician’s Progress Notes

Uses
- Allows data to be assessed based upon total length of ED stay.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- ED Discharge Disposition
- ED Discharge Time
ED DISCHARGE TIME

Data Format [time] National Element

Definition
The time the patient was discharged from the ED.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:time</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>EdDischargeTime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Collected as HH:MM.
- HH:MM should be collected as military time.
- Used to auto-generate an additional calculated field: Total ED Time: (elapsed time from ED admit to ED discharge).
- If the patient is directly admitted to the hospital, code as N/A

Data Source Hierarchy
1. Hospital Record
2. Billing Sheet / Medical Records Coding Summary Sheet
3. Physician’s Progress Notes

Uses
- Allows data to be sorted based upon total length of ED stay.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- ED Discharge Disposition
- ED Discharge Date
Hospital Procedure Information
HOSPITAL PROCEDURES

Data Format [combo] multiple-choice

National Element

Definition
Operative or essential procedures conducted during hospital stay.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>HospitalProcedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 200</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Major and minor procedure (ICD-9-CM) IP codes.
- The maximum number of procedures that may be reported for a patient is 200.

Additional Information
- Operative and/or essential procedures is defined as procedures performed in the Operating Room, Emergency Department, or Intensive Care Unit that were essential to the diagnoses, stabilization, or treatment of the patient's specific injuries.
- Repeated diagnostic procedures (e.g., repeated CT scan) should not be recorded (record only the first procedure).
- Include only procedures performed at your institution.

Data Source Hierarchy
1. Operative Reports
2. ER and ICU Records
3. Trauma Flow Sheet
4. Anesthesia Record
5. Billing Sheet / Medical Records Coding Summary Sheet
6. Hospital Discharge Summary

Uses
- Allows data to be used to characterize procedures used to treat specific injury types.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Procedure Date
- Procedure Time
HOSPITAL PROCEDURE START DATE

Data Format [date]

Definition
The date operative and essential procedures were performed.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:date</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>HospitalProcedureStartDate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 200</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1990</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>2030</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Collected as YYYY-MM-DD.

Data Source Hierarchy
1. OR Nurses Notes
2. Operative Reports
3. Anesthesia Record

Uses
- Allows data to be stratified by time until operative and essential procedures were performed.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Hospital Procedures
- Procedure Time
HOSPITAL PROCEDURE START TIME

Definition
The time operative and essential procedures were performed.

Field Values
- Relevant value for data element.

Additional Information
- Collected as HH:MM.
- HH:MM should be collected as military time.
- Procedure start time is defined as the time the incision was made (or the procedure started).

Data Source Hierarchy
1. OR Nurses Notes
2. Operative Reports
3. Anesthesia Record

Uses
- Allows data to be stratified by time until operative and essential procedures were performed.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Hospital Procedures
- Procedure Date
Diagnoses Information
**CO-MORBID CONDITIONS**

**Data Format** [combo] multiple-choice

**National Element**

**Definition**
Pre-existing co-morbid factors present before patient arrival at the ED/hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>ComorbidCondition</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 23</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Field Values**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No NTDS co-morbidities are present</td>
</tr>
<tr>
<td>2</td>
<td>Alcoholism</td>
</tr>
<tr>
<td>3</td>
<td>Ascites within 30 days</td>
</tr>
<tr>
<td>4</td>
<td>Bleeding disorder</td>
</tr>
<tr>
<td>5</td>
<td>Chemotherapy for cancer within 30 days</td>
</tr>
<tr>
<td>6</td>
<td>Congenital Anomalies</td>
</tr>
<tr>
<td>7</td>
<td>Congestive heart failure</td>
</tr>
<tr>
<td>8</td>
<td>Current smoker</td>
</tr>
<tr>
<td>9</td>
<td>Currently requiring or on dialysis</td>
</tr>
<tr>
<td>10</td>
<td>CVA/residual neurological deficit</td>
</tr>
<tr>
<td>11</td>
<td>Diabetes mellitus</td>
</tr>
<tr>
<td>12</td>
<td>Disseminated cancer</td>
</tr>
<tr>
<td>13</td>
<td>Do Not Resuscitate (DNR) status</td>
</tr>
<tr>
<td>14</td>
<td>Esophageal varices</td>
</tr>
<tr>
<td>15</td>
<td>Functionally dependent health status</td>
</tr>
<tr>
<td>16</td>
<td>History of angina within past 1 month</td>
</tr>
<tr>
<td>17</td>
<td>History of myocardial infarction within past 6 months</td>
</tr>
<tr>
<td>18</td>
<td>History of revascularization / amputation for PVD</td>
</tr>
<tr>
<td>19</td>
<td>Hypertension requiring medication</td>
</tr>
<tr>
<td>20</td>
<td>Impaired sensorium</td>
</tr>
<tr>
<td>21</td>
<td>Prematurity</td>
</tr>
<tr>
<td>22</td>
<td>Obesity</td>
</tr>
<tr>
<td>23</td>
<td>Respiratory Disease</td>
</tr>
<tr>
<td>24</td>
<td>Steroid use</td>
</tr>
</tbody>
</table>

**Additional Information**

- The field value (1) "No NTDS co-morbidities are present" would be chosen if none of the pre-existing co-morbid factors listed above are present in the patient. This particular field value is available since individual state or hospital registries may track additional co-morbid factors not listed here.
- The value "N/A" should be used for patients with no known co-morbid conditions coded by your registry or defined in the NTDS Data Dictionary.

**Data Source Hierarchy**

1. History and Physical
2. Discharge Sheet
3. Billing Sheet

**Uses**

- Allows data to be used to characterize patients and hospital outcomes based upon the presence (and type) of co-morbid condition.

**Data Collection**

- Hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**

- Injury Diagnosis
INJURY DIAGNOSES

Data Format [combo] multiple-choice

National Element

Definition
Diagnoses related to all identified injuries.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>InjuryDiagnosis</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 50</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Field Values
- Injury diagnoses as defined by (ICD-9-CM) codes (code range: 800-959.9).
- The maximum number of diagnoses that may be reported for an individual patient is 50.

Additional Information
- ICD-9-CM codes pertaining to other medical conditions (e.g., CVA, MI, co-morbidities, etc.) may also be included in this field.
- Used to auto-generate eight additional calculated fields: Abbreviated Injury Scale (six body regions), Injury Severity Score and the Functional Capacity Index.

Data Source Hierarchy
1. Hospital Discharge Summary
2. Billing Sheet / Medical Records Coding Summary Sheet
3. Trauma Flow Sheet
4. ER and ICU Records

Uses
- Allows data to be used to characterize patients and hospital outcomes based upon the presence, severity and type of injury.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Co-morbid Conditions
Injury Severity Information
### AIS PREDOT CODE

**Data Format** [combo] multiple choice

**Definition**
The Abbreviated Injury Scale (AIS) predot codes that reflect the patient's injuries.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:string</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>AisPredot</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 50</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Field Values
- The predot code is the 6 digits preceding the decimal point in an associated AIS code.

#### Additional Information
- This variable is considered optional and is not required as part of the NTDS dataset.

#### Uses
- Allows data to be used to characterize patients and hospital outcomes based upon the presence, severity and type of injury.

#### Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

#### Other Associated Elements
- Common Null Values
- AIS Severity
- ISS Body Region
- AIS Version
- Locally Calculated ISS
**AIS SEVERITY**

**Data Format** [combo] multiple choice  

**Optional Element**

**Definition**
The Abbreviated Injury Scale (AIS) severity codes that reflect the patient’s injuries.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>AisSeverity</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 50</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

**Field Values**

<table>
<thead>
<tr>
<th>Field Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minor Injury</td>
</tr>
<tr>
<td>2</td>
<td>Moderate Injury</td>
</tr>
<tr>
<td>3</td>
<td>Serious Injury</td>
</tr>
<tr>
<td>4</td>
<td>Severe Injury</td>
</tr>
<tr>
<td>5</td>
<td>Critical Injury</td>
</tr>
<tr>
<td>6</td>
<td>Maximum Injury, Virtually Unsurvivable</td>
</tr>
<tr>
<td>9</td>
<td>Not Possible to Assign</td>
</tr>
</tbody>
</table>

**Additional Information**

- This variable is considered optional and is not required as part of the NTDS dataset.
- The field value (9) “Not Possible to Assign” would be chosen if it is not possible to assign a severity to an injury.

**Uses**

- Allows data to be used to characterize patients and hospital outcomes based upon the presence, severity and type of injury.

**Data Collection**

- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**

- Common Null Values
- AIS PREDOT
- ISS Body Region
- AIS Version
- Locally Calculated ISS
ISS BODY REGION

Data Format [combo] multiple choice

Optional Element

Definition
The Injury Severity Score (ISS) body region codes that reflect the patient’s injuries.

Field Values
1  Head or Neck
2  Face
3  Chest
4  Abdominal or pelvic contents
5  Extremities or pelvic girdle
6  External

- Head or neck injuries include injury to the brain or cervical spine, skull or cervical spine fractures.
- Facial injuries include those involving mouth, ears, nose and facial bones.
- Chest injuries include all lesions to internal organs. Chest injuries also include those to the diaphragm, rib cage, and thoracic spine.
- Abdominal or pelvic contents injuries include all lesions to internal organs. Lumbar spine lesions are included in the abdominal or pelvic region.
- Injuries to the extremities or to the pelvic or shoulder girdle include sprains, fractures, dislocations, and amputations, except for the spinal column, skull and rib cage.
- External injuries include lacerations, contusions, abrasions, and burns, independent of their location on the body surface.

Additional Information
- This variable is considered optional and is not required as part of the NTDS dataset.

Uses
- Allows data to be used to characterize patients and hospital outcomes based upon the presence, severity and type of injury.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Common Null Values
- AIS PREDOT
- AIS Severity
- AIS Version
- Locally Calculated ISS
AIS VERSION

**Definition**
The software (and version) used to calculate Abbreviated Injury Scale (AIS) severity codes.

**XSD Data Type** xs:integer  
**XSD Element / Domain (Simple Type)** AisVersion

**Multiple Entry Configuration** No  
**Accepts Null Value** Yes, common null values

**Required in XSD** Yes

**Field Values**
1  80 Full code (description & severity, XXXXXX.Y)  
2  85 Full code (description & severity, XXXXXX.Y)  
3  90 Full code (description & severity, XXXXXX.Y)  
4  95 Full code (description & severity, XXXXXX.Y)  
5  98 Full code (description & severity, XXXXXX.Y)  
6  05 Full code (description & severity, XXXXXX.Y)  
7  ICD Map  
8  Tri-Code  
9  AIS80 only (Severity only, .Y)  
10  AIS85 only (Severity only, .Y)  
11  AIS90 only (Severity only, .Y)  
12  AIS95 only (Severity only, .Y)  
13  AIS98 only (Severity only, .Y)  
14  AIS05 only (Severity only, .Y)  
15  Other

**Additional Information**
- This variable is considered *optional* and is not required as part of the NTDS dataset

**Uses**
- Allows data to be used to characterize patients and hospital outcomes based upon the presence, severity and type of injury.

**Data Collection**
- EMS or hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**
- Common Null Values
- AIS PREDOT
- ISS Body Region
- AIS Severity
- Locally Calculated ISS
LOCALLY CALCULATED ISS

Data Format [combo] single-choice

Optional Element

Definition
The Injury Severity Score (ISS) that reflects the patient’s injuries.

Field Values
- Relevant ISS value for the constellation of injuries.

Additional Information
- This variable is considered optional and is not required as part of the NTDS dataset

Uses
- Allows data to be used to characterize patients and hospital outcomes based upon the presence, severity and type of injury.

Data Collection
- EMS or hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- Common Null Values
- AIS PREDOT
- ISS Body Region
- AIS Version
- AIS Severity
Outcome Information
TOTAL ICU LENGTH OF STAY

Data Format [number]  National Element

**Definition**
The total number of patient days in any ICU (including all episodes).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>TotalICuLos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1</td>
</tr>
</tbody>
</table>

**Field Values**
- Relevant value for data element.

**Additional Information**
- Recorded in full day increments with any partial day listed as a full day.
- Field allows for multiple admission and discharge dates and autofills with total ICU LOS. If a patient is admitted and discharged on the same date, the LOS is one day.

**Data Source Hierarchy**
1. ICU Nursing Flow Sheet
2. Calculate Based on Admission Form and Discharge Sheet
3. Nursing Progress Notes

**Uses**
- Provides a rough estimate of severity of injury and resource utilization.

**Data Collection**
- Hospital records or electronically through linkage with EMS/medical record.
TOTAL VENTILATOR DAYS

Data Format [number] National Element

Definition
The total number of patient days spent on a mechanical ventilator (excluding time in the OR).

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>TotalVentDays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td>Minimum Constraint</td>
<td>1</td>
</tr>
<tr>
<td>Maximum Constraint</td>
<td>400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Values
- Relevant value for data element.

Additional Information
- Recorded in full day increments with any partial day listed as a full day.
- Field allows for multiple “start” and “stop” dates and calculates total days spent on a mechanical ventilator. If a patient begins and ends mechanical ventilation on the same date, the total ventilator days is one day.
- Excludes mechanical ventilation time associated with OR procedures.
- Non-invasive means of ventilatory support (CPAP or BIPAP) should not be considered in the calculation of ventilator days.

Data Source Hierarchy
1. ICU Respiratory Therapy Flowsheet
2. ICU Nursing Flow Sheet
3. Physician’s Daily Progress Notes
4. Calculate Based on Admission Form and Discharge Sheet

Uses
- Provides a rough estimate of severity of injury and resource utilization.

Data Collection
- Hospital records or electronically through linkage with EMS/medical record.
**HOSPITAL DISCHARGE DATE**

**Data Format** [date/time]  

**National Element**

**Definition**  
The date the patient was discharged from the hospital.

**XSD Data Type** xs:date  
**XSD Element / Domain (Simple Type)** HospitalDischargeDate  
**Multiple Entry Configuration** No  
**Accepts Null Value** Yes, common null values  
**Required in XSD** Yes  
**Minimum Constraint** 1990  
**Maximum Constraint** 2030

**Field Values**  
- Relevant value for data element.

**Additional Information**  
- Collected as YYYY-MM-DD.  
- Used to auto-generate an additional calculated field: Total Length of Hospital Stay (elapsed time from ED/hospital arrival to hospital discharge).

**Data Source Hierarchy**  
1. Hospital Record  
2. Billing Sheet / Medical Records Coding Summary Sheet  
3. Physician Discharge Summary

**Uses**  
- Provides a rough estimate of severity of injury and resource utilization.

**Data Collection**  
- Hospital records or electronically through linkage with the EMS/medical record.

**Other Associated Elements**  
- ED/Hospital Admission Date  
- ED/Hospital Admission Time  
- Hospital Discharge Time
**HOSPITAL DISCHARGE TIME**

**Data Format** [time]  

**National Element**

---

**Definition**

The time the patient was discharged from the hospital.

---

**XSD Data Type** xs:time  

**XSD Element / Domain (Simple Type)** HospitalDischargeTime  

**Multiple Entry Configuration** No  

**Accepts Null Value** Yes, common null values  

**Required in XSD** Yes

---

**Field Values**

- Relevant value for data element.

---

**Additional Information**

- Collected as HH:MM.
- HH:MM should be collected as military time.
- Used to auto-generate an additional calculated field: Total Length of Hospital Stay (elapsed time from ED/hospital arrival to hospital discharge).

---

**Data Source Hierarchy**

1. Hospital Record  
2. Billing Sheet / Medical Records Coding Summary Sheet  
3. Physician Discharge Summary

---

**Uses**

- Provides a rough estimate of severity of injury and resource utilization.

---

**Data Collection**

- Hospital records or electronically through linkage with the EMS/medical record.

---

**Other Associated Elements**

- ED/Hospital Admission Date and Time  
- Hospital Discharge Date
HOSPITAL DISCHARGE DISPOSITION

Data Format [combo] single-choice  National Element

Definition
The disposition of the patient when discharged from the hospital.

Field Values
1  Discharged/Transferred to a short-term general hospital for inpatient care
2  Discharged/Transferred to an Intermediate Care Facility (ICF)
3  Discharge/Transferred to home under care of organized home health service
4  Left against medical advice or discontinued care
5  Expired
6  Discharged home with no home services
7  Discharged/Transferred to Skilled Nursing Facility
8  Discharged/Transferred to hospice care
9  Discharged/Transferred to another type of rehabilitation or long-term care facility

Additional Information
- Field value = 6, “home” refers to the patient’s current place of residence (e.g., prison, etc)
- Field values based upon UB-04 disposition coding.
- Disposition to any other non-medical facility should be coded as 6.
- Disposition to any other medical facility should be coded as 9.
- Refer to the glossary for definitions of facility types.

Data Source Hierarchy
1. Hospital Discharge Summary Sheet
2. Nurses Notes
3. Case Manager / Social Services Notes

Uses
- Can be used to roughly characterize functional status at hospital discharge.

Data Collection
- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements
- ED Discharge Date
- ED Discharge Time
Financial Information
### PRIMARY METHOD OF PAYMENT

**Data Format** [combo] single-choice

**National Element**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Primary source of payment for hospital care.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
<th>XSD Element / Domain (Simple Type)</th>
<th>PrimaryMethodPayment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Entry Configuration</td>
<td>No</td>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
<tr>
<td>Required in XSD</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Field Values

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

#### Data Source Hierarchy

1. Billing Sheet / Medical Records Coding Summary Sheet
2. Hospital Admission Form

#### Uses

- Allows data to be sorted based upon payer mix.

#### Data Collection

- EMS or hospital records or electronically through linkage with the EMS/medical record.
Quality Assurance Information
HOSPITAL COMPLICATIONS

Data Format [combo] multiple-choice

National Element

Definition

Any medical complication that occurred during the patient’s stay at your hospital.

<table>
<thead>
<tr>
<th>XSD Data Type</th>
<th>xs:integer</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSD Element / Domain (Simple Type)</td>
<td>HospitalComplication</td>
</tr>
<tr>
<td>Multiple Entry Configuration</td>
<td>Yes, max 25</td>
</tr>
<tr>
<td>Accepts Null Value</td>
<td>Yes, common null values</td>
</tr>
</tbody>
</table>

Field Values

1. No NTDS listed medical complications 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

Additional Information

- The field value (1) “No NTDS listed medical complications occurred” would be chosen if none of the hospital complications listed above are present in the patient. This particular field value is available since individual state or hospital registries may track additional hospital complications not listed here.
- The value "N/A" should be used for patients with no known co-morbid conditions coded by your registry or defined in the NTDS Data Dictionary.

Data Source Hierarchy

1. Discharge Sheet
2. History and Physical
3. Billing Sheet

Uses

- Allows data to be used to characterize patients and hospital outcomes based upon the presence (and type) of hospital complication.

Data Collection

- Hospital records or electronically through linkage with the EMS/medical record.

Other Associated Elements

- Injury Diagnosis
Appendix 1: Auto Calculated Variables
Based upon Existing Data Elements
Variables Auto-Calculated Based on Existing Data Elements

The NTDS is designed to provide the basis for additional calculated fields. Calculated fields are derived based on those fields actually collected from participating trauma centers. While there are many potential fields that may be calculated from NTDS fields, NTDB determines each year which fields to calculate and include in the NTDB Research Dataset. The following list provides examples of calculated fields. Please see NTDB Research Dataset for documentation of specific fields offered each year (www.ntdb.org).

1. **Trauma Type**

   **Definition:** An indication of the type (or nature) of trauma produced by an injury.

   **Calculation:** Trauma type is derived based upon the mechanism of injury description grouping for the primary E-code for each incident. The following table was used:

<table>
<thead>
<tr>
<th>Mechanism Code</th>
<th>Mechanism Description</th>
<th>Trauma Type Code</th>
<th>Trauma Type Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cut/pierce</td>
<td>2</td>
<td>Penetrating</td>
</tr>
<tr>
<td>2</td>
<td>Drowning/submersion</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>3</td>
<td>Fall</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>4</td>
<td>Fire/flame</td>
<td>3</td>
<td>Burn</td>
</tr>
<tr>
<td>5</td>
<td>Hot object/substance</td>
<td>3</td>
<td>Burn</td>
</tr>
<tr>
<td>6</td>
<td>Firearm</td>
<td>2</td>
<td>Penetrating</td>
</tr>
<tr>
<td>7</td>
<td>Machinery</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>8</td>
<td>MVT Occupant</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>9</td>
<td>MVT Motorcyclist</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>10</td>
<td>MVT Pedestrian</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>11</td>
<td>MVT Unspecified</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>12</td>
<td>MVT Other</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>13</td>
<td>Pedalcyclist, other</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>14</td>
<td>Pedestrian, other</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>15</td>
<td>Transport, other</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>16</td>
<td>Bites and stings</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>17</td>
<td>Other natural/env</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>18</td>
<td>Overexertion</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>19</td>
<td>Poisoning</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>20</td>
<td>Struck by, against</td>
<td>1</td>
<td>Blunt</td>
</tr>
<tr>
<td>21</td>
<td>Suffocation</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>22</td>
<td>Other specified and classifyable</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>23</td>
<td>Other specified, not elsewhere classifyable</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>24</td>
<td>Unspecified</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>25</td>
<td>Adverse effects, medical care</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
<tr>
<td>26</td>
<td>Adverse effects, drugs</td>
<td>4</td>
<td>Other/unspecified</td>
</tr>
</tbody>
</table>

   The mechanism of injury description grouping is classified according to Table 2, Center for Disease Control and Prevention (CDC) matrix of E-code groupings: “Recommended framework of E-code groupings for presenting injury mortality and morbidity data (February 1, 2007)”.

2. **Injury Intentionality**
**Definition:** An indication of whether an injury was caused by an act carried out on purpose by oneself or by another person(s), with the goal of injuring or killing.

**Calculation:** The injury intentionality was classified according to Table 2. Center for Disease Control and Prevention (CDC) matrix of E-code groupings: “Recommended framework of E-code groupings for presenting injury mortality and morbidity data (February 1, 2007)”.

3. **Total EMS Response Time**

**Definition:** The total elapsed time from dispatch of the EMS transporting unit to scene arrival of the EMS transporting unit (i.e., the time the vehicle stopped moving).

**Calculation:** EMS Unit Arrival on Scene DateTime – EMS Dispatch DateTime.

4. **Total EMS Scene Time**

**Definition:** The total elapsed time from EMS transporting unit scene arrival to EMS transporting unit scene departure (i.e., the time the vehicle started moving).

**Calculation:** EMS Unit Scene Departure DateTime – EMS Unit Arrival on Scene DateTime.

5. **Total EMS Time**

**Definition:** The total elapsed time from dispatch of the EMS transporting unit to hospital arrival of the EMS transporting unit.

**Calculation:** ED/Hospital Arrival DateTime – EMS Dispatch DateTime.

6. **Overall GCS - EMS score (both adult and pediatric)**

**Definition:** A scale calculated in the out-of-hospital setting which evaluates the patient's initial level of awareness, which indirectly indicates the extent of neurologic injury. The scale rates three categories of a patient response in regards to eye opening, verbal response, and motor response. The lowest score is 3 and is indicative of no response, the highest score is 15, indicates the patient is alert and aware of his or her surroundings.

**Calculation:** Initial Field GCS Eye + Initial Field GCS Verbal + Initial Field GCS Motor

7. **Overall GCS - ED score (both adult and pediatric)**

**Definition:** A scale calculated in the emergency department (ED) or hospital setting which evaluates the patient's initial (upon arrival) level of awareness, which indirectly indicates the extent of neurologic injury. The scale rates three categories of a patient response in regards to eye opening, verbal response, and motor response. The lowest score is 3 and is indicative of no response, the highest score is 15, indicates the patient is alert and aware of his or her surroundings.

**Calculation:** Initial ED/Hospital GCS Eye + Initial ED/Hospital GCS Verbal + Initial ED/Hospital GCS Motor
8. **Abbreviated Injury Scale (AIS)**

*Definition:* The Abbreviated Injury Scale (AIS) is an anatomical scoring system first introduced in 1969. Since this time it has been revised and updated against survival to provide a ranking the severity of injury. The AIS scores includes include the injury code, severity and AIS body regions. AIS scores are available for nine AIS body regions: Head, Neck, Face, Thorax, Abdominal, Spine, Upper and Lower extremities and External. The AIS is monitored by a scaling committee of the Association for the Advancement of Automotive Medicine.

*Calculation:* The components of the AIS scores are translated from ICD-9 CM diagnosis codes using ICD/AIS map, ICDMAP90, 1995 update [computer program: ICODERI.DLL], Windows version. Johns Hopkins University, 1997. The AIS diagnosis code, severity and body region is calculated for each injury. The AIS severity is ranked on a scale of 1 to 6, with 1 being minor, 5 severe and 6 an un-survivable injury. An AIS score of 6 represents the ‘threat to life’ associated with an injury and is not meant to represent a comprehensive measure of severity.

9. **ICD-9 CM Body Regions and Nature of Injury**

*Definition:* The classification of Body regions and Nature of Injury for the associated ICD-9 CM injury diagnosis.

*Calculation:* The Body regions and Nature of injury was classified according to Table 1. The Barell Injury Diagnosis Matrix.

10. **Injury Severity Score**

*Definition:* The Injury Severity Score (ISS) is an anatomical scoring system that provides an overall score for patients with multiple injuries. Injury Severity Scores range from 1 to 75. If an injury is assigned an AIS severity of 6 (currently untreatable injury), the ISS score is automatically assigned 75.

*Calculation:* There are two ISS scores calculated in the data base: One ISS score that is derived from the AIS scores submitted by the hospitals and one ISS score that is derived from the AIS score that is calculated from the ICD/AIS map, ICDMAP90, 1995 update [computer program: ICODERI.DLL], Windows version. Johns Hopkins University, 1997. Each injury is allocated to one of six body regions based on the Abbreviated Injury Scale (AIS) score according to:

- Head or neck
- Face
- Chest
- Abdominal or pelvic contents
- Extremities or pelvic girdle
- External
The 3 most severely injured body regions have their AIS severity score squared and added together to produce the ISS score. Only the highest AIS score in each body region is used.

11. **Functional Capacity Index**

*Definition:* The Functional Capacity Index (FCI) maps AIS injury descriptions into scores that reflect expected levels of reduced functional capacity at 1 year after injury. The FCI predicts functional capacity across 10 dimensions of physical function. It is meant to predict the ability of the injured to perform tasks important for everyday living independent of physical and social environment. The overall FCI score ranges from 0 (representing death) to 100 (representing no limitations), indicating the percent of functionality.

*Calculation:* There are two types of calculated FCI scores in the data base: One which is derived from the AIS scores submitted by the hospitals and one which is derived from the calculated AIS score. Each AIS injury diagnosis code is assigned (by expert consensus) a FCI score for each one of the 10 dimensions as well as an overall FCI score. That is, there will be an FCI score for each of the 10 dimensions and for the total injury for each trauma injury diagnosis. In addition, the overall FCI score for each incident is then defined as the lowest FCI score among all the injury diagnoses for that incident.

*Use:* FCI scores are included the final research NTDB database as a potential measure of function following recovery from severe injury. The FCI continues to undergo refinement and is available to researchers, in part, to facilitate further testing of the validity and reliability of the index. We anticipate FCI scores available in the research database beginning in 2009.

12. **Total ED Time**

*Definition:* The total elapsed time the patient was in the emergency department (ED).

*Calculation:* ED Discharge DateTime – ED/Hospital Arrival DateTime.

13. **Total Length of Hospital Stay**

*Definition:* The total elapsed time the patient was in the hospital.

*Calculation:* Hospital Discharge DateTime – ED/Hospital Arrival DateTime.
**TABLE 1: THE BARELL INJURY DIAGNOSIS MATRIX, CLASSIFICATION BY BODY REGION AND NATURE OF THE INJURY**

<table>
<thead>
<tr>
<th>Body Region</th>
<th>Description</th>
<th>ICD-9-CM Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head and Neck</td>
<td>Neck Unspecified</td>
<td>802, 830, 848.0-.1, 872, 873.2-.7, 941.x1,.x3-.x5,.x7</td>
</tr>
<tr>
<td></td>
<td>Neck</td>
<td>807.5-.6, 848.2, 874, 925.2, 941.x8, 953.0, 954.0</td>
</tr>
<tr>
<td></td>
<td>Head and Neck</td>
<td>805(.0-.1), 839(.0-.1), 847.0</td>
</tr>
<tr>
<td></td>
<td>Face</td>
<td>806(.6-.7), 952(.3-.4)</td>
</tr>
<tr>
<td></td>
<td>Spine and Back</td>
<td>805(.8-.9), 839(.40,.49), 839(.50,.59)</td>
</tr>
<tr>
<td></td>
<td>Torso</td>
<td>809</td>
</tr>
<tr>
<td></td>
<td>Pelvis and Urogenital</td>
<td>820, 835, 843, 924.01, 928.01</td>
</tr>
<tr>
<td></td>
<td>Wrist, Hand, and Fingers</td>
<td>842</td>
</tr>
<tr>
<td></td>
<td>Hip</td>
<td>820, 835, 843, 924.01, 928.01</td>
</tr>
<tr>
<td></td>
<td>Knee</td>
<td>822, 836, 844.0-.3, 924.11, 928.11, 945.x5</td>
</tr>
<tr>
<td></td>
<td>Wrist, Hand, and Fingers</td>
<td>842</td>
</tr>
<tr>
<td></td>
<td>Hip</td>
<td>820, 835, 843, 924.01, 928.01</td>
</tr>
<tr>
<td></td>
<td>Knee</td>
<td>822, 836, 844.0-.3, 924.11, 928.11, 945.x5</td>
</tr>
<tr>
<td>Late Effects of Injuries, Poisonings, and Other External Causes</td>
<td>905-909</td>
<td></td>
</tr>
</tbody>
</table>

*Note from CDC: 959.01 (added to ICD-9 in 1997) is not intended to be assigned to TBI cases; however, in the USA it has been assigned incorrectly to a substantial proportion of cases.*
**TABLE 2: INJURY INTENTIONALITY CDC MATRIX**


<table>
<thead>
<tr>
<th>Mechanism/Cause</th>
<th>Unintentional</th>
<th>Self-inflicted</th>
<th>Assault</th>
<th>Undetermined</th>
<th>Other¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut/pierce</td>
<td>E920.0–.9</td>
<td>E966</td>
<td>E966</td>
<td>E986</td>
<td>E974</td>
</tr>
<tr>
<td>Drowning/submersion</td>
<td>E830.0–.9, E832.0–.9, E910.0–.9</td>
<td>E954</td>
<td>E964</td>
<td>E984</td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>E880.0–E886.9, E888</td>
<td>E957.0–.9</td>
<td>E968.1</td>
<td>E987.0–.9</td>
<td></td>
</tr>
<tr>
<td>Fire/burn</td>
<td>E890.0–E899, E924.0–.9</td>
<td>E958.1,2,7</td>
<td>E961, E968.0,3</td>
<td>E988.1,2,7</td>
<td></td>
</tr>
<tr>
<td>Fire/flame</td>
<td>E890.0–E899</td>
<td>E958.1</td>
<td>E968.0</td>
<td>E988.1</td>
<td></td>
</tr>
<tr>
<td>Hot object/substance</td>
<td>E924.0–.9</td>
<td>E958.2,7</td>
<td>E961, E968.3</td>
<td>E988.2,7</td>
<td></td>
</tr>
<tr>
<td>Firearm</td>
<td>E922.0–.3,8,9</td>
<td>E955.0–.4</td>
<td>E965.0–.4</td>
<td>E985.0–.4</td>
<td>E970</td>
</tr>
<tr>
<td>Machinery</td>
<td>E919 (0–.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle traffic²,³</td>
<td>E810–E819 (0–.9)</td>
<td>E958.5</td>
<td>E968.5</td>
<td>E988.5</td>
<td></td>
</tr>
<tr>
<td>Occupant</td>
<td>E810–E819 (0,1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcyclist</td>
<td>E810–E819 (2,3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedal cyclist</td>
<td>E810–E819 (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian</td>
<td>E810–E819 (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unspecified</td>
<td>E810–E819 (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedal cyclist, other</td>
<td>E800–E807 (.3)</td>
<td>E820–E825 (.6), E826.1,9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian, other</td>
<td>E800–807(.2)</td>
<td>E820–E825(.7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport, other</td>
<td>E800–E807 (.0,1,8,9)</td>
<td></td>
<td>E958.6</td>
<td>E988.6</td>
<td></td>
</tr>
<tr>
<td>Natural/environment</td>
<td>E900.0–E909, E928.0–.2</td>
<td></td>
<td>E958.3</td>
<td>E988.3</td>
<td></td>
</tr>
<tr>
<td>Bites and stings³</td>
<td>E905.0–.6,9</td>
<td>E962.0–.9</td>
<td>E980.0–E982.9</td>
<td>E972</td>
<td></td>
</tr>
<tr>
<td>Overexertion</td>
<td>E927.0–.4,8,9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poisoning</td>
<td>E850.0–E869.9</td>
<td>E950.0–E952.9</td>
<td>E980.0–E982.9</td>
<td>E972</td>
<td></td>
</tr>
<tr>
<td>Struck by, against</td>
<td>E916–E917.9</td>
<td>E960.0; E968.2</td>
<td></td>
<td></td>
<td>E973, E975</td>
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</table>
Table 2: Injury Intentionality CDC Matrix

<table>
<thead>
<tr>
<th>Suffocation</th>
<th>E911–E913.9</th>
<th>E953.0–9</th>
<th>E963</th>
<th>E983.0–9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other specified and classifiable¹</td>
<td>E846–E848, E914–E915 E918, E921.0–9, E922.4,5 E923.0–9, E926.0–E926.9 E928.3, E929.0–.5</td>
<td>E955.5,.6,.7,.9 E958.0,.4</td>
<td>E960.1, E965.5–9 E967.0–9, E968.4,.6,.7 E979.0–9</td>
<td>E985.5,.6,.7 E988.0,.4</td>
</tr>
<tr>
<td>Other specified, not elsewhere classifiable</td>
<td>E928.8, E929.8</td>
<td>E958.8, E959</td>
<td>E968.8, E969</td>
<td>E988.8, E989</td>
</tr>
</tbody>
</table>

¹Includes legal intervention (E970–E978) and operations of war (E990–E999).
²Three 4th-digit codes (.4 [occupant of streetcar], .5 [rider of animal], .8 [other specified person]) are not presented separately because of small numbers. However, because they are included in the overall motor vehicle traffic category, the sum of these categories can be derived by subtraction.
³Codes in bold are for morbidity coding only. For details see table 2.
⁴E849 (place of occurrence) has been excluded from the matrix. For mortality coding, an ICD-9 E849 code does not exist. For morbidity coding, an ICD-9-CM E849 code should never be first-listed E code and should only appear as an additional code to specify the place of occurrence of the injury incident.

Note: ICD-9 E codes for coding underlying cause of death apply to injury-related death data from 1979 through 1998. Then there is a new ICD-10 external cause of injury matrix that applies to death data from 1999 and after. This can be found on the National Center for Health Statistics website at http://www.cdc.gov/nchs/about/otheract/ice/projects.htm
Appendix 2: NTDB Facility Dataset

The Purpose of Variables Defining Hospital Characteristics

This appendix defines variables which are collected at the time of hospital registration (and data submission) that are "attached" to each submitted trauma registry case. The purpose of these variables is to allow researchers, state entities and others (in accordance with ACS policy) to stratify data analyses in ways that allow the efficacy of trauma care to be evaluated for different levels of care. Variables will allow both trauma center performance and trauma system performance to be evaluated and benchmarked. It is important to note that the anonymity of hospitals will be safeguarded in accordance with current ACS policy and specific requirements contained within existing Business Associate Agreements maintained between states (and/or hospitals) and the ACS.

Examples of the type of national and state assessments that can be conducted using these variables include:

1. Injury severity/type by admitting hospital designation (i.e., an assessment of over-under triage).
2. The prevalence of injury severity/type presenting to frontier, rural, suburban and urban hospitals by bed size and available resources.
3. Procedure types by admitting hospital designation.
4. Length of stay by injury type and hospital designation.
5. Resource utilization by injury characteristics (e.g., procedures, ICU LOS, insurance, etc.) and hospital size and designation.
6. Frequency of inter-facility transfer after hospitalization by injury severity and hospital trauma designation.
7. Hospital complications by injury characteristics, hospital designation and patient age.

Variables describing hospital characteristics are completed by personnel at each hospital on an annual basis (at the time of data submission to the NTDB). Responses to each variable are stored and automatically attached to each record sent to the National Trauma Data Bank. The description of the variables attached to each record is categorized into three sections (Hospital Characteristics, Patient Inclusion Criteria, and Pediatric Care) Variables and the associated value labels are provided below:
<table>
<thead>
<tr>
<th>Variables</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital Information</strong></td>
<td></td>
</tr>
<tr>
<td>Facility Name</td>
<td></td>
</tr>
<tr>
<td>Department Name</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>Street; City; State; County; Country; ZIP</td>
</tr>
<tr>
<td>Country Specification</td>
<td>USA, Other</td>
</tr>
<tr>
<td>Phone/Fax Number</td>
<td>xxx-xxx-xxxx</td>
</tr>
<tr>
<td>Phone Extension</td>
<td>xxxx</td>
</tr>
<tr>
<td>Registry Type</td>
<td>Hospital; Third Party; Both</td>
</tr>
<tr>
<td><strong>Other Registries</strong></td>
<td></td>
</tr>
<tr>
<td>Other Registries Submitted</td>
<td>State; County; Regional; Other; None</td>
</tr>
<tr>
<td><strong>Contacts</strong></td>
<td></td>
</tr>
<tr>
<td>Primary Contact Name</td>
<td></td>
</tr>
<tr>
<td>Primary Contact Title</td>
<td></td>
</tr>
<tr>
<td>Primary Contact Email Address</td>
<td></td>
</tr>
<tr>
<td>Primary Contact Country Specification</td>
<td>USA; Other</td>
</tr>
<tr>
<td>Primary Contact Address</td>
<td>Street; City; State; Country; ZIP</td>
</tr>
<tr>
<td>Primary Contact Phone</td>
<td>xxx-xxx-xxxx; Extension</td>
</tr>
<tr>
<td>Primary Contact Fax</td>
<td>xxx-xxx-xxxx</td>
</tr>
<tr>
<td>Trauma Program Manager/Coordinator Contact Name</td>
<td></td>
</tr>
<tr>
<td>TPM/Coord. Contact Title</td>
<td></td>
</tr>
<tr>
<td>TPM/Coord. Contact Email Address</td>
<td></td>
</tr>
<tr>
<td>TPM/Coord. Contact Country Specification</td>
<td>USA; Other</td>
</tr>
<tr>
<td>TPM/Coord. Contact Address</td>
<td>Street; City; State; Country; ZIP</td>
</tr>
<tr>
<td>TPM/Coord. Contact Phone</td>
<td>xxx-xxx-xxxx; Extension</td>
</tr>
<tr>
<td>TPM/Coord. Contact Fax</td>
<td>xxx-xxx-xxxx</td>
</tr>
<tr>
<td>Trauma Medical Director Contact Name</td>
<td></td>
</tr>
<tr>
<td>TMD Contact Title</td>
<td></td>
</tr>
<tr>
<td>TMD Contact Email Address</td>
<td></td>
</tr>
<tr>
<td>TMD Contact Country Specification</td>
<td>USA; Other</td>
</tr>
<tr>
<td>TMD Contact Address</td>
<td>Street; City; State; Country; ZIP</td>
</tr>
<tr>
<td>TMD Contact Phone</td>
<td>xxx-xxx-xxxx; Extension</td>
</tr>
<tr>
<td>TMD Contact Fax</td>
<td>xxx-xxx-xxxx</td>
</tr>
<tr>
<td>Other Contact Name</td>
<td></td>
</tr>
<tr>
<td>Other Contact Title</td>
<td></td>
</tr>
<tr>
<td>Other Contact Email Address</td>
<td></td>
</tr>
<tr>
<td>Other Contact Country Specification</td>
<td>USA; Other</td>
</tr>
<tr>
<td>Other Contact Address</td>
<td>Street; City; State; Country; ZIP</td>
</tr>
<tr>
<td>Other Contact Phone</td>
<td>xxx-xxx-xxxx; Extension</td>
</tr>
<tr>
<td>Other Contact Fax</td>
<td>xxx-xxx-xxxx</td>
</tr>
</tbody>
</table>
## Facility Characteristics

<table>
<thead>
<tr>
<th>Facility Characteristic</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACS Verification Level</strong></td>
<td>I; II; III; IV; Not applicable</td>
</tr>
<tr>
<td><strong>ACS Pediatric Verification Level</strong></td>
<td>I; II; Not applicable</td>
</tr>
<tr>
<td><strong>State Designation/Accreditation</strong></td>
<td>I; II; III; IV; V; Other; Not applicable</td>
</tr>
<tr>
<td><strong>State Pediatric Designation/Accreditation</strong></td>
<td>I; II; III; IV; Other; Not applicable</td>
</tr>
<tr>
<td><strong>Other Non-US Designation/Accreditation</strong></td>
<td>Specify using provided text box</td>
</tr>
<tr>
<td><strong>Number of Beds (for)</strong></td>
<td>Adult; Pediatric; Burn; ICU for trauma patients; ICU for burn patients</td>
</tr>
<tr>
<td><strong>Hospital Teaching Status</strong></td>
<td>University; Community; Non-teaching</td>
</tr>
<tr>
<td><strong>Hospital Type</strong></td>
<td>For Profit; Non-profit</td>
</tr>
<tr>
<td><strong>Number of Staff</strong></td>
<td>Core Trauma Surgeons; Neurosurgeons; Orthopedic Surgeons; Trauma Registrars/Data Abstractors (FTEs); Certified Registrars</td>
</tr>
<tr>
<td><strong>Comorbidity Recording</strong></td>
<td>Derived from ICD-9 coding; Chart abstraction by trauma registrar; Calculated by software registry program; Not Collected</td>
</tr>
<tr>
<td><strong>Complication Recording</strong></td>
<td>Derived from ICD-9 coding; Chart abstraction by trauma registrar; Calculated by software registry program; Not Collected</td>
</tr>
<tr>
<td><strong>Registry Software Type</strong></td>
<td>DI Collector; DI (ACS) NTRACS; Inspirionix Trauma Data Pro; DI (formerly Cales) Trauma!; Lancet / Trauma One; CDM Trauma Base; ImageTrend TraumaBridge; TriAnalytics Collector; Midas+; Hospital Mainframe; The San Diego Registry; Other</td>
</tr>
<tr>
<td><strong>Trauma Registry Version Number</strong></td>
<td></td>
</tr>
</tbody>
</table>

### AIS Coding

- **AIS Coding**
  - 80 – Full code (description plus severity, XXXXXXX.Y)
  - 85 – Full code (description plus severity, XXXXXXX.Y)
  - 90 – Full code (description plus severity, XXXXXXX.Y)
  - 95 – Full code (description plus severity, XXXXXXX.Y)
  - 98 – Full code (description plus severity, XXXXXXX.Y)
  - 05 – Full code (description plus severity, XXXXXXX.Y)
  - ICD Map
  - Tri-Code
  - AIS80 Only (Severity Only, .Y)
  - AIS85 Only (Severity Only, .Y)
  - AIS90 Only (Severity Only, .Y)
  - AIS95 Only (Severity Only, .Y)
  - AIS98 Only (Severity Only, .Y)
  - AIS05 Only (Severity Only, .Y)
  - Other, Not Applicable

### Patient Inclusion/Exclusion Criteria

<table>
<thead>
<tr>
<th>Patient Inclusion/Exclusion Criteria</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Stay Included</strong></td>
<td>23 Hour Holds; &gt; = 24 hours; &gt; = 48 hours; &gt; = 72 hours; All Admissions</td>
</tr>
<tr>
<td><strong>Hip Fractures Included</strong></td>
<td>None; Patients &lt;=18 years; Patients &lt;=50 years; Patients &lt;=60</td>
</tr>
<tr>
<td><strong>DOA's In ED Included</strong></td>
<td>Yes/No</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Deaths after receiving any evaluation/treatment (including died in ED) Included</strong></td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>Transfers Into Your Facility Included</strong></td>
<td>All transfers; within 4 hours; within 8 hours; within 12 hours; within 24 hours; within 48 hours; within 72 hours; none</td>
</tr>
<tr>
<td><strong>Transfers Our of Your Facilities Included</strong></td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>AIS Code Inclusion Range</strong></td>
<td>All AIS codes included (none excluded); Range 1 (to ); Range 2 (to ); Range 3 (to )</td>
</tr>
<tr>
<td><strong>AIS Code Exclusion Range</strong></td>
<td>Range 1 (to ); Range 2 (to ); Range 3 (to )</td>
</tr>
<tr>
<td><strong>Do you have inclusion/exclusion criteria that are not fully described by your responses in this section?</strong></td>
<td>Yes/No</td>
</tr>
<tr>
<td><strong>ICD-9 Diagnosis Code Inclusion Range</strong></td>
<td>Same ICD-9 code ranges as NTDB criteria; Range 1 (to ); Range 2 (to ); …; Range 10 (to )</td>
</tr>
<tr>
<td><strong>ICD-9 Diagnosis Code Exclusion Range</strong></td>
<td>Range 1 (to ); Range 2 (to ); …; Range 10 (to )</td>
</tr>
</tbody>
</table>

### Pediatric Care

| **Are you associated with a pediatric hospital?** | Yes/No |
| **Do you have a pediatric ward?** | Yes/No |
| **Do you have a pediatric ICU?** | Yes/No |
| **Do you transfer the most severely injured children to other specialty centers?** | Yes/No |
| **How do you provide care to injured children?** | No Children (not applicable); Provide all acute care services; Shared role with another center |
| **What is the oldest age for pediatric patients in your facility?** | 10, 11, 12, …, 21, none |

### Authorization

I hereby certify that the Facility information contained here is an accurate representation of my Facility for this year's data submission:

Name of user at the Facility who verified this information:
Appendix 3: Edit Checks for the National Trauma Data Standard Data Elements
Introduction

The flags described in this Appendix are those that are produced by the Validator when an NTDS XML file is checked. The rule ID associated with each edit check has four digits with the first two being associated with a field in the data dictionary. The last two digits are sequentially assigned according to the message associated with the edit check rule.

There is a Flag Level associated with each edit check and this is important to developers and to users alike and should be used to decide what checks (or errors) must be addressed before submitting to NTDB. Some flags are mandatory to address and some are somewhat discretionary. Ultimately the number of flags resolved in the submitted data is up to the individual submitter and the quality of data that is available for reporting and research in NTDB.

The Flag Levels can be explained as follows:

- **Level 1: Format / Schema** – any element that does not conform to the “rules” of the XSD. That is, these are errors that arise from XML data that cannot be parsed or would otherwise not be legal XML. Some errors in this Level do not have a Rule ID – for example: illegal tag, commingling of null values and actual data, out of range errors, etc.

- **Level 2: Inclusion Criteria** – this level affects the fields needed to determine if the record meets the inclusion criteria for NTDB, or are required for critical analyses. These fields currently include:
  - Date of Birth
  - Sex
  - ED/Hospital Arrival Date
  - ED Discharge Disposition
  - ED Death
  - Injury Diagnoses
  - Hospital Discharge Disposition
  - Inter-Facility Transfer
  - Facility ID
  - Patient ID
  - Last modified Date/Time
  - Initial ED/Hospital Systolic Blood Pressure
  - Initial ED/Hospital Pulse Rate
  - Primary E-Code
  - Hospital Complications
  - Comorbid Conditions
  - Initial ED/Hospital GCS Eye
  - Initial ED/Hospital GCS Motor
  - Initial ED/Hospital GCS Verbal
  - Initial ED/Hospital GCS Total
  - Initial ED/Hospital GCS Assessment Qualifier
  - Initial ED/Hospital Respiratory Rate
  - Respiratory Assistance

- **Level 3: Major Logic** – data consistency checks related to variables commonly used for reporting. Examples include Arrival Date, E-code, etc.

- **Level 4: Minor Logic** – data consistency checks (e.g. dates) and blank fields that are acceptable to create a “valid” XML record but may cause certain parts of the record to be excluded from analysis.

- **Level 5: Data Entry Prompts** – “data checks” in this category are recommended to developers to function as prompts for application users. These prompts should be more correctly termed “warnings” to inform users that they should double-check their entry or be required to complete additional fields.

**Important Notes:**

* Any XML file submitted to NTDB that contains one or more Level 1 or 2 Flags will result in the entire file being rejected. These kinds of flags must be resolved before a submission will be accepted.

^ Facility ID, Patient ID and Last Modified Date/Time are not described in the data dictionary and are only required in the XML file as control information for back-end NTDB processing. However, these fields are mandatory to provide in every XML record. Consult your Registry Vendor if one of these flags occurs.
### Patient’s Home Zip Code

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0002</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>0003</td>
<td>5</td>
<td>Not Applicable, complete variable: Alternate Home Residence</td>
</tr>
<tr>
<td>0005</td>
<td>5</td>
<td>Not Known/Not Recorded, complete variables: Patient’s Home Country, Patient’s Home State, Patient’s Home County and Patient’s Home City</td>
</tr>
</tbody>
</table>

### Patient’s Home Country

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0101</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0102</td>
<td>4</td>
<td>Blank, required to complete when Patient’s Home Zip Code is Not Known/Not Recorded</td>
</tr>
<tr>
<td>0103</td>
<td>5</td>
<td>Blank, required to complete variables: Patient’s Home Zip Code or Alternate Home Residence</td>
</tr>
</tbody>
</table>

### Patient’s Home State

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0201</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0202</td>
<td>4</td>
<td>Blank, required to complete when Patient’s Home Zip Code is Not Known/Not Recorded</td>
</tr>
<tr>
<td>0203</td>
<td>5</td>
<td>Blank, required to complete variables: Patient’s Home Zip Code or Alternate Home Residence</td>
</tr>
</tbody>
</table>

### Patient’s Home County

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0301</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0302</td>
<td>4</td>
<td>Blank, required to complete when Patient’s Home Zip Code is Not Known/Not Recorded</td>
</tr>
<tr>
<td>0303</td>
<td>5</td>
<td>Blank, required to complete variables: Patient’s Home Zip Code or Alternate Home Residence</td>
</tr>
</tbody>
</table>
### Patient’s Home City

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0401</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0402</td>
<td>4</td>
<td>Blank, required to complete when Patient’s Home Zip Code is Not Known/Not Recorded</td>
</tr>
<tr>
<td>0403</td>
<td>5</td>
<td>Blank, required to complete variables: Patient’s Home Zip Code or Alternate Home Residence</td>
</tr>
</tbody>
</table>

### Alternate Home Residence

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0501</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0502</td>
<td>4</td>
<td>Blank, required to complete when Patient’s Home Zip Code is Not Applicable</td>
</tr>
<tr>
<td>0503</td>
<td>5</td>
<td>Blank, required to complete variables: Patient’s Home Zip Code or (Patient’s Home Country, Patient’s Home State, Patient’s Home County and Patient’s Home City)</td>
</tr>
</tbody>
</table>

### Date of Birth

<table>
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<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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<td>Invalid value</td>
</tr>
<tr>
<td>0602</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>0603</td>
<td>2</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>0605</td>
<td>3</td>
<td>Not Known/Not Recorded, complete variables: Age and Age Units</td>
</tr>
<tr>
<td>0606</td>
<td>2</td>
<td>Date of Birth cannot be later than EMS Dispatch Date</td>
</tr>
<tr>
<td>0607</td>
<td>2</td>
<td>Date of Birth cannot be later than EMS Unit Arrival on Scene Date</td>
</tr>
<tr>
<td>0608</td>
<td>2</td>
<td>Date of Birth cannot be later than EMS Unit Scene Departure Date</td>
</tr>
<tr>
<td>0609</td>
<td>2</td>
<td>Date of Birth cannot be later than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>0610</td>
<td>2</td>
<td>Date of Birth cannot be later than ED Discharge Date</td>
</tr>
<tr>
<td>0611</td>
<td>2</td>
<td>Date of Birth cannot be later than Hospital Discharge Date</td>
</tr>
<tr>
<td>0612</td>
<td>2</td>
<td>Date of Birth + 120 years must be less than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>0613</td>
<td>2</td>
<td>Not Applicable, complete variables: Age and Age Units if less than 24 hours</td>
</tr>
</tbody>
</table>
### Age

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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<td>0701</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0702</td>
<td>5</td>
<td>Blank, required to complete variable: Date of Birth</td>
</tr>
<tr>
<td>0703</td>
<td>4</td>
<td>Blank, required to complete when Date of Birth is less than 24 hours or Not Known/Not Recorded</td>
</tr>
<tr>
<td>0704</td>
<td>3</td>
<td>ED/Hospital Arrival Date minus Date of Birth must equal submitted Age.</td>
</tr>
</tbody>
</table>

### Age Units

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0801</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0802</td>
<td>5</td>
<td>Blank, required to complete variable: Date of Birth</td>
</tr>
<tr>
<td>0803</td>
<td>4</td>
<td>Blank, required to complete when Date of Birth is less than 24 hours or Not Known/Not Recorded</td>
</tr>
</tbody>
</table>

### Race

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>0901</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>0902</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
</tbody>
</table>

### Ethnicity

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>1002</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
</tbody>
</table>

### Sex

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1101</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>1102</td>
<td>2</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>1103</td>
<td>2</td>
<td>Not Applicable, required Inclusion Criterion.</td>
</tr>
</tbody>
</table>
## Injury Information

### Injury Incident Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1201</td>
<td>1</td>
<td>Invalid Value</td>
</tr>
<tr>
<td>1202</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>1203</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>1204</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be earlier than <strong>Date of Birth</strong></td>
</tr>
<tr>
<td>1205</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be later than <strong>EMS Dispatch Date</strong></td>
</tr>
<tr>
<td>1206</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be later than <strong>EMS Unit Arrival on Scene Date</strong></td>
</tr>
<tr>
<td>1207</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be later than <strong>EMS Unit Scene Departure Date</strong></td>
</tr>
<tr>
<td>1208</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be later than <strong>ED/Hospital Arrival Date</strong></td>
</tr>
<tr>
<td>1209</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be later than <strong>ED Discharge Date</strong></td>
</tr>
<tr>
<td>1210</td>
<td>4</td>
<td><strong>Injury Incident Date</strong> cannot be later than <strong>Hospital Discharge Date</strong></td>
</tr>
</tbody>
</table>

### Injury Incident Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1301</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>1302</td>
<td>1</td>
<td>Time out of range</td>
</tr>
<tr>
<td>1303</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>1304</td>
<td>4</td>
<td>If <strong>Injury Incident Date</strong> and <strong>EMS Dispatch Date</strong> are the same, the <strong>Injury Incident Time</strong> cannot be later than the <strong>EMS Dispatch Time</strong></td>
</tr>
<tr>
<td>1305</td>
<td>4</td>
<td>If <strong>Injury Incident Date</strong> and <strong>EMS Unit Arrival on Scene Date</strong> are the same, the <strong>Injury Incident Time</strong> cannot be later than the <strong>EMS Unit Arrival on Scene Time</strong></td>
</tr>
<tr>
<td>1306</td>
<td>4</td>
<td>If <strong>Injury Incident Date</strong> and <strong>EMS Unit Scene Departure Date</strong> are the same, the <strong>Injury Incident Time</strong> cannot be later than the <strong>EMS Unit Scene Departure Time</strong></td>
</tr>
<tr>
<td>1307</td>
<td>4</td>
<td>If <strong>Injury Incident Date</strong> and <strong>ED/Hospital Arrival Date</strong> are the same, the <strong>Injury Incident Time</strong> cannot be later than the <strong>ED/Hospital Arrival Time</strong></td>
</tr>
<tr>
<td>1308</td>
<td>4</td>
<td>If <strong>Injury Incident Date</strong> and <strong>ED Discharge Date</strong> are the same, the <strong>Injury Incident Time</strong> cannot be later than the <strong>ED Discharge Time</strong></td>
</tr>
<tr>
<td>1309</td>
<td>4</td>
<td>If <strong>Injury Incident Date</strong> and <strong>Hospital Discharge Date</strong> are the same, the <strong>Injury Incident Time</strong> cannot be later than the <strong>Hospital Discharge Time</strong></td>
</tr>
</tbody>
</table>
### Work-Related

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1401</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>1402</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>1403</td>
<td>5</td>
<td>If Yes, then Patient’s Occupational Industry must be completed</td>
</tr>
<tr>
<td>1404</td>
<td>5</td>
<td>If Yes, then Patient Occupation must be completed</td>
</tr>
</tbody>
</table>

### Patient’s Occupational Industry

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1501</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>1502</td>
<td>4</td>
<td>If completed, then Work-Related must be 1 Yes</td>
</tr>
<tr>
<td>1503</td>
<td>5</td>
<td>If completed, then Patient Occupation must be completed</td>
</tr>
<tr>
<td>1504</td>
<td>4</td>
<td>Blank, required to complete when Work-Related is 1 (Yes)</td>
</tr>
</tbody>
</table>

### Patient’s Occupation

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1601</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>1602</td>
<td>4</td>
<td>If completed, then Work-Related must be 1 Yes</td>
</tr>
<tr>
<td>1603</td>
<td>5</td>
<td>If completed, then Patient’s Occupational Industry must be completed</td>
</tr>
<tr>
<td>1604</td>
<td>4</td>
<td>Blank, required to complete when Work-Related is 1 (Yes)</td>
</tr>
</tbody>
</table>

### Primary E-Code

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1701</td>
<td>1</td>
<td>Invalid, out of range</td>
</tr>
<tr>
<td>1702</td>
<td>2</td>
<td>Blank, required field (at least one ICD-9-CM trauma code must be entered)</td>
</tr>
<tr>
<td>1703</td>
<td>4</td>
<td>E-code should not be = (810.0, 811.0, 812.0, 813.0, 814.0, 815.0, 816.0, 817.0, 818.0, 819.0) and Age &lt; 15</td>
</tr>
<tr>
<td>1704</td>
<td>2</td>
<td>Should not be 849.x</td>
</tr>
</tbody>
</table>

### Location E-Code

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1801</td>
<td>1</td>
<td>Invalid, out of range</td>
</tr>
<tr>
<td>1802</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
</tbody>
</table>
### Additional E-Code

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>1</td>
<td>Invalid, out of range</td>
</tr>
<tr>
<td>1902</td>
<td>4</td>
<td>If completed, Additional E-Code cannot be equal to Primary E-Code.</td>
</tr>
</tbody>
</table>

### Incident Location Zip Code

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2002</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>2004</td>
<td>5</td>
<td>Not Known/Not Recorded, complete variables: Incident State, Incident County and Incident City</td>
</tr>
<tr>
<td>2005</td>
<td>5</td>
<td>Not Applicable, complete variables: Incident State, Incident County and Incident City</td>
</tr>
</tbody>
</table>

### Incident Country

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2101</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2102</td>
<td>4</td>
<td>Blank, required to complete when Incident Location Zip Code is Not Applicable or Not Known/Not Recorded</td>
</tr>
<tr>
<td>2103</td>
<td>5</td>
<td>Blank, required to complete variable: Incident Location Zip Code</td>
</tr>
</tbody>
</table>

### Incident State

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2201</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2202</td>
<td>5</td>
<td>Blank, required to complete variable: Incident Location Zip Code</td>
</tr>
<tr>
<td>2203</td>
<td>4</td>
<td>Blank, required to complete when Incident Location Zip Code is Not Applicable or Not Known/Not Recorded</td>
</tr>
</tbody>
</table>

### Incident County

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2301</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2302</td>
<td>5</td>
<td>Blank, required to complete variable: Incident Location Zip Code</td>
</tr>
<tr>
<td>2303</td>
<td>4</td>
<td>Blank, required to complete when Incident Location Zip Code is Not Applicable or Not Known/Not Recorded</td>
</tr>
</tbody>
</table>

### Incident City

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2401</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2402</td>
<td>5</td>
<td>Blank, required to complete variable: Incident Location Zip Code</td>
</tr>
<tr>
<td>2403</td>
<td>4</td>
<td>Blank, required to complete when Incident Location Zip Code is Not Applicable or Not Known/Not Recorded</td>
</tr>
</tbody>
</table>
### Protective Devices

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2501</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2502</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>2503</td>
<td>5</td>
<td>If Protectiv Device = 6 (Child Restraint) then Child Specific Restraint must be completed</td>
</tr>
<tr>
<td>2504</td>
<td>5</td>
<td>If Protectiv Device = 8 (Airbag Present) then Airbag Deployment must be completed</td>
</tr>
</tbody>
</table>

### Child Specific Restraint

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2601</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2602</td>
<td>3</td>
<td>If completed, then Protective Device must be 6 (Child Restraint).</td>
</tr>
<tr>
<td>2603</td>
<td>4</td>
<td>Blank, required to complete when Protective Device is 6 (Child Restraint)</td>
</tr>
</tbody>
</table>

### Airbag Deployment

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2701</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2702</td>
<td>3</td>
<td>If completed, then Protective Device must be 8 (Airbag Present).</td>
</tr>
<tr>
<td>2703</td>
<td>4</td>
<td>Blank, required to complete when Protective Device is 8 (Airbag Present)</td>
</tr>
</tbody>
</table>
**Pre-hospital Information**

### EMS Dispatch Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2801</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2802</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>2803</td>
<td>4</td>
<td>EMS Dispatch Date cannot be earlier than Date of Birth</td>
</tr>
<tr>
<td>2804</td>
<td>4</td>
<td>EMS Dispatch Date cannot be later than EMS Unit Arrival on Scene Date</td>
</tr>
<tr>
<td>2805</td>
<td>4</td>
<td>EMS Dispatch Date cannot be later than EMS Unit Scene Departure Date</td>
</tr>
<tr>
<td>2806</td>
<td>4</td>
<td>EMS Dispatch Date cannot be later than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>2807</td>
<td>4</td>
<td>EMS Dispatch Date cannot be later than ED Discharge Date</td>
</tr>
<tr>
<td>2808</td>
<td>4</td>
<td>EMS Dispatch Date cannot be later than Hospital Discharge Date</td>
</tr>
</tbody>
</table>

### EMS Dispatch Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>2901</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>2902</td>
<td>1</td>
<td>Time out of range</td>
</tr>
<tr>
<td>2903</td>
<td>4</td>
<td>If EMS Dispatch Date and EMS Unit Arrival on Scene Date are the same, the EMS Dispatch Time cannot be later than the EMS Unit Arrival on Scene Time</td>
</tr>
<tr>
<td>2904</td>
<td>4</td>
<td>If EMS Dispatch Date and EMS Unit Scene Departure Date are the same, the EMS Dispatch Time cannot be later than the EMS Unit Scene Departure Time</td>
</tr>
<tr>
<td>2905</td>
<td>4</td>
<td>If EMS Dispatch Date and ED/Hospital Arrival Date are the same, the EMS Dispatch Time cannot be later than the ED/Hospital Arrival Time</td>
</tr>
<tr>
<td>2906</td>
<td>4</td>
<td>If EMS Dispatch Date and ED Discharge Date are the same, the EMS Dispatch Time cannot be later than the ED Discharge Time</td>
</tr>
<tr>
<td>2907</td>
<td>4</td>
<td>If EMS Dispatch Date and Hospital Discharge Date are the same, the EMS Dispatch Time cannot be later than the Hospital Discharge Time</td>
</tr>
</tbody>
</table>
### EMS Unit Arrival on Scene Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>3001</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>3002</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>3003</td>
<td>4</td>
<td>EMS Unit Arrival on Scene Date cannot be earlier than Date of Birth</td>
</tr>
<tr>
<td>3004</td>
<td>4</td>
<td>EMS Unit Arrival on Scene Date cannot be earlier than EMS Dispatch Date</td>
</tr>
<tr>
<td>3005</td>
<td>4</td>
<td>EMS Unit Arrival on Scene Date cannot be later than EMS Unit Scene Departure Date</td>
</tr>
<tr>
<td>3006</td>
<td>4</td>
<td>EMS Unit Arrival on Scene Date cannot be later than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>3007</td>
<td>4</td>
<td>EMS Unit Arrival on Scene Date cannot be later than ED Discharge Date</td>
</tr>
<tr>
<td>3008</td>
<td>4</td>
<td>EMS Unit Arrival on Scene Date and cannot be later than Hospital Discharge Date</td>
</tr>
<tr>
<td>3009</td>
<td>3</td>
<td>EMS Unit Arrival on Scene Date minus EMS Dispatch Date cannot be greater than 7 days.</td>
</tr>
</tbody>
</table>

### EMS Unit Arrival on Scene Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>3101</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>3102</td>
<td>1</td>
<td>Time out of range</td>
</tr>
<tr>
<td>3103</td>
<td>4</td>
<td>If EMS Unit Arrival on Scene Date and EMS Dispatch Date are the same, the EMS Unit Arrival on Scene Time cannot be earlier than the EMS Dispatch Time</td>
</tr>
<tr>
<td>3104</td>
<td>4</td>
<td>If EMS Unit Arrival on Scene Date and EMS Unit Scene Departure Date are the same, the EMS Unit Arrival on Scene Time cannot be later than the EMS Unit Scene Departure Time</td>
</tr>
<tr>
<td>3105</td>
<td>4</td>
<td>If EMS Unit Arrival on Scene Date and ED/Hospital Arrival Date are the same, the EMS Unit Arrival on Scene Time cannot be later than the ED/Hospital Arrival Time</td>
</tr>
<tr>
<td>3106</td>
<td>4</td>
<td>If EMS Unit Arrival on Scene Date and ED Discharge Date are the same, the EMS Unit Arrival on Scene Time cannot be later than the ED Discharge Time</td>
</tr>
<tr>
<td>3107</td>
<td>4</td>
<td>If EMS Unit Arrival on Scene Date and Hospital Discharge Date are the same, the EMS Unit Arrival on Scene Time cannot be later than the Hospital Discharge Time</td>
</tr>
</tbody>
</table>

### EMS Unit Scene Departure Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>3201</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>3202</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>3203</td>
<td>4</td>
<td>EMS Unit Scene Departure Date cannot be earlier than Date of Birth</td>
</tr>
<tr>
<td>3204</td>
<td>4</td>
<td>EMS Unit Scene Departure Date cannot be earlier than EMS Dispatch Date</td>
</tr>
<tr>
<td>3205</td>
<td>4</td>
<td>EMS Unit Scene Departure Date cannot be earlier than EMS Unit Arrival on Scene Date</td>
</tr>
<tr>
<td>3206</td>
<td>4</td>
<td>EMS Unit Scene Departure Date cannot be later than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>3207</td>
<td>4</td>
<td>EMS Unit Scene Departure Date cannot be later than ED Discharge Date</td>
</tr>
<tr>
<td>3208</td>
<td>4</td>
<td>EMS Unit Scene Departure Date cannot be later than Hospital Discharge Date</td>
</tr>
<tr>
<td>3209</td>
<td>3</td>
<td>EMS Unit Scene Departure Date minus EMS Unit Arrival on Scene Date cannot be greater than 7 days.</td>
</tr>
</tbody>
</table>
EMS Unit Scene Departure Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
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<tbody>
<tr>
<td>3301</td>
<td>1</td>
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<tr>
<td>3302</td>
<td>1</td>
<td>Time out of range</td>
</tr>
<tr>
<td>3303</td>
<td>4</td>
<td>If EMS Unit Scene Departure Date and EMS Dispatch Date are the same, the EMS Unit Scene Departure Time cannot be earlier than the EMS Dispatch Time</td>
</tr>
<tr>
<td>3304</td>
<td>4</td>
<td>If EMS Unit Scene Departure Date and EMS Unit Arrival on Scene Date are the same, the EMS Unit Scene Departure Time cannot be earlier than the EMS Unit Arrival on Scene Time</td>
</tr>
<tr>
<td>3305</td>
<td>4</td>
<td>If EMS Unit Scene Departure Date and ED/Hospital Arrival Date are the same, the EMS Unit Scene Departure Time cannot be later than the ED/Hospital Arrival Time</td>
</tr>
<tr>
<td>3306</td>
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<td>If EMS Unit Scene Departure Date and ED Discharge Date are the same, the EMS Unit Scene Departure Time cannot be later than the ED Discharge Time</td>
</tr>
<tr>
<td>3307</td>
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<td>If EMS Unit Scene Departure Date and Hospital Discharge Date are the same, the EMS Unit Scene Departure Time cannot be later than the Hospital Discharge Time</td>
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Transport Mode

<table>
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<tr>
<td>3403</td>
<td>4</td>
<td>If EMS response times are provided, Transport Mode cannot be 4 (Private/Public Vehicle/Walk-in)</td>
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</tbody>
</table>

Other Transport Mode

<table>
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Initial Field Systolic Blood Pressure

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<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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Initial Field Pulse Rate

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Initial Field Respiratory Rate

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### Initial Field Oxygen Saturation

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### Initial Field GCS – Eye

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<tr>
<td>4002</td>
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### Initial Field GCS – Verbal

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### Initial Field GCS – Motor

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<td>Blank, required to complete variable: Initial Field GCS – Total</td>
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### Initial Field GCS – Total

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<th>Level</th>
<th>Message</th>
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</thead>
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<tr>
<td>4301</td>
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<td>Invalid, out of range</td>
</tr>
<tr>
<td>4302</td>
<td>5</td>
<td>Blank, required to complete variables: Initial Field GCS – Eye, Initial Field GCS – Verbal, and Initial Field GCS – Motor</td>
</tr>
<tr>
<td>4303</td>
<td>4</td>
<td>Initial Field GCS – Total does not equal the sum of Initial Field GCS – Eye, Initial Field GCS – Verbal, and Initial Field GCS – Motor</td>
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### Inter-Facility Transfer

<table>
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<tr>
<td>4404</td>
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<td>Not Known/Not Recorded, required Inclusion Criterion</td>
</tr>
<tr>
<td>4405</td>
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<td>Not Applicable, required Inclusion Criterion.</td>
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</table>
# Emergency Department Information

## ED/Hospital Arrival Date

<table>
<thead>
<tr>
<th>Rule ID</th>
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<td>4502</td>
<td>1</td>
<td>Date out of range</td>
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<tr>
<td>4503</td>
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</tr>
<tr>
<td>4505</td>
<td>2</td>
<td>Not Known/Not Recorded, required Inclusion Criterion</td>
</tr>
<tr>
<td>4506</td>
<td>3</td>
<td><em>ED/Hospital Arrival Date</em> cannot be earlier than <em>EMS Dispatch Date</em></td>
</tr>
<tr>
<td>4507</td>
<td>3</td>
<td><em>ED/Hospital Arrival Date</em> cannot be earlier than <em>EMS Unit Arrival on Scene Date</em></td>
</tr>
<tr>
<td>4508</td>
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<td><em>ED/Hospital Arrival Date</em> cannot be earlier than <em>EMS Unit Scene Departure Date</em></td>
</tr>
<tr>
<td>4509</td>
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<td><em>ED/Hospital Arrival Date</em> cannot be later than <em>ED Discharge Date</em></td>
</tr>
<tr>
<td>4510</td>
<td>3</td>
<td><em>ED/Hospital Arrival Date</em> cannot be later than <em>Hospital Discharge Date</em></td>
</tr>
<tr>
<td>4511</td>
<td>3</td>
<td><em>ED/Hospital Arrival Date</em> cannot be earlier than <em>Date of Birth</em></td>
</tr>
<tr>
<td>4512</td>
<td>3</td>
<td><em>ED/Hospital Arrival Date</em> must be after 1993</td>
</tr>
<tr>
<td>4513</td>
<td>3</td>
<td><em>ED/Hospital Arrival Date</em> minus <em>Injury Incident Date</em> must be less than 30 days</td>
</tr>
<tr>
<td>4514</td>
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<td><em>ED/Hospital Arrival Date</em> minus <em>EMS Dispatch Date</em> cannot be greater than 7 days.</td>
</tr>
<tr>
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<td>Not Applicable, required Inclusion Criterion.</td>
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</table>

## ED/Hospital Arrival Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
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<tr>
<td>4602</td>
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<tr>
<td>4603</td>
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<tr>
<td>4604</td>
<td>4</td>
<td>If <em>ED/Hospital Arrival Date</em> and <em>EMS Dispatch Date</em> are the same, the <em>ED/Hospital Arrival Time</em> cannot be earlier than the <em>EMS Dispatch Time</em>.</td>
</tr>
<tr>
<td>4605</td>
<td>4</td>
<td>If <em>ED/Hospital Arrival Date</em> and <em>EMS Unit Arrival on Scene Date</em> are the same, the <em>ED/Hospital Arrival Time</em> cannot be earlier than the <em>EMS Unit Arrival on Scene Time</em>.</td>
</tr>
<tr>
<td>4606</td>
<td>4</td>
<td>If <em>ED/Hospital Arrival Date</em> and <em>EMS Unit Scene Departure Date</em> are the same, the <em>ED/Hospital Arrival Time</em> cannot be earlier than the <em>EMS Unit Scene Departure Time</em>.</td>
</tr>
<tr>
<td>4607</td>
<td>4</td>
<td>If <em>ED/Hospital Arrival Date</em> and <em>ED Discharge Date</em> are the same, the <em>ED/Hospital Arrival Time</em> cannot be later than the <em>ED Discharge Time</em>.</td>
</tr>
<tr>
<td>4608</td>
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<td>If <em>ED/Hospital Arrival Date</em> and <em>Hospital Discharge Date</em> are the same, the <em>ED/Hospital Arrival Time</em> cannot be later than the <em>Hospital Discharge Time</em>.</td>
</tr>
</tbody>
</table>

## Initial ED/Hospital Systolic Blood Pressure

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>4701</td>
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<tr>
<td>4702</td>
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</tr>
<tr>
<td>4703</td>
<td>3</td>
<td><em>Initial ED / Hospital Systolic Blood Pressure</em> must be 0 when <em>Ed Death = 1</em> (DOA).</td>
</tr>
<tr>
<td>4704</td>
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<td>Invalid, out of range</td>
</tr>
</tbody>
</table>
### Initial ED/Hospital Pulse Rate

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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<td>4802</td>
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<tr>
<td><strong>4803</strong></td>
<td><strong>3</strong></td>
<td><em>Initial Ed / Hospital Pulse Rate</em> must be 0 when <em>Ed Death</em> = 1 (DOA).</td>
</tr>
<tr>
<td>4804</td>
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<td>Invalid, out of range</td>
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</table>

### Initial ED/Hospital Temperature

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
</tr>
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<tbody>
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<td>4901</td>
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<td>4902</td>
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<tr>
<td>4903</td>
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### Initial ED/Hospital Respiratory Rate

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
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</thead>
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<tr>
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<tr>
<td>5002</td>
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<tr>
<td><strong>5003</strong></td>
<td><strong>3</strong></td>
<td><em>Initial ED/Hospital Respiratory Rate</em> must be 0 when <em>ED Death</em> = 1 (DOA).</td>
</tr>
<tr>
<td>5004</td>
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<td>If completed, then <em>Initial Ed/Hospital Respiratory Assistance</em> must be completed.</td>
</tr>
<tr>
<td>5005</td>
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### Initial ED/Hospital Respiratory Assistance

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<td><strong>5103</strong></td>
<td><strong>2</strong></td>
<td>Blank, required to complete when <em>Initial ED/Hospital Respiratory Rate</em> is complete</td>
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</table>
### Initial ED/Hospital Oxygen Saturation

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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<td>5201</td>
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<td>5202</td>
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<tr>
<td>5203</td>
<td>5</td>
<td>If completed, then <em>Initial ED/Hospital Supplemental Oxygen</em> must be completed</td>
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### Initial ED/Hospital Supplemental Oxygen

<table>
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<tr>
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<td>Blank, required to complete when <em>Initial ED/Hospital Oxygen Saturation</em> is complete</td>
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### Initial ED/Hospital GCS – Eye

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<td>Blank, required to complete variable: <em>Initial ED/Hospital GCS – Total</em></td>
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### Initial ED/Hospital GCS – Verbal

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### Initial ED/Hospital GCS – Motor

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<th>Message</th>
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<tr>
<td>5602</td>
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<td>Blank, required to complete variable: <em>Initial ED/Hospital GCS – Total</em></td>
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</table>
### Initial ED/Hospital GCS – Total

<table>
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<td>5702</td>
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<td>Blank, required to complete if Initial ED/Hospital GCS – Eye, Initial ED/Hospital GCS – Verbal, and Initial ED/Hospital GCS – Motor are Not Applicable or Known/Not Recorded</td>
</tr>
<tr>
<td>5703</td>
<td>2</td>
<td>Initial ED/Hospital GCS – Total does not equal the sum of Initial ED/Hospital GCS – Eye, Initial ED/Hospital GCS – Verbal, and Initial ED/Hospital GCS – Motor</td>
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</tbody>
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### Initial ED/Hospital GCS Assessment Qualifiers

<table>
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### Alcohol Use Indicator

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</thead>
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### Drug Use Indicator

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### ED Discharge Disposition

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<tr>
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<td>Not Known/Not Recorded, required Inclusion Criterion</td>
</tr>
<tr>
<td>6105</td>
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<td>Not Applicable, required Inclusion Criterion.</td>
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</table>
### ED Death

<table>
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<th>Level</th>
<th>Message</th>
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<td>Invalid value</td>
</tr>
<tr>
<td>6202</td>
<td>2</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>6203</td>
<td>2</td>
<td>If ( ED \text{ Discharge Disposition} = 5 ) (Died) then ( ED \text{ Death} ) must be complete.</td>
</tr>
<tr>
<td>6204</td>
<td>2</td>
<td>If ( ED \text{ Discharge Disposition} &lt;&gt; 5 ) (Died) then ( ED \text{ Death} ) should be NA (BIU = 1)</td>
</tr>
<tr>
<td>6206</td>
<td>3</td>
<td>Not Known/Not Recorded, required Inclusion Criterion</td>
</tr>
</tbody>
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### ED Discharge Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
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<tbody>
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<tr>
<td>6302</td>
<td>1</td>
<td>Date out of range</td>
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<tr>
<td>6303</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>6304</td>
<td>4</td>
<td>( ED \text{ Discharge Date} ) cannot be earlier than ( EMS \text{ Dispatch Date} )</td>
</tr>
<tr>
<td>6305</td>
<td>4</td>
<td>( ED \text{ Discharge Date} ) cannot be earlier than ( EMS \text{ Unit Arrival on Scene Date} )</td>
</tr>
<tr>
<td>6306</td>
<td>4</td>
<td>( ED \text{ Discharge Date} ) cannot be earlier than ( EMS \text{ Unit Scene Departure Date} )</td>
</tr>
<tr>
<td>6307</td>
<td>4</td>
<td>( ED \text{ Discharge Date} ) cannot be earlier than ( ED/Hospital \text{ Arrival Date} )</td>
</tr>
<tr>
<td>6308</td>
<td>4</td>
<td>( ED \text{ Discharge Date} ) cannot be later than ( Hospital \text{ Discharge Date} )</td>
</tr>
<tr>
<td>6309</td>
<td>4</td>
<td>( ED \text{ Discharge Date} ) cannot be earlier than ( Date \text{ of Birth} )</td>
</tr>
<tr>
<td>6310</td>
<td>3</td>
<td>( ED \text{ Discharge Date} ) minus ( ED/Hospital \text{ Arrival Date} ) cannot be greater than 365 days.</td>
</tr>
</tbody>
</table>

### ED Discharge Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>6401</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>6402</td>
<td>1</td>
<td>Time out of range</td>
</tr>
<tr>
<td>6403</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>6404</td>
<td>4</td>
<td>If ( ED \text{ Discharge Date} ) and ( EMS \text{ Dispatch Date} ) are the same, the ( ED \text{ Discharge Time} ) cannot be earlier than the ( EMS \text{ Dispatch Time} )</td>
</tr>
<tr>
<td>6405</td>
<td>4</td>
<td>If ( ED \text{ Discharge Date} ) and ( EMS \text{ Unit Arrival on Scene Date} ) are the same, the ( ED \text{ Discharge Time} ) cannot be earlier than the ( EMS \text{ Unit Arrival on Scene Time} )</td>
</tr>
<tr>
<td>6406</td>
<td>4</td>
<td>If ( ED \text{ Discharge Date} ) and ( EMS \text{ Unit Scene Departure Date} ) are the same, the ( ED \text{ Discharge Time} ) cannot be earlier than the ( EMS \text{ Unit Scene Departure Time} )</td>
</tr>
<tr>
<td>6407</td>
<td>4</td>
<td>If ( ED \text{ Discharge Date} ) and ( ED/Hospital \text{ Arrival Date} ) are the same, the ( ED \text{ Discharge Time} ) cannot be earlier than the ( ED/Hospital \text{ Arrival Time} )</td>
</tr>
<tr>
<td>6408</td>
<td>4</td>
<td>If ( ED \text{ Discharge Date} ) and ( Hospital \text{ Discharge Date} ) are the same, the ( ED \text{ Discharge Time} ) cannot be later than the ( Hospital \text{ Discharge Time} )</td>
</tr>
</tbody>
</table>
### Hospital Procedure Information

#### Hospital Procedures

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
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<tbody>
<tr>
<td>6501</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>6502</td>
<td>1</td>
<td>Procedures with the same code cannot have the same Hospital Procedure Start Date and Time.</td>
</tr>
<tr>
<td>6503</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>6504</td>
<td>4</td>
<td>Hospital Procedures must be BIU=1 (NA) when ED Death=1 (DOA)</td>
</tr>
</tbody>
</table>

#### Hospital Procedure Start Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Invalid value</td>
</tr>
<tr>
<td>6602</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>6603</td>
<td>4</td>
<td>Hospital Procedure Start Date cannot be earlier than EMS Dispatch Date</td>
</tr>
<tr>
<td>6604</td>
<td>4</td>
<td>Hospital Procedure Start Date cannot be earlier than EMS Unit Arrival on Scene Date</td>
</tr>
<tr>
<td>6605</td>
<td>4</td>
<td>Hospital Procedure Start Date cannot be earlier than EMS Unit Scene Departure Date</td>
</tr>
<tr>
<td>6606</td>
<td>4</td>
<td>Hospital Procedure Start Date cannot be earlier than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>6607</td>
<td>4</td>
<td>Hospital Procedure Start Date cannot be later than Hospital Discharge Date</td>
</tr>
<tr>
<td>6608</td>
<td>4</td>
<td>Hospital Procedure Start Date cannot be earlier than Date of Birth</td>
</tr>
<tr>
<td>6609</td>
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<td>Blank, required field</td>
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</table>

#### Hospital Procedure Start Time

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
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</thead>
<tbody>
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<tr>
<td>6702</td>
<td>1</td>
<td>Time out of range</td>
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<tr>
<td>6703</td>
<td>4</td>
<td>If Hospital Procedure Start Date and EMS Dispatch Date are the same, the Hospital Procedure Start Time cannot be earlier than the EMS Dispatch Time</td>
</tr>
<tr>
<td>6704</td>
<td>4</td>
<td>If Hospital Procedure Start Date and EMS Unit Arrival on Scene Date are the same, the Hospital Procedure Start Time cannot be earlier than the EMS Unit Arrival on Scene Time</td>
</tr>
<tr>
<td>6705</td>
<td>4</td>
<td>If Hospital Procedure Start Date and EMS Unit Scene Departure Date are the same, the Hospital Procedure Start Time cannot be earlier than the EMS Unit Scene Departure Time</td>
</tr>
<tr>
<td>6706</td>
<td>4</td>
<td>If Hospital Procedure Start Date and ED/Hospital Arrival Date are the same, the Hospital Procedure Start Time cannot be earlier than the ED/Hospital Arrival Time</td>
</tr>
<tr>
<td>6707</td>
<td>4</td>
<td>If Hospital Procedure Start Date and Hospital Discharge Date are the same, the Hospital Procedure Start Time cannot be later than the Hospital Discharge Time</td>
</tr>
<tr>
<td>6708</td>
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## Diagnoses Information

### Co-Morbid Conditions

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<tr>
<td>6802</td>
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### Injury Diagnoses

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
</tr>
</thead>
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<td>Invalid value</td>
</tr>
<tr>
<td>6902</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>6903</td>
<td>2</td>
<td>At least one diagnosis must be provided and meet inclusion criteria (800 – 959.9, except for 905 – 909.9, 910 – 924.9, 930 – 939.9)</td>
</tr>
</tbody>
</table>
### Injury Severity Information

#### AIS PreDot Code

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
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<tbody>
<tr>
<td>7001</td>
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<tr>
<td>7002</td>
<td>5</td>
<td>If completed, then AIS Severity must be completed.</td>
</tr>
<tr>
<td>7003</td>
<td>5</td>
<td>If completed, then AIS Version must be completed.</td>
</tr>
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</table>

#### AIS Severity

<table>
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<tbody>
<tr>
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</tr>
<tr>
<td>7102</td>
<td>5</td>
<td>If completed, then AIS Version must be completed.</td>
</tr>
<tr>
<td>7103</td>
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<td>Blank, required to complete when AIS PreDot Code is complete</td>
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</table>

#### ISS Body Region

<table>
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<tr>
<th>Rule ID</th>
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<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>7201</td>
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<td>Invalid value</td>
</tr>
<tr>
<td>7202</td>
<td>5</td>
<td>If completed, then AIS Severity must be completed.</td>
</tr>
<tr>
<td>7203</td>
<td>5</td>
<td>If completed, then AIS Version must be completed.</td>
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</table>

#### AIS Version

<table>
<thead>
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<th>Level</th>
<th>Message</th>
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</tr>
<tr>
<td>7302</td>
<td>4</td>
<td>Blank, required to complete when AIS PreDot Code, AIS Severity, or ISS Body Region are provided.</td>
</tr>
</tbody>
</table>

#### Locally Calculated ISS

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
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<tbody>
<tr>
<td>7401</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>7402</td>
<td>3</td>
<td>Must be the sum of three squares</td>
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</table>
### Outcome Information

#### Total ICU Length of Stay

<table>
<thead>
<tr>
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<th>Message</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>7502</td>
<td>3</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>7503</td>
<td>3</td>
<td>Total ICU Length of Stay should not be greater than the difference between ED/Hospital Arrival Date and Hospital Discharge Date</td>
</tr>
<tr>
<td>7504</td>
<td>3</td>
<td>Should not be greater than 365</td>
</tr>
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</table>

#### Total Ventilator Days

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>7601</td>
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<td>Invalid value</td>
</tr>
<tr>
<td>7602</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>7603</td>
<td>4</td>
<td>Total Ventilator Days should not be greater than the difference between ED/Hospital Arrival Date and Hospital Discharge Date</td>
</tr>
<tr>
<td>7604</td>
<td>4</td>
<td>Should not be greater than 365</td>
</tr>
</tbody>
</table>

#### Hospital Discharge Date

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>7701</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>7702</td>
<td>1</td>
<td>Date out of range</td>
</tr>
<tr>
<td>7703</td>
<td>3</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>7704</td>
<td>3</td>
<td>Hospital Discharge Date cannot be earlier than EMS Dispatch Date</td>
</tr>
<tr>
<td>7705</td>
<td>3</td>
<td>Hospital Discharge Date cannot be earlier than EMS Unit Arrival on Scene Date</td>
</tr>
<tr>
<td>7706</td>
<td>3</td>
<td>Hospital Discharge Date cannot be earlier than EMS Unit Scene Departure Date</td>
</tr>
<tr>
<td>7707</td>
<td>3</td>
<td>Hospital Discharge Date cannot be earlier than ED/Hospital Arrival Date</td>
</tr>
<tr>
<td>7708</td>
<td>3</td>
<td>Hospital Discharge Date cannot be earlier than ED Discharge Date</td>
</tr>
<tr>
<td>7709</td>
<td>3</td>
<td>Hospital Discharge Date cannot be earlier than Date of Birth</td>
</tr>
<tr>
<td>7710</td>
<td>3</td>
<td>Hospital Discharge Date minus Injury Incident Date cannot be greater than 365 days.</td>
</tr>
<tr>
<td>7711</td>
<td>3</td>
<td>Hospital Discharge Date minus ED/Hospital Arrival Date cannot be greater than 365 days.</td>
</tr>
</tbody>
</table>
### Hospital Discharge Time

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>7801</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>7802</td>
<td>1</td>
<td>Time out of range</td>
</tr>
<tr>
<td>7803</td>
<td>4</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>7804</td>
<td>4</td>
<td>If Hospital Discharge Date and EMS Dispatch Date are the same, the Hospital Discharge Time cannot be earlier than the EMS Dispatch Time</td>
</tr>
<tr>
<td>7805</td>
<td>4</td>
<td>If Hospital Discharge Date and EMS Unit Arrival on Scene Date are the same, the Hospital Discharge Time cannot be earlier than the EMS Unit Arrival on Scene Time</td>
</tr>
<tr>
<td>7806</td>
<td>4</td>
<td>If Hospital Discharge Date and EMS Unit Scene Departure Date are the same, the Hospital Discharge Time cannot be earlier than the EMS Unit Scene Departure Time</td>
</tr>
<tr>
<td>7807</td>
<td>4</td>
<td>If Hospital Discharge Date and ED/Hospital Arrival Date are the same, the Hospital Discharge Time cannot be earlier than the ED/Hospital Arrival Time</td>
</tr>
<tr>
<td>7808</td>
<td>4</td>
<td>If Hospital Discharge Date and ED Discharge Date are the same, the Hospital Discharge Time cannot be earlier than the ED Discharge Time</td>
</tr>
</tbody>
</table>

### Hospital Discharge Disposition

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>7901</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>7902</td>
<td>2</td>
<td>Blank, required field</td>
</tr>
<tr>
<td>7903</td>
<td>2</td>
<td>If ED Discharge Disposition = 5 (Died) then Hospital Discharge Disposition should be NA (BIU=1).</td>
</tr>
<tr>
<td>7906</td>
<td>2</td>
<td>If ED Discharge Disposition = 1,2,3,7, or 8 then Hospital Discharge Disposition cannot be blank.</td>
</tr>
<tr>
<td>7907</td>
<td>2</td>
<td>If ED Discharge Disposition = 4,6,9,10, or 11 then Hospital Discharge Disposition must be NA (BIU = 1).</td>
</tr>
<tr>
<td>7908</td>
<td>2</td>
<td>Not Applicable, required Inclusion Criterion.</td>
</tr>
</tbody>
</table>
### Financial Information

**Primary Method of Payment**

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>8002</td>
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</table>

**Quality Assurance Information**

**Hospital Complications**

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>8101</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>8102</td>
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</tbody>
</table>

**Control Information**

**Last Modified Date Time**

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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<td>8201</td>
<td>1</td>
<td>Invalid value</td>
</tr>
<tr>
<td>8202</td>
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<td>Blank, required field</td>
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</table>

**Patient ID**

<table>
<thead>
<tr>
<th>Rule ID</th>
<th>Level</th>
<th>Message</th>
</tr>
</thead>
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</tr>
<tr>
<td>8302</td>
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<td>Blank, required field</td>
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</table>

**Facility ID**

<table>
<thead>
<tr>
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<th>Level</th>
<th>Message</th>
</tr>
</thead>
<tbody>
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<td>8401</td>
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<td>Invalid value</td>
</tr>
<tr>
<td>8402</td>
<td>2</td>
<td>Blank, required field</td>
</tr>
</tbody>
</table>

*Inclusion criterion*
Data Scheme

Demographic Variables


   If Patient’s Home Zip Code is “Not Recorded,” or “Not Known,” the following four variables will be collected to generate a FIPS Code:

   a. *Patient’s Home Country*: The patient’s home country where he/she resides.

   b. *Patient’s Home State*: The patient’s home state (territory, province, or District of Columbia) where the patient resides.

   c. *Patient’s Home County*: The patient’s home county (or parish) of residence.

   d. *Patient’s Home City*: The patient’s home city (or township, village) of residence.

   If Patient’s Home Zip Code is “Not Applicable,” the following variable will be collected.

   e. *Alternate Home Residence*: Documentation of the type of patient without a home Zip Code.

2. *Date of Birth*: The patient’s date of birth.

   If Date of Birth is “Not Recorded,” “Not Known,” or less than 24 hours, the following two variables will be collected to determine the patient’s age:

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

   b. *Age Units*: The units used to document the patient’s age (Years, Months, Days, Hours).


5. *Sex*: The patient’s sex.

Injury Information

6. *Injury Incident Date*: The date the injury occurred.

7. *Injury Incident Time*: The time the injury occurred.


   If the injury is determined to be “Work-Related”, the following two variables will be collected:
a. **Patient’s Occupational Industry**: The occupational industry associated with the patient’s work environment.

b. **Patient’s Occupation**: The occupation of the patient.

9. **Primary E-code**: E-code used to describe the mechanism (or external factor) that caused the injury event.

   Autocalculates: Trauma Type & Intentionality

10. **Location E-code**: E-code used to describe the place/site/location of the injury event (E 849.X).

11. **Additional E-code**: Additional E-code used to describe, for example, a mass casualty event, or other external cause.

12. **Incident Location Zip Code**: The ZIP code of the incident location.

   If the Incident Location Zip Code is “Not Applicable,” “Not Recorded,” or “Not Known,” the following three variables will be collected to generate a FIPS Code:

   a. **Incident Country**: The country where the patient was found or to which the unit responded (or best approximation).

   b. **Incident State**: The state, territory, or province where the patient was found or to which the unit responded (or best approximation).

   c. **Incident County**: The county or parish where the patient was found or to which the unit responded (or best approximation).

   d. **Incident City**: The city or township where the patient was found or to which the unit responded (or best approximation).

13. **Protective Devices**: Protective devices (safety equipment) in use or worn by the patient at the time of the injury.

   If “Child Restraint” is present, complete variable “Child Specific Restraint.”

   a. **Child Specific Restraint**: Protective child restraint devices used by patient at the time of injury.

   If “Protective Devices” include “Airbag” complete variable “Airbag Deployment.”

   a. **Airbag Deployment**: Indication of an airbag deployment during a motor vehicle crash.
Pre-hospital Information

14. **EMS Dispatch Date**: The date the unit *transporting to your hospital* was notified by dispatch.

   Autocalculates: Total EMS Time

15. **EMS Dispatch Time**: The time the unit *transporting to your hospital* was notified by dispatch.

   Autocalculates: Total EMS Time

16. **EMS Unit Arrival on Scene/Transferring Facility Date**: The date the unit *transporting to your hospital* arrived on the scene.

   Autocalculates: Total EMS Response Time and Total EMS Scene Time

17. **EMS Unit Arrival on Scene/Transferring Facility Time**: The time the unit *transporting to your hospital* arrived on the scene (the time the vehicle stopped moving).

   Autocalculates: Total EMS Response Time and Total EMS Scene Time

18. **EMS Unit Scene/Transferring Facility Departure Date**: The date the unit *transporting to your hospital* left the scene.

   Autocalculates: Total EMS Scene Time

19. **EMS Unit Scene/transferring Facility Departure Time**: The time the unit *transporting to your hospital* left the scene (the time the vehicle started moving).

   Autocalculates: Total EMS Scene Time

20. **Transport Mode**: The mode of transport delivering the patient to your hospital.

21. **Other Transport Mode**: All other modes of transport used during patient care event, except the mode delivering the patient to the hospital.

22. **Initial Field Systolic Blood Pressure**: First recorded systolic blood pressure in the pre-hospital setting.

   Autocalculates: Revised Trauma Score – EMS (adult & pediatric)

23. **Initial Field Pulse Rate**: First recorded pulse in the pre-hospital setting (palpated or auscultated, expressed as a number per minute).

24. **Initial Field Respiratory Rate**: First recorded respiratory rate in the pre-hospital setting (expressed as a number per minute).
25. **Initial Field Oxygen Saturation**: First recorded oxygen saturation in the pre-hospital setting (expressed as a percentage).

26. **Initial Field GCS – Eye**: First recorded Glasgow Coma Score (Eye) in the pre-hospital setting.

   Autocalculates: Overall GCS - EMS Score (adult and pediatric)

27. **Initial Field GCS – Verbal**: First recorded Glasgow Coma Score (Verbal) in the pre-hospital setting.

   Autocalculates: Overall GCS – EMS Score (adult and pediatric)

28. **Initial Field GCS – Motor**: First recorded Glasgow Coma Score (Motor) in the pre-hospital setting.

   Autocalculates: Overall GCS – EMS Score (adult and pediatric)

29. **Initial Field GCS – Total**: First recorded Glasgow Coma Score (total) in the Pre-hospital setting.

   Utilize only if total score is available without component scores.

   Autocalculates: Revised Trauma Score - EMS (adult and pediatric)

30. **Inter-Facility Transfer**: Was the patient transferred to your facility from another acute care facility?

**Emergency Department Information**

31. **ED/Hospital Arrival Date**: The date the patient arrived to the ED/Hospital.

   Autocalculates: Total EMS Time and Total Length of Hospital Stay

32. **ED/Hospital Arrival Time**: The time the patient arrived to the ED/Hospital.

   Autocalculates: Total EMS Time and Total Length of Hospital Stay

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

   Autocalculates: Revised Trauma Score - ED (adult and pediatric)

34. **Initial ED/Hospital Pulse Rate**: First recorded pulse in the ED/hospital (palpated or auscultated, expressed as a number per minute).
35. **Initial ED/Hospital Temperature**: First recorded temperature (in degrees Celsius/centigrade) in the ED/hospital.

36. **Initial ED/Hospital Respiratory Rate**: First recorded respiratory rate in the ED/hospital (expressed as a number per minute).

   Autocalculates: Revised Trauma Score - ED (adult and pediatric)

   If a value is provided for “Initial ED/Hospital Respiratory Rate,” then complete “Initial ED/Hospital Respiratory Assistance.”

   a. **Initial ED/Hospital Respiratory Assistance**: Determination of respiratory assistance associated with the initial ED/hospital respiratory rate.

37. **Initial ED/Hospital Oxygen Saturation**: First recorded oxygen saturation in the ED/hospital (expressed as a percentage).

   If available, complete additional field: “Initial ED/Hospital Supplemental Oxygen”:

   a. **Initial ED/Hospital Supplemental Oxygen**: Determination of the presence of supplemental oxygen during assessment of initial ED/hospital oxygen saturation level.

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

   Autocalculates: Overall GCS - ED (adult and pediatric)

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

   Autocalculates: Overall GCS - ED (adult and pediatric)

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

   Autocalculates: Overall GCS - ED (adult and pediatric)

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

   Utilize only if total score is available without component scores.

   Autocalculates: Revised Trauma Score - ED (adult and pediatric)

42. **Initial ED/Hospital GCS Assessment Qualifiers**: Documentation of factors potentially affecting the first assessment of GCS upon arrival in the ED/hospital.

43. **Alcohol Use Indicator**: Use of alcohol by the patient.
44. **Drug Use Indicator**: Use of drugs by the patient.

45. **ED Discharge Disposition**: The disposition of the patient at the time of discharge from the ED.

If the ED Discharge Disposition is recorded as “Died”, the field below documents under what circumstances the death occurred:

   a. **ED Death**: The type of death incurred while the patient was in the ED.

46. **ED Discharge Date**: The date the patient was discharged from the ED.

   Autocalculates: Total ED Time

47. **ED Discharge Time**: The time the patient was discharged from the ED.

   Autocalculates: Total ED Time

**Hospital Procedure Information**

48. **Hospital Procedures**: Operative or essential procedures conducted during hospital stay.

49. **Hospital Procedure Start Date**: The date operative and essential procedures were performed.

50. **Hospital Procedure Start Time**: The time operative and essential procedures were performed.

**Diagnosis Information**

51. **Comorbid Conditions**: Pre-existing comorbid factors present prior to patient arrival at the ED/hospital.

52. **Injury Diagnosis**: Diagnoses related to all identified injuries.

   Autocalculates: Abbreviated Injury Score (six body regions), Injury Severity Score and Functional Capacity Index.

**Injury Severity Information**

53. **AIS Predot Code**: The Abbreviated Injury Scale (AIS) predot codes that reflect the patient’s injuries.
54. **AIS Severity**: The Abbreviated Injury Scale (AIS) severity codes that reflect the patient’s injuries.

55. **ISS Body Region**: The Injury Severity Score (ISS) body region codes that reflect the patient’s injuries.

56. **AIS Version**: The software (and version) used to calculate Abbreviated Injury Scale (AIS) severity codes.

57. **Locally Calculated ISS**: The Injury Severity Score (ISS) that reflects the patient’s injuries.

### Outcome Information

58. **Total ICU Length of Stay**: The total number of patient days in any ICU (including all episodes).

59. **Total Ventilator Days**: The total number of patient days spent on a mechanical ventilator (including all episodes)

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

   Autocalculates: Total Length of Hospital Stay

61. **Hospital Discharge Time**: The time the patient was discharged from the hospital.

   Autocalculates: Total Length of Hospital Stay

62. **Hospital Discharge Disposition**: The disposition of the patient when discharged from the hospital.

### Financial Information

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

### Quality Assurance Information

64. **Hospital Complications**: Any medical complication that occurred during the patient’s stay at your hospital.
Appendix 5: Glossary of Terms
Co-Morbid Conditions

**Alcoholism:** To be determined based upon the brief screening tool used at your institution.

*ICD-9 Code Range: 291.0-291.3, 291.5, 291.81, 291.89, 291.9, 303.00-303.93, 305.00-305.03, V11.3*

**Ascites:** The presence of fluid accumulation (other than blood) in the peritoneal cavity noted on physical examination, abdominal ultrasound, or abdominal CT/MRI.

*ICD-9 Code Range: 789.5 (pre 2008), 789.59*

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

*ICD-9 Code Range: for example - 269.0, 286.0, 286.1, 286.4, 287.1, 287.3 (pre 2006)-287.5.287.9*

**Chemotherapy for cancer within 30 days:** A patient who had any chemotherapy treatment for cancer in the 30 days prior to admission. Chemotherapy may include, but is not restricted to, oral and parenteral treatment with chemotherapeutic agents for malignancies such as colon, breast, lung, head and neck, and gastrointestinal solid tumors as well as lymphatic and hematopoietic malignancies such as lymphoma, leukemia, and multiple myeloma.

*ICD-9 Code Range: V58.1(pre 2006), V58.11*

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

*ICD-9 Code Range: 740.0 through 759.9, 758.3 (pre 2005), 752.8 (pre 2004)*

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

1. Abnormal limitation in exercise tolerance due to dyspnea or fatigue
2. Orthopnea (dyspnea on lying supine)
3. Paroxysmal nocturnal dyspnea (awakening from sleep with dyspnea)
4. Increased jugular venous pressure
5. Pulmonary rales on physical examination
6. Cardiomegaly
7. Pulmonary vascular engorgement
ICD-9 Code Range: 398.91, 402.01, 402.11, 402.91, 404.11, 404.13, 404.91, 404.93, 425.0-425.9, 428.0

Current smoker: A patient who has smoked cigarettes in the year prior to admission. Do not include patients who smoke cigars or pipes or use chewing tobacco.

Currently requiring or on dialysis: Acute or chronic renal failure prior to injury that was requiring periodic peritoneal dialysis, hemodialysis, hemofiltration, or hemodiafiltration.

ICD-9 Code Range: V45.1

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

ICD-9 Code Range: 430-438.9, 436

Diabetes mellitus: Diabetes mellitus prior to injury that required exogenous parenteral insulin or an oral hypoglycemic agent.

ICD-9 Code Range: 250.00-250.33, 250.40-250.73

Disseminated cancer: Patients who have cancer that:

1. Has spread to one site or more sites in addition to the primary site AND
2. In whom the presence of multiple metastases indicates the cancer is widespread, fulminant, or near terminal. Other terms describing disseminated cancer include “diffuse,” “widely metastatic,” “widespread,” or “carcinomatosis.” Common sites of metastases include major organs (e.g., brain, lung, liver, meninges, abdomen, peritoneum, pleura, bone).

ICD-9 Code Range: 196.0-199.1

Do Not Resuscitate (DNR) status: The patient had a Do-Not-Resuscitate (DNR) document or similar advance directive recorded prior to injury.

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

ICD-9 Code Range: 456.0-456.20
Functionally dependent health status: Pre-injury functional status may be represented by the ability of the patient to complete activities of daily living (ADL) including: bathing, feeding, dressing, toileting, and walking. This item is marked YES if the patient, prior to injury, was partially dependent or completely dependent upon equipment, devices or another person to complete some or all activities of daily living. Formal definitions of dependency are listed below:

1. Partially dependent: The patient requires the use of equipment or devices coupled with assistance from another person for some activities of daily living. Any patient coming from a nursing home setting who is not totally dependent would fall into this category, as would any patient who requires kidney dialysis or home ventilator support that requires chronic oxygen therapy yet maintains some independent functions.

2. Totally dependent: The patient cannot perform any activities of daily living for himself/herself. This would include a patient who is totally dependent upon nursing care, or a dependent nursing home patient. All patients with psychiatric illnesses should be evaluated for their ability to function with or without assistance with ADLs just as the non-psychiatric patient.

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

ICD-9 Code Range: V12.50

History of Myocardial Infarction within past 6 months: The history of a non-Q wave, or a Q wave infarction in the six months prior to injury as diagnosed in the patient's medical record.

ICD-9 Code Range: 412

History of revasc/amp for PVD (History of revascularization/amputation for peripheral vascular disease): Any type of angioplasty or revascularization procedure for atherosclerotic PVD (e.g., aortofemoral, femoral-femoral, femoral-popliteal) or a patient who has had any type of amputation procedure for PVD (e.g., toe amputations, transmetatarsal amputations, below the knee or above the knee amputations). Patients who have had amputation for trauma or resection of abdominal aortic aneurysms would not be included.

Hypertension requiring medication: History of a persistent elevation of systolic blood pressure >140 mm Hg and a diastolic blood pressure >90 mm Hg requiring an antihypertensive treatment (e.g., diuretics, beta blockers, ACE inhibitors, calcium channel blockers).

ICD-9 Code Range: 401.0-401.9, 402.00, 402.10, 402.90, 403.00, 403.10, 403.90, 404.00, 404.10, 404.90, 405.01-405.99
**Impaired sensorium:** Patients should be noted to having an impaired sensorium if they had mental status changes, and/or delirium in the context of a current illness prior to injury. Patients with chronic or longstanding mental status changes secondary to chronic mental illness (e.g., schizophrenia) or chronic dementing illnesses (e.g., multi-infarct dementia, senile dementia of the Alzheimer's type) should also be included. Mental retardation would qualify as impaired sensorium. For pediatric populations, patients with documented behavior disturbances, attention disorders, delayed learning or delayed development should be included.

*ICD-9 Code Range:* 290-290.9, 299.00, 312.9, 314.00, 315.2, 315.31, 315.39, 315.5, 315.8, 315.9, 317, 318.0, 318.1, 319, 331.1 (pre 2004), 331.11-331.2, V11.0, V11.1, V11.2, V11.8

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

*ICD-9 Code Range:* 343.0 through 343.9, 765.00 through 765.19, 770.7

**Obesity:** Defined as a Body Mass Index of 40 or greater.

*ICD-9 Code Range:* 278.00-278.01

**Respiratory Disease:** Defined as severe chronic lung disease, chronic asthma; cystic fibrosis; or COPD (such as emphysema and/or chronic bronchitis) resulting in any one or more of the following:

1. Functional disability from COPD (e.g., dyspnea, inability to perform ADLs)
2. Hospitalization in the past for treatment of COPD
3. Requires chronic bronchodilator therapy with oral or inhaled agents
4. An FEV1 of <75% of predicted on pulmonary function testing

Do not include patients whose only pulmonary disease is *acute* asthma. Do not include patients with diffuse interstitial fibrosis or sarcoidosis.

*ICD-9 Code Range:* 277.00, 490 though 493.92

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

**Abdominal compartment syndrome:** Defined as the sudden increase in the intra-abdominal pressure resulting in alteration in the respiratory mechanism, hemodynamic parameters, and renal perfusion. Typically patients with this syndrome are critically ill and require ventilator support and/or reoperation.

*ICD-9 Code Range:* 958.93

**Abdominal fascia left open:** No primary surgical closure of the fascia or intra-abdominal packs left at conclusion of primary laparotomy (damage control).

**Acute renal failure:** A patient who did not require dialysis prior to injury, who has worsening renal dysfunction after injury requiring hemodialysis, ultrafiltration, or peritoneal dialysis. If the patient refuses treatment (e.g., dialysis), the condition is still considered present.

*ICD-9 Code Range:* 403.11, 403.91, 404.12, 404.92, 582.0-582.9, 583.0-583.7, 584.5-584.9 585 (pre 2006), 586, 588.0, 958.5

**ARDS:** Adult (Acute) Respiratory Distress Syndrome: ARDS occurs in conjunction with catastrophic medical conditions, such as pneumonia, shock, sepsis (or severe infection throughout the body, sometimes also referred to as systemic infection, and may include or also be called a blood or blood-borne infection), and trauma. It is a form of sudden and often severe lung failure characterized by PaO2/FiO2 ≤ 200, decreased compliance, and diffuse bilateral pulmonary infiltrates without associated clinical evidence of CHF. The process must persist beyond 36 hours and require mechanical ventilation.

*ICD-9 Code Range:* ICD-9 codes 518.5 and 518.82 cross-referenced with procedural codes for ventilatory support (96.70, 96.71 and 96.72).

**Base deficit:** Defined as a value greater than 4 at any time during admission. This number is reported as a component of arterial or venous blood gases. The number may be reported by the lab as Base Deficit, or as Base Excess with a negative value.

**Bleeding:** Any transfusion (including autologous) of five or more units of packed red blood cells or whole blood given from the time the patient is injured up to and including 72 hours later. The blood may be given for any reason.

**Cardiac arrest with CPR:** The absence of a cardiac rhythm or presence of chaotic cardiac rhythm that results in loss of consciousness requiring the initiation of any component of basic and/or advanced cardiac life support. Excludes patients that arrive at the hospital in full arrest.

*ICD-9 Code Range:* 427.5

**Coagulopathy:** Defined as twice the upper limit of the normal range for PT or PTT in a patient without a pre-injury bleeding disorder of this magnitude.

*ICD-9 Code Range:* 286.6, 287.1, 287.3
**Coma:** Defined as significantly impaired level of consciousness (exclude transient disorientation or psychosis) for greater than 24 hours. The patient should be unconscious, or postures to painful stimuli, or is unresponsive to all stimuli. Does not include drug-induced coma.

**Decubitus ulcer:** Defined as a “pressure sore” resulting from pressure exerted on the skin, soft tissue, muscle, or bone by the weight of an individual against a surface beneath. Individuals unable to avoid long periods of uninterrupted pressure over bony prominences are at increased risk for the development of necrosis and ulceration.

*ICD-9 Code Range: 707.0 (pre 2005), 707.00 through 707.09*

**Deep surgical site infection:** Defined as an infection that occurs within 30 days after an operation and the infection appears to be related to the operation. The infection should involve deep soft tissues (e.g., fascial and muscle layers) at the site of incision and at least one of the following:

1. Purulent drainage from the deep incision but not from the organ/space component of the surgical site.
2. A deep incision spontaneously dehiscs or is deliberately opened by a surgeon when the patient has at least one of the following signs or symptoms: fever (> 38 C), localized pain, or tenderness, unless site is culture-negative.
3. An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
4. Diagnosis of a deep incision infection by a surgeon or attending physician.

**Note:**
Report infections that involve both superficial and deep incision sites as deep surgical site infection. If wound spontaneously opens as a result of infection, code for Deep Surgical Site Infection and Wound Disruption.

**Drug or alcohol withdrawal syndrome:** Defined as a set of symptoms that may occur when a person who has been drinking too much alcohol or habitually using certain drugs suddenly stops. Symptoms may include: activation syndrome (i.e., tremulousness, agitation, rapid heart beat and high blood pressure), seizures, hallucinations or delirium tremens.

*ICD-9 Code Range: 291.0, 291.3, 291.81, 292.0*

**Deep Vein Thrombosis (DVT)/thrombophlebitis:** The formation, development, or existence of a blood clot or thrombus within the vascular system, which may be coupled with inflammation. This diagnosis may be confirmed by a venogram, ultrasound, or CT. The patient must be treated with anticoagulation therapy and/or placement of a vena cava filter or clipping of the vena cava.


**Extremity compartment syndrome:** Defined as a condition in which there is swelling and an increase in pressure within a limited space (a fascial compartment) that presses on and
Compromises blood vessels, nerves, and/or tendons that run through that compartment. Compartment syndromes usually involve the leg but can also occur in the forearm, arm, thigh, and shoulder.

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

*ICD-9 Code Range: 996.00, 996.1, 996.52, 996.61, 996.62*

**Intracranial pressure elevation:** Defined as intracranial pressure greater than 25 Torr for greater than 30 minutes.

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

*ICD-9 Code Range: 410.00, 410.02, 410.10, 410.12, 410.20, 410.22, 410.30, 410.32, 410.40, 410.42, 410.50, 410.52, 410.60, 410.62, 410.70, 410.72, 410.80, 410.82, 410.90, 410.92*

**Organ/space surgical site infection:** Defined as an infection that occurs within 30 days after an operation and infection involves any part of the anatomy (eg, organs or spaces) other than the incision, which was opened or manipulated during a procedure; and at least one of the following, including:
1. Purulent drainage from a drain that is placed through a stab wound or puncture into the organ/space;
2. Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space;
3. An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination; or
4. Diagnosis of an organ/space SSI by a surgeon or attending physician.

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

Criterion 1. Rales or dullness to percussion on physical examination of chest AND any of the following:
   a. New onset of purulent sputum or change in character of sputum
   b. Organism isolated from blood culture
   c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy

Criterion 2. Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion AND any of the following:
   a. New onset of purulent sputum or change in character of sputum
   b. Organism isolated from the blood
   c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy
   d. Isolation of virus or detection of viral antigen in respiratory secretions
   e. Diagnostic single antibody titer (IgM) or fourfold increase in paired serum samples (IgG) for pathogen
f. Histopathologic evidence of pneumonia

*ICD-9 Code Range:* 480.0-480.3, 481, 482.0, 482.1, 482.2, 482.30, 482.31, 482.32, 482.39, 482.40, 482.41, 482.49, 482.81-482.89, 482.9, 483.0, 483.1, 483.8, 484.1, 484.8, 485, 486

**Pulmonary embolism:** Defined as a lodging of a blood clot in a pulmonary artery with subsequent obstruction of blood supply to the lung parenchyma. The blood clots usually originate from the deep leg veins or the pelvic venous system. Consider the condition present if the patient has a V-Q scan interpreted as high probability of pulmonary embolism or a positive pulmonary arteriogram or positive CT angiogram.

*ICD-9 Code Range:* 415.11, 415.19

**Stroke/CVA:** Following injury, patient develops an embolic, thrombotic, or hemorrhagic vascular accident or stroke with motor, sensory, or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory) that persists for 24 or more hours.

*ICD-9 Code Range:* 997.02

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

1. Purulent drainage, with or without laboratory confirmation, from the superficial incision.
2. Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision.
3. At least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, redness, or heat and superficial incision is deliberately opened by the surgeon, unless incision is culture-negative.
4. Diagnosis of superficial incisional surgical site infection by the surgeon or attending physician.

Do not report the following conditions as superficial surgical site infection:

1. Stitch abscess (minimal inflammation and discharge confined to the points of suture penetration).
2. Infected burn wound.
3. Incisional SSI that extends into the fascial and muscle layers (see deep surgical site infection).

**Systemic sepsis:** Defined as definitive evidence of infection, plus evidence of a systemic response to infection. This systemic response is manifested by the presence of infection and TWO or more of the following conditions:

1. Temp >38 degrees C or <36 degrees C
2. Sepsis with hypotension despite adequate fluid resuscitation combined with perfusion abnormalities that may include, but are not limited to, lactic acidosis, oliguria, or an acute alteration in mental status. Patients who are on inotropics or vasopressor agents may not be hypotensive at the time that perfusion abnormalities are measured.
3. HR >90 bpm  
4. RR >20 breaths/min or PaCO2 <32 mmHg(<4.3 kPa)  
5. WBC >12,000 cell/mm³, <4000 cells/mm³, or >10% immature (band) forms

**ICD-9 Code Range:** 038.0, 038.10, 038.11, 038.19, 038.3, 038.4-038.9, 790.7

**Unplanned intubation:** Patient requires placement of an endotracheal tube and mechanical or assisted ventilation because of the onset of respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis. In patients who were intubated in the field or Emergency Department, or those intubated for surgery, unplanned intubation occurs if they require reintubation after being extubated.

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

**ICD-9 Code Range:** 998.3 (pre 2004), 998.31, 998.32

**Other Terms**

**Foreign Visitor** is defined as any person visiting a country other than his/her usual place of residence for any reason without intending to receive earnings in the visited country.

**Intermediate care facility:** A facility providing a level of medical care that is less than the degree of care and treatment that a hospital or skilled nursing facility is designed to provide but greater than the level of room and board.

**Home Health Service:** A certified service approved to provide care received at home as part-time skilled nursing care, speech therapy, physical or occupational therapy or, part-time services of home health aides.

**Homeless** is defined as a person who lacks housing. The definition also includes a person living in transitional housing or a supervised public or private facility providing temporary living quarters.

**Hospice:** An organization which is primarily designed to provide pain relief, symptom management and supportive services for the terminally ill and their families.

**Migrant Worker** is defined as a person who temporarily leaves his/her principal place of residence within a country in order to accept seasonal employment in the same country.

**Operative and/or essential procedures** is defined as procedures performed in the Operating Room, Emergency Department, or Intensive Care Unit that were essential to the diagnoses, stabilization, or treatment of the patient’s specific injuries. Repeated diagnostic procedures (e.g., repeated CT scan) should not be recorded (record only the first procedure).
*Skilled Nursing Care*: Daily nursing and rehabilitative care that is performed only by or under the supervision of skilled professional or technical personnel. Skilled care includes administering medication, medical diagnosis and minor surgery.

*Undocumented Citizen* is defined as a national of another country who has entered or stayed in another country without permission.
Appendix 6: NTDS Data Dictionary Revision Cycle

Each year, the COT considers revisions for the National Trauma Data Standard data dictionary. We receive suggestions from NTDB participants, researchers, committee members, and others. The NTDB reviews suggestions and determines whether changes are required on an annual basis. At the beginning of each calendar, we will begin the cycle to determine data dictionary revisions for the year after next. For example, in January 2010, we will begin considering revisions for the 2012 data dictionary (i.e. the definitions applied to 2012 admissions) This approximately 14 month interval from consideration to implementation is required to allow for proper vetting of any changes, as well as the integration of changes into software products and registries.

Data Dictionary Update Cycle:
* Jan 2010 Preliminary ACS ideas for 2012 Data Dictionary (NTDS Data Dictionary Project Team)
* Jan-May COT committee members’ discussions/review
* March NTDS Vendor Meeting (in conjunction with COT Annual Meeting)
* May 2010 Finalize ACS ideas for 2012 Data Dictionary
* July 2010 Circulate draft 2012 Data Dictionary
* Jul-Sep COT committee members’ discussions/review
* Oct 2010 Ratify 2012 Data Dictionary
* Jan 2011 Repeat above process for 2013 Data Dictionary

The data dictionary for 2011 admissions will be available to users in 2010. Anticipated changes include:

- Q_01 Revision of the complications list
- ED_18 Revision of ED Death field
- P_08 Addition of “None; single vehicle transport” response category

In addition, fields designed to collect information about processes of care will be added to the data dictionary. The following processes of care are included:

- ICP monitoring in severe traumatic brain injury
- Time to hemorrhage control
- Fracture management
- Venous thromboembolism prophylaxis

Please note that additional revisions may be included. The intention of this preview is to introduce the notion of the NTDS revision cycle, and to give users an idea of the changes coming in the next volume of the data dictionary.