

National EMS Database

NEMESIS Research Data Set v. 2.2.1

2012 User Manual

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ACKNOWLEDGEMENT

The Office of Emergency Medical Services, National Highway Traffic Safety Administration (NHTSA) established the NEMSIS Data Set as a public service to be a repository of EMS related data voluntarily reported by participating EMS agencies and states. The National Highway Traffic Safety Administration collects and maintains the NEMSIS Database.

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TERMS OF USE

Please be advised of the following Terms and Conditions of Use. In order to request the NEMSIS dataset, you must agree to these terms and conditions (below), and complete the data application form.

The National Highway Traffic Safety Administration (NHTSA) established the NEMSIS Data Set as a public service to be a repository of EMS related data voluntarily reported by participating EMS agencies and states. PLEASE NOTE THAT NEMSIS DATABASE IS NOT A POPULATION BASED DATA SET.

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A copy of the final printed material must be forwarded to NEMSIS Technical Assistance Center staff.

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HISTORY OF NEMSIS

In 1973, the Emergency Medical Services Systems Act was passed. This act was initiated in response to the fact that State EMS directors could not compare data from one state to another in any way or in any standard format or process. At the same time, The Department of Health, Education and Welfare indentified 15 essential components of an EMS system, which was helpful in defining data needs. This was the first legislation to require data or documentation of EMS services.

The first major document to publish data points that specifically address EMS systems was the Utstein Style for Uniform Reporting of Data, published in 1991. These data points, specific to cardiac care, also included variables to assess patient outcome, which was, at the time, unavailable to EMS personnel.

In 1994, it became clear that different data fields (across all EMS systems) existed for the same issue or event. There was a need for standardization. The National Highway Safety Administration (NHTSA) developed a national consensus document that defined 81 elements important to an EMS information system. This document was referred to as the NHTSA Uniform Pre-hospital EMS Dataset Version 1.0.

In 1996, after widespread national input, NHTSA published the *EMS Agenda for the Future...A Vision for the Nation's EMS System* outlining five recommendations for EMS information systems.

In 1997, The National Center for Injury Prevention and Control publishes *Data Elements for Emergency Department Systems* which extends the concept of an information system to the emergency department by providing standards for data collection and linkages back to EMS.

In 1998, NHTSA produced a follow-up document to the *EMS Agenda for the Future* called *EMS Agenda for the Future: Implementation Guide*. The document gave suggestions or approaches for the development of 14 components of the *EMS Agenda for the future*.

In 2001, The National Association of State EMS Directors in conjunction with its federal partners at the National Highway Traffic Safety Administration (NHTSA) and the Trauma/EMS Systems program of the Health Resources and Services Administration's (HRSA) Maternal Child Health Bureau worked to develop a national EMS database—known as NEMSIS, the *National EMS Information System*.

In 2003, states and territories begin to sign a “Memorandum of Understanding” (MOU) recognizing the need for standard EMS data collection at the state level as well as the assignment of specific definitions to a set of data elements indentified as desirable to be collected on a national level. By 2008, all states and territories sign the memorandum.

After 18 months of working with expert consensus panels, a 400 page NEMSIS data dictionary was completed. Information about each of the data elements, the variables, and the definitions associated with that data element as well as how to deploy the element in a database are described.

In 2004, physical database schemas and models, as well as scripts to automatically create the database, are made available in different platforms to EMS software vendors and states implementing state EMS data collection systems. XML is defined as the standard to move EMS data between local and the state level or state and the national database level. XML's open format provides an easy way to pass data between different software formats.

In 2005, a fully vetted dataset is released and schemas published on the NEMSIS website for integration. The Version 2.2 dataset was created through a national consensus process to update and revise the standard. NHTSA, HRSA (EMSC), and the CDC see the value from the pilot phase of the NEMSIS project and provide funding to create the NEMSIS Technical Assistance Center. The contract is given to the University of Utah School of Medicine (Utah) to operate the NEMSIS Technical Assistance Center. Utah partners with the University of North Carolina (EMS-PIC) to handle all of the customer service needs.

In 2009, the Version 2.2.1 dataset was reviewed and Version 3 created. This version of the dataset not only expanded the number of available NEMSIS data elements, it also provided standards for software implementation of business rules, expanded recommendations for state EMS datasets and a standard for data export using Web Services.

In 2012, NEMSIS version 3.2.6 is “locked down” and compliance testing of software products on the new standard began. In addition, NEMSIS 3.x has passed HL7 balloting and is now a normative standard. A Data Standard for Trial Use (DSTU) period was initiated and will continue for 18 months. The number of states submitting EMS events to the national repository continues to grow, with 37 states and territories continually submitting data.

NEMSIS CONFIDENTIALITY POLICY

The NEMSIS National Database is maintained on a secure database with limited internal access. External users must gain permission to the database by completing a request form available on the web site (<http://www.nemsis.org/dataCenter/requestNEMSISData.html>). Use of the National EMS Database is in strict compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA).² The NEMSIS Technical Assistance Center does not distribute or report data identifying a patient, EMS agency, health care facility, or reporting state in any manner that allows for identification without the express written permission of the entity to be identified. The dataset collected by the NEMSIS TAC is considered a “limited” dataset under HIPAA, and the research dataset that the NEMSIS TAC releases is a “de-identified” dataset.

CURRENT LIMITATIONS OF NATIONAL EMS DATA

1. Data Quality in the National EMS Database

The National EMS Database is a convenience sample— it consists solely of data submitted by participating EMS agencies within states and it is not a population-based data set. In addition, the National EMS Database inherits the individual deficiencies originating from its contributing entities. However, the NEMSIS TAC is continually cleaning and standardizing the data to improve data quality. Data files received from contributing EMS agencies and states are checked for completeness, logical consistency, and proper formatting. Any data files not passing the NEMSIS validation and data cleaning processes are rejected or flagged; based upon the seriousness of the discovered errors. A data profile report is generated for each submitted file from a state (and/or submitting entity) allowing the opportunity to review the quality of submitted data, correct errors and resubmit their data if needed. Any remaining data limitations, errors, or inconsistencies are allowed into the database. These errors remain for two reasons: 1) it would be extremely difficult to flag individual errors and request corrections from thousands of EMS agencies submitting millions of records and; 2) allowing states (and associated EMS agencies) to view data as submitted, will hopefully facilitate efforts to further refine data collection techniques to increase the accuracy of data collected.

The NEMSIS TAC employs edit checks to identify invalid or out of range values for the variables included the research data set. There are currently over 300 edit checks. For further information about the edit checks please see Appendix B.

2. The National EMS Database is not a Population-based Dataset

The National EMS Database is subject to the limitations of any “convenience sample”. It probably includes a disproportionate number of EMS agencies with the resources and leadership necessary to be an adopter of the NEMSIS standard. The data may not be representative of all States or EMS agencies in the nation and thus do not allow statistically valid inferences about national incidence and/or prevalence.

In addition, users of the National EMS Database should understand that the data are “event-based” and not “patient-based”. That is, a single patient may be represented in more than one record for a variety of reasons. A patient may request EMS assistance frequently, and therefore, be represented in the dataset more than once. Also, several agencies may respond to the same event (i.e., one patient) and each submit a record to the National EMS Database. For example, a patient may be treated by first responders, who transfer care to a ground ambulance crew, who deliver the patient to a soccer field for transport to a tertiary hospital via air ambulance. In this case, three records would exist in the National EMS Database for the single event.

3. Selection and Information Bias in the National EMS Database

As a “convenience sample”, the National EMS Database is subject to various forms of bias. The NEMSiS national data are submitted voluntarily from EMS agencies and states that have demonstrated a commitment to monitoring and improving the care of patients treated and transported by EMS. These may not be representative of all EMS agencies and states. In addition, states have differing criteria for including patients in statewide EMS databases. Some states include all 9-1-1 calls, while other states limit case additions to patient contacts or patient transports. See the NEMSiS website for descriptions of inclusion criteria for each submitting state (<http://www.nemsis.org/support/stateProgressReports/index.html>).

Some of the theoretical issues resulting from the use of registries have been noted²⁻⁴. The most obvious problems are selection bias, the inconsistency with which clinical variables can be measured, and inter-agency differences in treatment and transport practices.

Selection bias refers to an apparent difference between two groups that is actually caused by different inclusion criteria. For example, if a state includes all “no-treatment, left on scene” patients in its registry and another state does not, the state not including this patient population may appear to have more higher acuity events (i.e., frequent treatment and medication events) compared to the state including patient refusals. Any difference in inclusion/exclusion criteria could produce a selection bias.

Information bias refers to an apparent difference between two groups that is actually caused by a difference in the data available to compare them. Many fields among the national NEMSiS elements allow for null values, and differences in the proportion of cases with missing (or null) data may be responsible for apparent differences among states of EMS agencies. If one state demonstrates incomplete data on patients with treatment complications, for example, it may falsely appear to be delivering better quality care than a state that diligently requires every treatment complication to be recorded.

4. Missing data in the National EMS Dataset

The proportion of missing data varies across data elements in National EMS Database, and it is important to decide how to deal with missing data when doing analyses. In most cases NEMSiS data are not missing at random and analyses, therefore, are subject to bias if missing data are ignored. That is, the results may be misleading when excluding all observations with missing data or null values. Excluding observations with missing values is the default for most software programs when running statistical analyses.

Another option is to provide plausible values for the missing data, either by single value or multiple value imputation. A single imputation of a value may be an educated guess at the value, substitution of the mean value, or substitution based on a regression equation using other (observed) values. For example, one might assume that a patient has suffered an injury (E09_04=Yes) if the complaint reported to dispatch was “Traumatic Injury”. Most statistical software packages can do imputations without much difficulty. However, it is important to

explore the impact of missing data with sensitivity analyses. That is, repeat an analysis with and without imputation and see whether there are any important differences.

CONTACT INFORMATION

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GETTING STARTED WITH NATIONAL EMS DATA

The National EMS Research Database is a set of relational tables and consists of 19 data files each, for ASCII, SAS and STATA formats. These files are provided in ASCII-CSV format (comma separated value), SAS and STATA formats. Both types of files can be used to export the data to other formats (e.g., Excel, R, SPSS, etc.).

The table named “Event Table” includes all of the single entry elements contained in the NEMSIS standard that have been approved for release. All other tables include elements for which multiple entry values are possible. The data element “EventID” is the unique key to match elements for each record contained in the Event Table and all other tables. This “Primary Key” (i.e., EventID) is the unique ID for each record contained in each table and can be used to match elements across tables associated with the same EMS event. A Foreign key is found in all tables, except the Event Table, and is used to match multiple entries (for multiple entry elements) to the same EMS event. For most multiple entry elements, the match to other elements for the same EMS event can be the same as the EventID which is the primary key in Event table. Only the elements MedsGivenComplications and ProceduresComplications match to the MedsGiven table and Procedures table, respectively, so their foreign Keys are the primary key in MedsGiven table or Procedures table.

Included at the end of this document (Appendix F) are sample programs to help researchers get started with merging files and creating statistical output. These sample programs are available for SAS. We hope that you will contact us with any concerns or suggestions on how to make these sample programs more useful in the future. A detailed data dictionary of each variable in the data sets can be found in Appendix A.

Additional information regarding file size:

UNCOMPRESSED

ASCII 16.8 GB

SAS 23.0 GB

STATA 21.6 GB

COMPRESSED

ASCII 2.11 GB

SAS 1.29 GB

STATA 1.38 GB

FREQUENTLY ASKED QUESTIONS ABOUT USING NATIONAL EMS DATA

1. What are the system requirements of downloading the NEMSiS?

Relational Tables

Minimum of 18 GB of storage for SAS files

Minimum of 10 GB of storage for ASCII-SV files

Minimum of 16 GB of storage for STATA files

Minimum of 8 GB of RAM strongly recommended

2. Can I estimate the number of EMS runs based on the National EMS Database?

The National EMS Database is an incident database and there are no patient identifiers in the database. If a patient has more than one EMS reported incident during a year, or several agencies submit a run report for the same incident, this patient will be in the database more than once.

3. How can I merge the data sets in the National EMS Database?

The National EMS Database files can be merged by using the unique incident key for each incident (event_key).

4. What are the patient inclusion criteria for the National EMS Database?

States have differing criteria for including patients in statewide EMS databases. Some states include all 9-1-1 calls, while other states limit case additions to patient contacts or patient transports. See the NEMSiS website for descriptions of inclusion criteria for each submitting state (<http://www.nemsis.org/support/stateProgressReports/index.html>).

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APPENDIX A: PUBLIC USE VARIABLE DESCRIPTION LIST

This section includes the definition, format and length of each variable in the v 2.2.1 Public Use NEMIS National EMS Database. The variables appear in the order listed in the NEMIS Data Dictionary (v. 2.2.1).

Variable Name	Variable Description	Short Variable Definition	Variable Type	Variable Length		Multiple Entry (1=Yes)	Accept Null Values (1=Yes)
				Min	Max		
E02_04	TypeOfService	Type of Service Requested	integer	2	2	0	0
E02_05	UnitRole	Primary Role of the Unit	integer	2	2	0	0
E02_06	DispatchDelay	Type of Dispatch Delay	integer	2	3	1	1
E02_07	ResponseDelay	Type of Response Delay	integer	2	3	1	1
E02_08	SceneDelay	Type of Scene Delay	integer	2	3	1	1
E02_09	TransportDelay	Type of Transport Delay	integer	2	3	1	1
E02_10	TurnAroundDelay	Type of Turn-Around Delay	integer	2	3	1	1
E02_20	ResponseToScene	Response Mode to Scene	integer	3	3	0	0
E03_01	ComplaintByDispatch	Complaint Reported by Dispatch	integer	2	3	0	1
E03_02	EMDPerformed	EMD Performed	integer	2	3	0	1
E05_02	PSAPDateTime	PSAP Call Date/Time	date/time	19	19	0	0
E05_04	UnitNotifiedDateTime	Unit Notified by Dispatch Date/Time	date/time	19	19	0	0
E05_05	UnitEnRouteDateTime	Unit En Route Date/Time	date/time	19	19	0	0
E05_06	UnitArriveOnSceneDateTime	Unit Arrived on Scene Date/Time	date/time	19	19	0	0
E05_07	UnitArriveAtPatientDateTime	Arrived at Patient Date/Time	date/time	19	19	0	0
E05_09	UnitLeftSceneDateTime	Unit Left Scene Date/Time	date/time	19	19	0	0
E05_10	PatientAtDestinationDateTime	Patient Arrived at Destination Date/Time	date/time	19	19	0	0
E05_11	UnitBackInServiceDateTime	Unit Back in Service Date/Time	date/time	19	19	0	0
E05_13	UnitBackAtBaseDate	Unit Back at Home Location Date/Time	date/time	19	19	0	0
E06_11	Gender	Gender	integer	2	3	0	1
E06_12	Race	Race	integer	2	3	0	1
E06_13	Ethnicity	Ethnicity	integer	2	3	0	1
E06_14	Age	Age	integer	2	3	0	0
E06_15	AgeUnit	Age Units	integer	2	3	0	1
E07_01	PaymentMethod	Primary Method of Payment	integer	2	3	0	1
E07_34	CMSServiceLevel	CMS Service Level	integer	2	4	0	1

Variable Name	Variable Description	Short Variable Definition	Variable Type	Variable Length	Variable Length	Multiple Entry	Accept Null
				Min	Max	(1=Yes)	Values (1=Yes)
E07_35	ConditionCodes	Condition Code Number	string	2	30	1	1
E08_05	NumberOfPatients	Number of Patients at Scene	integer	2	4	0	1
E08_06	MassCasualtyIncident	Mass Casualty Incident	integer	2	4	0	1
E08_07	IncidentLocType	Incident Location Type	integer	2	4	0	1
E09_03	PriorAidOutcome	Outcome of the Prior Aid	integer	2	3	0	1
E09_04	PossibleInjury	Possible Injury	integer	2	3	0	1
E09_11	ChiefComplaintAnatomicLoc	Chief Complaint Anatomic Location	integer	2	4	0	1
E09_12	ChiefComplaintOrgan	Chief Complaint Organ System	integer	2	4	0	1
E09_13	PrimarySymptom	Primary Symptom	integer	2	4	0	1
E09_15	EMSFIRSTImpression	Providers Primary Impression	integer	2	4	0	1
E09_16	EMSSecondaryImpression	Provider's Secondary Impression	integer	2	4	0	1
E09_01	PriorAidCare	Prior Aid	string	2	30	1	1
E09_02	PriorAidPerformedBy	Prior Aid Performed by	integer	2	4	1	1
E09_14	dw_OtherSymptoms	Other Associated Symptoms	integer	2	4	1	1
E10_01	CauseOfInjury	Cause of Injury	integer	2	4	0	1
E11_01	CardiacArrest	Cardiac Arrest	integer	2	4	0	1
E11_02	CardiacArrestEtiology	Cardiac Arrest Etiology	integer	2	4	0	1
E11_03	Resuscitation	Resuscitation Attempted	integer	2	4	1	1
E12_01	BarriersToPatientCare	Barriers to Patient Care	integer	2	4	1	1
E12_19	AlcoholDrugIndicators	Alcohol/Drug Use Indicators	integer	2	4	1	1
E18_03	MedsGiven	Medication Given	string	2	30	1	1
E18_08	MedsComplications	Medication Complication	integer	2	4	1	1
E19_03	Procedures	Procedure	decimal	0	8	1	1
E19_05	NumberOfAttempts	Number of Procedure Attempts	integer	2	3	1	1
E19_06	ProcedureSuccessful	Procedure Successful	integer	1	3	1	1
E19_07	ProcedureComplications	Procedure Complication	integer	2	4	1	1
E20_10	IncidentDisposition	Incident/Patient Disposition	integer	4	4	0	0
E20_14	TransportModeFromScene	Transport Mode from Scene	integer	2	4	0	1
E20_16	ReasonForDestination	Reason for Choosing Destination	integer	2	4	0	1
E20_17	DestinationType	Type of Destination	integer	2	4	0	1
E22_01	EDDisposition	Emergency Department Disposition	integer	2	4	0	1
E22_02	HospitalDisposition	Hospital Disposition	integer	2	4	0	1

Variable Name	Variable Description	Short Variable Definition	Variable Type	Variable Length	Variable Length	Multiple Entry	Accept Null
				Min	Max	(1=Yes)	Values (1=Yes)
AgeGroup	Age Group by Age in Years	Age Group (in deciles)	String/varchar(7)	0	7	0	1
EMSDispatchCenter	EMS Dispatch Center Time	Time difference in minutes between E05_04 and E05_02. Note: if > 60 minutes, set to null.	integer	0	4	0	1
EMSchuteTime	EMS Chute Time	Time difference in minutes between E05_04 and E05_05. Note: if > 60 minutes, set to null.	integer	0	4	0	1
EMSSystemRespons	EMS System Response Time	Time difference in minutes between E05_04 and E05_06. Note: if > 24 hours, set to null.	integer	0	4	0	1
EMSSceneResponse	EMS Scene Response Time	Time difference in minutes between E05_06 and E05_05. Note: if > 24 hours, set to null.	integer	0	4	0	1
EMSSceneTime	EMS Scene Time	Time difference in minutes between E05_06 and E05_09. Note: if > 24 hours, set to null.	integer	0	4	0	1
EMSSceneToPatient	EMS Scene To Patient Time	Time difference in minutes between E05_06 and E05_07. Note: if > 12 hours, set to null.	integer	0	4	0	1
EMSTransportTime	EMS Transport Time	Time difference in minutes between E05_09 and E05_10. Note: if > 24 hours, set to null.	integer	0	4	0	1
EMSTotalCallTime	EMS Total Call Time	Time difference in minutes between E05_11 and E05_04. Note: if > 24 hours, set to null.	integer	0	4	0	1
USCensusRegion	U.S. Census Region	Stratifies events into the four major Census Regions	integer	0	50	0	1
USCensusDivision	U.S. Census Division	Stratifies events into the 10 major Census Divisions	integer	0	50	0	1
NasemsoRegion	NASEMSO Region	Stratifies events into the four NASEMSO regions	integer	0	50	0	1
Urbanicity	Urbanicity	Stratifies events by four urbanicity codes, based upon USDA Urban Influence Codes					

APPROVAL REQUIRED VARIABLE DESCRIPTION LIST

This section includes the definition, format and length of variables contained in the v 2.2.1 NEMESIS National EMS Database requiring approval for use. These variables can be made available as a “limited-data set” (specified by the HIPAA Privacy Rule) or a “de-identified data set” by statistical manipulation into encrypted re-classified codes. The variables appear in the order listed in the NEMESIS Data Dictionary (v. 2.2.1).

Variable Name	Variable Description	Short Variable Definition	Variable Type	Variable Length Min	Variable Length Max	Multiple Entry (1=Yes)	Accept Null Values (1=Yes)
<i>Variables included in limited-data set (first three numbers only)</i>							
E06_08	PatientZip	Patient's Home Zip Code	string	2	3	0	1
E08_15	IncidentZip	Incident ZIP Code	string	2	3	0	1
E20_07	PatientDestinationZip	Destination Zip Code	string	2	3	0	1
<i>Variables available through statistical manipulation</i>							
D01_03	AgencyState	EMS Agency State	string	2	3	0	1
E01_02	SoftwareVendor	Software Creator	string	3	30	0	0
E01_03	SoftwareName	Software Name	string	3	30	0	0
E01_04	SoftwareVersion	Software Version	string	3	30	0	0
E02_01	AgencyNum	EMS Agency Number	string	3	15	0	0
E02_12	UnitCallNum	EMS Unit Call Sign (Radio Number)	string	2	15	0	0

APPENDIX B: AUDIT FILTERS FOR NATIONAL EMS DATA

Rule #	Description	Element	Action
1	Patient record has already been submitted under a different postID according to PCR ID (fields E01_01, E02_01, E02_12, E05_04 and D01_03).	EventHash	Record to remain in dataset. All previous records will be flagged as "resubmitted"; only the most recent record will be used in the data warehouse.
111	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E01_01	Data to remain as submitted.
112	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_05	Data to remain as submitted.
113	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_04	Data to remain as submitted.
114	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_07	Data to remain as submitted.
115	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_08	Data to remain as submitted.
116	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_09	Data to remain as submitted.
117	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_12	Data to remain as submitted.
118	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E02_20	Data to remain as submitted.
119	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E03_01	Data to remain as submitted.
120	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E03_02	Data to remain as submitted.
121	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_02	Data to remain as submitted.
122	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_04	Data to remain as submitted.

Rule #	Description	Element	Action
123	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_05	Data to remain as submitted.
124	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_06	Data to remain as submitted.
125	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_07	Data to remain as submitted.
126	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_09	Data to remain as submitted.
127	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_10	Data to remain as submitted.
128	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_11	Data to remain as submitted.
129	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E05_13	Data to remain as submitted.
130	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E06_08	Data to remain as submitted.
131	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E06_11	Data to remain as submitted.
132	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E06_12	Data to remain as submitted.
133	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E06_13	Data to remain as submitted.
134	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E06_14	Data to remain as submitted.
135	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E06_15	Data to remain as submitted.
136	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E07_01	Data to remain as submitted.
137	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E07_34	Data to remain as submitted.

Rule #	Description	Element	Action
138	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E08_05	Data to remain as submitted.
139	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E08_07	Data to remain as submitted.
140	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E08_15	Data to remain as submitted.
141	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E09_11	Data to remain as submitted.
142	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E09_12	Data to remain as submitted.
143	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E09_13	Data to remain as submitted.
144	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E09_15	Data to remain as submitted.
145	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E09_16	Data to remain as submitted.
146	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E11_02	Data to remain as submitted.
147	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E20_07	Data to remain as submitted.
148	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E20_10	Data to remain as submitted.
149	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E20_14	Data to remain as submitted.
150	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E20_16	Data to remain as submitted.
151	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E20_17	Data to remain as submitted.
152	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E22_01	Data to remain as submitted.

Rule #	Description	Element	Action
153	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E22_02	Data to remain as submitted.
154	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E07_35	Data to remain as submitted.
155	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E09_14	Data to remain as submitted.
156	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E11_03	Data to remain as submitted.
157	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E01_02	Data to remain as submitted.
158	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E01_03	Data to remain as submitted.
159	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	E01_04	Data to remain as submitted.
160	Values in E06_15 (Age Units) is exactly the same as values in E06_14 (Age) for 100% of the records in the current data submission.	E06_15	Data to remain as submitted.
162	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	D01_07	Data to remain as submitted.
163	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	D01_08	Data to remain as submitted.
164	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	D01_09	Data to remain as submitted.
165	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	D01_21	Data to remain as submitted.
166	Greater than 30% of the field populated with missing values, including nulls, blanks, and the null values (-5, -10, -15, -20, -25).	D02_07	Data to remain as submitted.
167	The five digit county code provided is populated with all zeros ("00000").	D01_04	Set value to null.
168	Invalid values have been submitted according to dictionary.	E08_05	Set invalid value to null.
169	The value associated with description "NONE" (105) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E02_06	Remove record reporting "None" value.

Rule #	Description	Element	Action
170	The value associated with description "NONE" (105) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E02_06	Remove record/s reporting "None" and/or Null Values.
171	The value associated with description "NONE" (150) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E02_07	Remove record reporting "None" value.
172	The value associated with description "NONE" (150) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E02_07	Remove record/s reporting "None" and/or Null Values.
173	The value associated with description "NONE" (225) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E02_08	Remove record reporting "None" value.
174	The value associated with description "NONE" (225) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E02_08	Remove record/s reporting "None" and/or Null Values.
175	The value associated with description "NONE" (290) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E02_09	Remove record reporting "None" value.
176	The value associated with description "NONE" (290) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E02_09	Remove record/s reporting "None" and/or Null Values.
177	The value associated with description "NONE" (360) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E02_10	Remove record reporting "None" value.
178	The value associated with description "NONE" (360) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E02_10	Remove record/s reporting "None" and/or Null Values.
179	A Null Value (-5, -10, -15, -20, -25) appears when a non-Null Value has also been submitted.	E09_01	Remove record/s reporting Null Values.
180	A Null Value (-5, -10, -15, -20, -25) appears when a non-Null Value has also been submitted.	E09_02	Remove record/s reporting Null Values.
181	The value associated with description "NONE" (1575) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E09_14	Remove record reporting "None" value.

Rule #	Description	Element	Action
182	The value associated with description "NONE" (1575) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E09_14	Remove record/s reporting "None" and/or Null Values.
183	A Null Value (-5, -10, -15, -20, -25) appears when a non-Null Value has also been submitted.	E11_03	Remove record/s reporting Null Values.
184	The value associated with description "NONE" (2615) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E12_01	Remove record reporting "None" value.
185	The value associated with description "NONE" (2615) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E12_01	Remove record/s reporting "None" and/or Null Values.
186	The value associated with description "NONE" (3001) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E12_19	Remove record reporting "None" value.
187	The value associated with description "NONE" (3001) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E12_19	Remove record/s reporting "None" and/or Null Values.
188	A Null Value (-5, -10, -15, -20, -25) appears when a non-Null Value has also been submitted.	E18_03	Remove record/s reporting Null Values.
189	The value associated with description "NONE" (4390) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E18_08	Remove record reporting "None" value.
190	The value associated with description "NONE" (4390) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E18_08	Remove record/s reporting "None" and/or Null Values.
191	A Null Value (-5, -10, -15, -20, -25) appears when a non-Null Value has also been submitted.	E19_03	Remove record/s reporting Null Values.

Rule #	Description	Element	Action
192	Value in E06_11 (gender) reflects 650 (male) when value in E03_01 (complaint reported by dispatch) = "515" (Pregnant/Child Birth) or value in E07_35 (condition code number) = "8037" (Pregnancy Complication/Childbirth/Labor) or value in E09_15 (providers primary impression) = "1695" (Pregnancy) or "1745" (vaginal hemorrhage) or value in E09_16 (providers primary impression) = "1695" (Pregnancy) or "1745" (vaginal hemorrhage).	E06_11	Change value to 655 (female).
193	Value for E06_15 (age unit) is not populated with a non-Null Value when value in E06_14 (age) is populated with a numeric value between 1 and 120.	E06_15	Data to remain as submitted.
194	The value associated with description "NONE" (4500) appears when a Null Value (-5, -10, -15, -20, -25) appears and no other non-Null Values have been submitted.	E19_07	Remove record reporting "None" value.
195	The value associated with description "NONE" (4500) and/or a Null Value (-5, -10, -15, -20, -25) has been submitted when at least one other non-Null Value has been submitted.	E19_07	Remove record/s reporting "None" and/or Null Values.
196	Value for "Cardiac Arrest Etiology" should only be populated with a non-Null Value if value in element E11_01 (Cardiac Arrest) = "2240" (Yes, Prior to EMS Arrival) or "2245" (Yes, After EMS Arrival).	E11_02	Data to remain as submitted.
197	Value for "Resuscitation Attempted" should only be populated with a non-Null Value if value in element E11_01 (Cardiac Arrest) = "2240" (Yes, Prior to EMS Arrival) or "2245" (Yes, After EMS Arrival).	E11_03	Data to remain as submitted.
198	Value submitted is not a Null Value and is not an integer between 0 and 100.	E19_05	Set invalid value to null.
202	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_02	Set invalid value to null.
203	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_04	Set invalid value to null.
204	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_05	Set invalid value to null.
205	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_06	Set invalid value to null.
206	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_07	Set invalid value to null.

Rule #	Description	Element	Action
207	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_09	Set invalid value to null.
208	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_10	Set invalid value to null.
209	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_11	Set invalid value to null.
210	Value is not a valid date/time (00:00:00 00:00:00 is not valid).	E05_13	Set invalid value to null.
211	Value reported in E08_06 (Mass Casualty Incident) is 1 (yes) when value reported in E08_05 (Number Of Patients At Scene) is not 1125 (single) or 1120 (none) OR value report in E08_06 (Mass Casualty Incident) is 0 (no) when value reported in E08_05 (Number Of Patients At Scene) is 1130 (Multiple).	E08_06	Data to remain as submitted.
212	Date reported in E05_02 does not precede Date in E05_04.	E05_02	Data to remain as submitted.
213	Date reported in E05_05 is not greater than or equal to the Date in E05_04.	E05_05	Data to remain as submitted.
214	Date reported in E05_06 is not greater than or equal to the Date in E05_04 and/or E05_05.	E05_06	Data to remain as submitted.
215	Date reported in E05_07 is not greater than or equal to the Date in E05_04, E05_05 and/or E05_06.	E05_07	Data to remain as submitted.
216	Date reported in E05_09 is not greater than or equal to the Date in E05_04, E05_05, E05_06 and/or E05_07.	E05_09	Data to remain as submitted.
217	Date reported in E05_10 is not greater than or equal to the date in E05_04, E05_05, E05_06, E05_07 and/or E05_09.	E05_10	Data to remain as submitted.
218	Date reported in E05_11 is not greater than or equal to the Date in E05_04, E05_05, E05_06, E05_07, E05_09 and/or E05_10.	E05_11	Data to remain as submitted.
219	Date reported in E05_13 is not greater than or equal to the Date in E05_04, E05_05, E05_06, E05_07, E05_09, E05_10 and/or E05_11.	E05_13	Data to remain as submitted.
220	Date/Time value reported in E05_02 does not precede Date/Time value in E05_04.	E05_02	Data to remain as submitted.
221	Date/Time value reported in E05_05 is not greater than or equal to the Date/Time value in E05_04.	E05_05	Data to remain as submitted.
222	Date/Time value reported in E05_06 is not greater than or equal to the Date/Time value in E05_04 and/or E05_05.	E05_06	Data to remain as submitted.

Rule #	Description	Element	Action
223	Date/Time value reported in E05_07 is not greater than or equal to the Date/Time values in E05_04, E05_05 and/or E05_06.	E05_07	Data to remain as submitted.
224	Date/Time value reported in E05_09 is not greater than or equal to the Date/Time value in E05_04, E05_05, E05_06 and/or E05_07.	E05_09	Data to remain as submitted.
225	Date/Time value reported in E05_10 is not greater than or equal to the Date/Time value in E05_04, E05_05, E05_06, E05_07 and/or E05_09.	E05_10	Data to remain as submitted.
226	Date/Time value reported in E05_11 is not greater than or equal to the Date/Time value in E05_04, E05_05, E05_06, E05_07, E05_09 and/or E05_10.	E05_11	Data to remain as submitted.
227	Date/Time value reported in E05_13 is not greater than or equal to the Date/Time value in E05_04, E05_05, E05_06, E05_07, E05_09, E05_10 and/or E05_11.	E05_13	Data to remain as submitted.
228	The length of time elapsed from E05_02 (PSAP Call Date/Time) and E05_04 (Unit Notified By Dispatch Date/Time) is greater than 60 minutes.	E05_02	Data to remain as submitted.
229	The length of time elapsed from E05_05 (Unit En Route Date/Time) and E05_04 (Unit Notified By Dispatch Date/Time) is greater than 60 minutes.	E05_05	Data to remain as submitted.
230	The length of time elapsed from E05_10 (Patient Arrived At Destination Date/Time) and E05_04 (Unit Notified By Dispatch Date/Time) is greater than 24 hours.	E05_10	Data to remain as submitted.
231	The majority of the 5 digits codes submitted do not have the first two digits (state code in fips format) matching the FIPS code for the posting state of the data submission.	D01_04	Data to remain as submitted.
232	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_02	Data to remain as submitted.
233	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_05	Data to remain as submitted.
234	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_06	Data to remain as submitted.
235	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_07	Data to remain as submitted.

Rule #	Description	Element	Action
236	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_09	Data to remain as submitted.
237	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_10	Data to remain as submitted.
238	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_11	Data to remain as submitted.
239	Times submitted reflecting midnight (00:00) represent more than 5% of all records with times submitted.	E05_13	Data to remain as submitted.
300	Value is null or populated with a Null Value.	D01_01	Data to remain as submitted.
301	Value is null or populated with a Null Value.	D01_03	Data to remain as submitted.
302	Invalid values have been submitted according to dictionary.	D01_03	If two letter state code provided, then convert to FIPS state code; Otherwise, set invalid code to fips code of posting state.
303	Value is null or populated with a Null Value.	D01_04	No fix requested. Rule is for informational purposes only.
304	The county code in element D01_04 is not populated with 5 numeric digits.	D01_04	Set invalid value to null.
305	The first two digits of the county codes provided are not legit FIPS state codes.	D01_04	Set invalid value to null.
306	Value is null, blank or populated with a Null Value.	D01_07	Data to remain as submitted.
307	Value is null, blank or populated with a Null Value.	D01_08	Data to remain as submitted.
308	Value is null, blank or populated with a Null Value.	D01_09	Data to remain as submitted.
309	Value is not populated.	D01_21	Data to remain as submitted.
310	Value is null, blank or populated with a Null Value.	D02_07	Data to remain as submitted.
311	Value submitted for "Agency Contact Zip Code", if not a Null Value, does not contain 5 numeric digits or 9 numeric digits with or without a hyphen after the 5th digit OR value was populated with all zeros.	D02_07	Data to remain as submitted.
312	Value is null, blank or populated with a Null Value.	E01_01	Data to remain as submitted.
313	Value is null, blank or populated with a Null Value.	E01_02	Data to remain as submitted.
314	Value is null, blank or populated with a Null Value.	E01_03	Data to remain as submitted.
315	Value is null, blank or populated with a Null Value.	E01_04	Data to remain as submitted.

Rule #	Description	Element	Action
316	Value is null, blank or populated with a Null Value.	E02_01	Data to remain as submitted.
317	Value is null, blank or populated with a Null Value.	E02_04	Data to remain as submitted.
318	Value is null, blank or populated with a Null Value.	E02_05	Data to remain as submitted.
319	Value is null, blank or populated with a Null Value.	E02_12	Data to remain as submitted.
320	Value is null, blank or populated with a Null Value.	E02_20	Data to remain as submitted.
321	Value submitted for "Patients Home Zip Code", if not a Null Value, does not contain 5 numeric digits or 9 numeric digits with or without a hyphen after the 5th digit OR value was populated with all zeros.	E06_08	If value is invalid, then set value to null.
324	Value submitted for "Incident ZIP Code", if not a Null Value, does not contain 5 numeric digits or 9 numeric digits with or without a hyphen after the 5th digit OR value was populated with all zeros.	E08_15	Set invalid value to null.
326	Value submitted for "Destination Zip Code", if not a Null Value, does not contain 5 numeric digits or 9 numeric digits with or without a hyphen after the 5th digit OR value was populated with all zeros.	E20_07	Set invalid value to null.
327	Value is null or populated with a Null Value.	E20_10	Data to remain as submitted.
400	Length of value submitted is not between 3 and 15 characters.	D01_01	Data will not be processed. Data needs to be corrected and resubmitted.
401	Length of value provided is not within 2 - 3 characters.	D01_03	Data will not be processed. Data needs to be corrected and resubmitted.
402	Length of value provided is not within 2 - 3 characters.	D01_04	Data will not be processed. Data needs to be corrected and resubmitted.
403	Value submitted is not valid according to dictionary.	D01_07	Data will not be processed. Data needs to be corrected and resubmitted.
404	Length of value submitted is not between 2 and 100 characters.	D01_07	Data will not be processed. Data needs to be corrected and resubmitted.
405	Value submitted is not valid according to dictionary.	D01_08	Data will not be processed. Data needs to be corrected and resubmitted.
406	Value submitted is not valid according to dictionary.	D01_09	Data will not be processed. Data needs to be corrected and resubmitted.

Rule #	Description	Element	Action
407	Length of value submitted is not between 3 and 10 characters.	D01_21	Data will not be processed. Data needs to be corrected and resubmitted.
408	Length of value submitted is not between 3 and 32 characters.	E01_01	Data will not be processed. Data needs to be corrected and resubmitted.
409	Length of value submitted is not between 3 and 30 characters.	E01_02	Data will not be processed. Data needs to be corrected and resubmitted.
410	Length of value submitted is not between 3 and 30 characters.	E01_03	Data will not be processed. Data needs to be corrected and resubmitted.
412	Length of value submitted is not between 3 and 30 characters.	E02_01	Data will not be processed. Data needs to be corrected and resubmitted.
413	Value submitted is not valid according to dictionary.	E02_04	Data will not be processed. Data needs to be corrected and resubmitted.
414	Value submitted is not valid according to dictionary.	E02_05	Data will not be processed. Data needs to be corrected and resubmitted.
415	Length of value submitted is not between 2 and 15 characters.	E02_12	Data will not be processed. Data needs to be corrected and resubmitted.
416	Value submitted is not valid according to dictionary.	E02_20	Data will not be processed. Data needs to be corrected and resubmitted.
417	Value submitted is not valid according to dictionary.	E02_06	Data will not be processed. Data needs to be corrected and resubmitted.
418	Value submitted is not valid according to dictionary.	E02_07	Data will not be processed. Data needs to be corrected and resubmitted.
419	Value submitted is not valid according to dictionary.	E02_08	Data will not be processed. Data needs to be corrected and resubmitted.
420	Value submitted is not valid according to dictionary.	E02_09	Data will not be processed. Data needs to be corrected and resubmitted.
421	Value submitted is not valid according to dictionary.	E02_10	Data will not be processed. Data needs to be corrected and resubmitted.
422	Value submitted is not valid according to dictionary.	E03_01	Data will not be processed. Data needs to be corrected and resubmitted.
423	Value submitted is not valid according to dictionary.	E03_02	Data will not be processed. Data needs to be corrected and resubmitted.
424	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_02	Data will not be processed. Data needs to be corrected and resubmitted.

Rule #	Description	Element	Action
425	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_04	Data will not be processed. Data needs to be corrected and resubmitted.
426	Value is null or populated with a Null Value.	E05_04	Data will not be processed. Data needs to be corrected and resubmitted.
427	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_05	Data will not be processed. Data needs to be corrected and resubmitted.
428	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_06	Data will not be processed. Data needs to be corrected and resubmitted.
429	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_07	Data will not be processed. Data needs to be corrected and resubmitted.
430	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_09	Data will not be processed. Data needs to be corrected and resubmitted.
431	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_10	Data will not be processed. Data needs to be corrected and resubmitted.
432	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_11	Data will not be processed. Data needs to be corrected and resubmitted.
433	Value is null or populated with a Null Value.	E05_11	Data will not be processed. Data needs to be corrected and resubmitted.
434	Value submitted is not in expected yyyy-mm-dd hh:mm:ss format.	E05_13	Data will not be processed. Data needs to be corrected and resubmitted.
435	Value submitted is not valid according to dictionary.	E06_11	Data will not be processed. Data needs to be corrected and resubmitted.
436	Value submitted is not valid according to dictionary.	E06_12	Data will not be processed. Data needs to be corrected and resubmitted.
437	Value submitted is not valid according to dictionary.	E06_13	Data will not be processed. Data needs to be corrected and resubmitted.
438	Value submitted is not between 1 and 120.	E06_14	Data will not be processed. Data needs to be corrected and resubmitted.
439	Value submitted is not valid according to dictionary.	E06_15	Data will not be processed. Data needs to be corrected and resubmitted.
440	Value submitted is not valid according to dictionary.	E07_01	Data will not be processed. Data needs to be corrected and resubmitted.
441	Value submitted is not valid according to dictionary.	E07_34	Data will not be processed. Data needs to be corrected and resubmitted.

Rule #	Description	Element	Action
442	Value submitted is not valid according to dictionary.	E07_35	Data will not be processed. Data needs to be corrected and resubmitted.
443	Value submitted is not valid according to dictionary.	E08_05	Data will not be processed. Data needs to be corrected and resubmitted.
444	Value submitted is not valid according to dictionary.	E08_06	Data will not be processed. Data needs to be corrected and resubmitted.
445	Value submitted is not valid according to dictionary.	E08_07	Data will not be processed. Data needs to be corrected and resubmitted.
446	Value submitted is not valid according to dictionary.	E09_03	Data will not be processed. Data needs to be corrected and resubmitted.
447	Value submitted is not valid according to dictionary.	E09_04	Data will not be processed. Data needs to be corrected and resubmitted.
448	Value submitted is not valid according to dictionary.	E09_11	Data will not be processed. Data needs to be corrected and resubmitted.
449	Value submitted is not valid according to dictionary.	E09_12	Data will not be processed. Data needs to be corrected and resubmitted.
450	Value submitted is not valid according to dictionary.	E09_13	Data will not be processed. Data needs to be corrected and resubmitted.
451	Value submitted is not valid according to dictionary.	E09_15	Data will not be processed. Data needs to be corrected and resubmitted.
452	Value submitted is not valid according to dictionary.	E09_16	Data will not be processed. Data needs to be corrected and resubmitted.
453	Length of value submitted is not between 2 and 30 characters.	E09_01	Data will not be processed. Data needs to be corrected and resubmitted.
454	Value submitted is not valid according to dictionary.	E09_02	Data will not be processed. Data needs to be corrected and resubmitted.
455	Value submitted is not valid according to dictionary.	E09_14	Data will not be processed. Data needs to be corrected and resubmitted.
456	Value submitted is not valid according to dictionary.	E10_01	Data will not be processed. Data needs to be corrected and resubmitted.
457	Value submitted is not valid according to dictionary.	E11_01	Data will not be processed. Data needs to be corrected and resubmitted.
458	Value submitted is not valid according to dictionary.	E11_02	Data will not be processed. Data needs to be corrected and resubmitted.

Rule #	Description	Element	Action
459	Value submitted is not valid according to dictionary.	E11_03	Data will not be processed. Data needs to be corrected and resubmitted.
460	Value submitted is not valid according to dictionary.	E12_01	Data will not be processed. Data needs to be corrected and resubmitted.
461	Value submitted is not valid according to dictionary.	E12_19	Data will not be processed. Data needs to be corrected and resubmitted.
462	Length of value submitted is not between 2 and 100 characters.	E18_03	Data will not be processed. Data needs to be corrected and resubmitted.
463	Value submitted is not valid according to dictionary.	E18_08	Data will not be processed. Data needs to be corrected and resubmitted.
464	Value submitted is not valid according to dictionary.	E19_03	Data will not be processed. Data needs to be corrected and resubmitted.
465	Value submitted is not between 0 and 100 and is not a Null Value.	E19_05	Data will not be processed. Data needs to be corrected and resubmitted.
466	Value submitted is not valid according to dictionary.	E19_06	Data will not be processed. Data needs to be corrected and resubmitted.
467	Value submitted is not valid according to dictionary.	E19_07	Data will not be processed. Data needs to be corrected and resubmitted.
468	Value submitted is not valid according to dictionary.	E20_10	Data will not be processed. Data needs to be corrected and resubmitted.
469	Value submitted is not valid according to dictionary.	E20_14	Data will not be processed. Data needs to be corrected and resubmitted.
470	Value submitted is not valid according to dictionary.	E20_16	Data will not be processed. Data needs to be corrected and resubmitted.
471	Value submitted is not valid according to dictionary.	E20_17	Data will not be processed. Data needs to be corrected and resubmitted.
472	Value submitted is not valid according to dictionary.	E22_01	Data will not be processed. Data needs to be corrected and resubmitted.
473	Value submitted is not valid according to dictionary.	E22_02	Data will not be processed. Data needs to be corrected and resubmitted.
474	Required element E05_04 is not populated for each PCR.	E05_04	Data will not be processed. Data needs to be corrected and resubmitted.
475	Required element E01_01 is not populated for each PCR.	E01_01	Data will not be processed. Data needs to be corrected and resubmitted.

Rule #	Description	Element	Action
476	Required element E02_01 is not populated for each PCR.	E02_01	Data will not be processed. Data needs to be corrected and resubmitted.
477	Required element E02_12 is not populated for each PCR.	E02_12	Data will not be processed. Data needs to be corrected and resubmitted.
478	The number of duplicate events using the PCR complex key (D01_03, E01_01, E02_01, E02_12 and E05_04) exceeds 5% of the total number of records in the submission.	PCRHash	Data will not be processed. Data needs to be corrected and resubmitted.
480	Record has been submitted multiple times in current data submission according to all one-to-one elements in the data submission.	EventHash	Duplicate records will be flagged and excluded in the data warehouse if the total number of records to be removed is less than 5% of all records in submission.
481	After having removed duplicate records (based on all one-to-one elements), there are duplicate events according to the PCR complex key (D01_03, E01_01, E02_01, E02_12 and E05_04).	PCRHash	Duplicate events will be flagged but remain in the data warehouse only if the total number of events to be flagged is less than 5% of all records in submission.
482	Patient record has already been submitted under a different postID according to PCR ID (fields E01_01, E02_01, E02_12, E05_04 and D01_03).	PCRHash	Record to remain in dataset. All previous records will be flagged as "resubmitted"; only the most recent record will be used in the data warehouse.
483	Record was not submitted within 18 month allotted time period (between Jan 1 of event year and June 30 of event year + 1).	E05_04	Record to remain as is, but may not be used in data warehouse.
484	Value submitted is not valid according to list of values in dictionary (may be because leading or trailing zeros are missing).	E19_03	Trailing and leading zeros will be added accordingly.
485	Value submitted is not one of the listed values in the dictionary.	D01_07	"ALS" values will be converted to "6110", value "BLS" will be changed to "6090", value "EMD" will be changed to "6090". All other site defined values will be changed to "Other Agency Value" for the data warehouse.
486	Date is not within 18 months of the file submission date.	E05_04	Data to remain as-is, but may not be used in the data warehouse.
487	Date is not within 18 months of the file submission date.	E05_11	Data to remain as-is, but may not be used in the data warehouse.

Rule #	Description	Element	Action
488	Length of value submitted, less trailing spaces, is not between 2 and 15 characters.	E02_12	Data to remain as submitted.

Additional data reduction methods applied to the data warehouse and public extracts:

For all 1:Many and Many:Many elements:

- 1) If a patient record has both null values and non-null values, exclude 1:Many records with null values.
- 2) If a patient record has multiple null values listed but doesn't have any non-null values, keep only the first null value listed and exclude all other 1:Many records with null values.
- 3) If a patient record has multiple non-null values listed and the same exact 1:Many value is listed multiple times, keep that specific value only for the 1st 5 times it is listed; exclude all other repetitions of the value.

Other value limits: (usually based upon the number of possible values, excluding null and NOT value, contained within an element.)

AlcoholDrugUseIndicators (E12_19) shall have no more than 4 values per event.

BarriersToPatientCare (E12_01) shall have no more than 8 values per event.

ConditionCodeNumber (E07_35) shall have no more than 20 values per event.

MedicationsGiven (E18_03) shall have no more than 30 values per event.

MedicationComplication (E18_08) shall have no more than 17 values per occurrence.

OtherAssociatedSymptoms (E09_14) shall have no more than 20 values per event.

PriorAidPerformedBy (E09_02) shall have no more than 5 values per event.

Procedure (E19_03) shall have no more than 40 values per event.

ProcedureComplication (E19_07) shall have no more than 19 values per occurrence.

ResuscitationAttempted (E11_03) shall have no more than 6 values per event.

TypeOfDispatchDelay (E02_06) shall have no more than 8 values per event.

TypeOfResponseDelay (E02_07) shall have no more than 12 values per event.





TypeOfSceneDelay (E02_08) shall have no more than 14 values per event.

TypeOfTransportDelay (E02_09) shall have no more than 12 values per event.

TypeOfTurnAroundDelay (E02_10) shall have no more than 9 values per event.

**APPENDIX C:
2012 CONTRIBUTING STATES**

State & Territory Version 2 Information

- | | |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|  Submitting data to NEMSiS |  Addressing barriers to NEMSiS |
|  Actively working with NEMSiS TAC |  Limited progress with NEMSiS |



**APPENDIX D:
EXTENDED DEFINITION DOCUMENT, VERSION 2.2**

National Association of
State EMS Officials



Extended Definition Document NEMSiS 2.2

*National Association of State EMS Officials
EMS Data Managers Council*



INTRODUCTION

A definitive call for the standardization of EMS data has existed since the 1970s. A number of key publications and projects, completed in the early to mid 1990s, culminated with the call for, and funding, of the National Emergency Medical Services Information System (NEMSIS).¹ The two overarching purposes of the NEMSIS project included the standardization of EMS data collection among all EMS agencies operating in the United States and aggregating these standardized data into a National EMS Registry to characterize and improve the patient care offered by EMS systems. To accomplish this task, the National Highway Traffic Safety Administration (NHTSA) partnered with the National Association of State EMS Officials (NASEMSO) to bring together a myriad of veterans in the field of EMS to define the second version of the NHTSA Uniform EMS Data Set (NEMSIS 2.2.1). From the outset, it was determined that it was a more important preliminary step to define the dataset than to reach consensus on definitions associated with field values in the dataset.

This document represents an effort to begin the process of defining field values contained in the NEMSIS 2.2.1 dataset. The EMS Data Managers Council with in NASEMSO took on the challenge of defining filed values through a process of consensus, convening several face-to-face discussions and conference calls. The hope of the Council is that this document will continue to promote the development, standardization, and improvement of state and national EMS data systems. For more information regarding NASEMSO and the EMS Data Managers Council, visit www.nasemso.org. Additional information regarding the NEMSIS project can be found at: www.nemsis.org.

References:

Mears, G., Dawson, D., & Ornato, J. (2002). Emergency Medical Services Information Systems and a Future EMS National Database. *Prehospital Emergency Care, January/March 2002, Volume 6, Number 1, 123-30.*

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NASEMSO DATA MANAGERS COUNCIL NATIONAL ELEMENT AND VALUE DEFINITION PROJECT

E01 01 Patient Care Report Number

National Element: Yes, Single Entry

Definition

The unique number automatically assigned by the EMS agency for each patient care report (PCR). This is a unique number to the EMS agency.

Although the patient care report number is unique to a given agency, it is probably not unique when compared to other agencies within a state or the nation. The NEMSIS Technical Assistance Center uses this variable (and EMS Agency Number [E02-01]) to validate that the same PCR has not been submitted by the state to the National EMS Database multiple times.

E02 04 Type of Service Requested

National Element: Yes, Single Entry

Definition

The type of service or category of service requested of the EMS service responding for this specific EMS incident.

Field Values:

- 30 911 Response (Scene)
- 35 Intercept
- 40 Inter-facility Transfer
- 45 Medical Transport
- 50 Mutual Aid
- 55 Standby

Extended Definitions:

911 Response (Scene) - Emergent or immediate response to an incident location, regardless of method of notification (for example, 911, direct dial, walk-in, or flagging down)

Intercept – When one EMS Provider meets a transporting EMS unit with the intent of receiving a patient or providing a higher level of care

Inter-facility Transfer – Transfer of a patient from one hospital to another hospital

Medical Transport – Transports that are not between hospitals or that do not require an immediate response

Mutual Aid – Request from another ambulance service to provide emergent or immediate response to an incident location

Standby – Initial request for service was not tied to a patient but to a situation where a person may become ill or injured

E02 05 Primary Role of the Unit

National Element: Yes, Single Entry

Definition

The primary role of the EMS service which was requested for this specific EMS incident.

Field Values:

60 Non-Transport

65 Rescue

70 Supervisor

75 Transport

Extended Definitions:

Non-Transport - The unit's role in this incident is to provide EMS care but is not intended to provide transport

Rescue - The unit's role in this incident is to provide rescue services

Supervisor - The unit's role in this incident is as a supervisor

Transport - The unit's role in this incident is to provide transportation of the patient even if no transport happened

E02 06 Type of Dispatch Delay

National Element: Yes, Multiple Entry

Definition

The dispatch delays, if any, associated with the dispatch of the EMS unit to the patient encounter.

Field Values:

80 Caller (Uncooperative)

- 85 High Call Volume
- 90 Language Barrier
- 95 Location (Inability to Obtain)
- 100 No Units Available
- 105 None
- 110 Other
- 115 Scene Safety (Not Secure for EMS)
- 120 Technical Failure (Computer, Phone etc.)

Extended Definitions:

Caller Uncooperative – Caller uncooperative (i.e. does not answer questions)

High Call Volume – High call volume in the dispatch center caused delayed notification of the EMS unit

Language Barrier – Difficulty communicating with the caller because of language problems

Location (Inability to Obtain) – Inability to determine where to dispatch the EMS unit

No Units Available – Lack of available EMS units

None – Use if the dispatch of the EMS unit was not delayed

Other – Dispatch was delayed for reasons not listed here

Scene Safety (Not Secure for EMS) – Notification of the EMS unit was delayed in dispatch because the scene was unsafe

Technical Failure (Computer, Phone, etc.) – Failure of phones, computers, radios, or other technical failure

E02 07 Type of Response Delay

National Element: Yes, Multiple Entry

Definition

The response delays, if any, of the unit associated with the patient encounter.

Field Values:

125 Crowd

- 130 Directions
- 135 Distance
- 140 Diversion
- 145 HazMat
- 150 None
- 155 Other
- 160 Safety
- 165 Staff Delay
- 170 Traffic
- 175 Vehicle Crash
- 180 Vehicle Failure
- 185 Weather

Extended Definitions:

Crowd – Crowds

Directions – Bad or inadequate directions, or if the unit got lost en route

Distance – A long distance to the scene from the unit's location when dispatched

Diversion – Diversion of the initially dispatched unit to another incident

HazMat – Hazardous Material danger

None – Use if the arrival of the EMS unit at the scene was not delayed

Other – Other reasons not listed here

Safety – Scene safety issues not related to crowds or HazMat

Staff Delay – Issues arising with crew members' ability to respond

Traffic – Heavy traffic

Vehicle Crash – EMS unit was involved in a crash

Vehicle Failure – EMS unit mechanical reasons (i.e., ambulance did not start, flat tire, etc.)

Weather – Bad weather

E02 08 Type of Scene Delay

National Element: Yes, Multiple Entry

Definition

The scene delays, if any, of the unit associated with the patient encounter.

Field Values:

- 190 Crowd
- 195 Directions
- 200 Distance
- 205 Diversion
- 210 Extrication >20 min.
- 215 HazMat
- 220 Language Barrier
- 225 None
- 230 Other
- 235 Safety
- 240 Staff Delay
- 245 Traffic
- 250 Vehicle Crash
- 255 Vehicle Failure
- 260 Weather

Extended Definitions:

Crowd – Crowds

Directions – Bad or inadequate directions resulting in the crew having difficulty finding the patient

Distance – Distance between the ambulance and the patient

Diversion – Need to find receiving hospital not on diversion before departing the scene

Extrication > 20 Min. – Extrication of patient that took longer than 20 minutes

HazMat – Hazardous Material danger

Language Barrier – Difficulty communicating with the patient or bystanders because of language problems

None – Use if the total scene time was not extended

Other – Any other factor not described here

Safety – Scene safety issues not related to crowds or HazMat

Staff Delay – Total scene time issues arising with crew members

Traffic – Traffic conditions

Vehicle Crash – EMS unit was involved in a crash

Vehicle Failure – EMS unit had mechanical reasons (i.e., ambulance did not start, flat tire, etc.)

Weather – Bad weather

E02 09 Type of Transport Delay

National Element: Yes, Multiple Entry

Definition

The transport delays, if any, of the unit associated with the patient encounter.

Field Values:

- 265 Crowd
- 270 Directions
- 275 Distance
- 280 Diversion
- 285 HazMat
- 290 None
- 295 Other
- 300 Safety
- 305 Staff Delay
- 310 Traffic
- 315 Vehicle Crash
- 320 Vehicle Failure
- 325 Weather

Extended Definitions:

Crowd – Crowds

Directions – Bad or inadequate directions, or if the unit got lost en route

Distance – A long distance to the destination from the scene

Diversion – Diversion of the transporting unit to a different receiving hospital

HazMat – Hazardous Material danger

None – Use if the arrival of the EMS unit at the destination was not delayed

Other – Other reasons not listed here

Safety – Transport safety issues not related to crowds or HazMat

Staff Delay – Issues arising with crew members' ability to transport

Traffic – Heavy traffic

Vehicle Crash – EMS unit was involved in a crash

Vehicle Failure – EMS unit mechanical reasons (i.e., ambulance did not start, flat tire, etc.)

Weather – Bad weather

E02 10 Type of Turn-Around Delay

National Element: Yes, Multiple Entry

Definition

The turn-around delays, if any, associated with the EMS unit associated with the patient encounter.

Field Values:

- 330 Clean-up
- 335 Decontamination
- 340 Documentation
- 345 ED Overcrowding
- 350 Equipment Failure
- 355 Equipment Replenishment
- 360 None
- 365 Other
- 370 Staff Delay
- 375 Vehicle Failure

Extended Definitions:

Clean-up – EMS unit clean up takes longer than normal

Decontamination – EMS unit decontamination

Documentation – Patient care documentation takes longer than normal

ED Over-crowding – Over-crowding in the hospital emergency department

Equipment Failure – Equipment Failure with the exception of the EMS unit

Equipment Replacement – Re-supply of the EMS unit takes longer than normal

None – There were no delays in returning to service

Other – Any other reason not listed here

Staff Delay – Issues arising with crew members

Vehicle Failure – EMS unit mechanical reasons (i.e., ambulance did not start, flat tire, etc.)

E03 01 Complaint Reported by Dispatch

National Element: Yes, Single Entry

Definition

The complaint dispatch reported to the responding unit.

Values do not need further definition.

E03 02 EMD Performed

National Element: Yes, Single Entry

Definition

Indication of whether EMD was performed for this EMS event.

Field Values:

- 0 No
- 570 Yes, With Pre-Arrival Instructions
- 575 Yes, Without Pre-Arrival Instructions

Extended Definitions:

No – EMD was not performed for this incident.

Yes, with Pre-Arrival Instructions – EMD was performed for this incident and the caller was given instructions on how to provide treatment (CPR, bleeding control, etc.) for the patient.

Yes, without Pre-Arrival Instructions – EMD was performed for this incident but no treatment instructions were given.

Common Null Value – Not Available – Used when EMD is not available in the provider’s primary service area. (If your dispatchers never provide EMD, this will always be the correct value).

Common Null Value – Not Known – Used when the EMS provider’s Do Not Know if EMD service was provided for this incident.

E06 12 Race

National Element: Yes, Single Entry

Definition

The patient's race as defined by the OMB (US Office of Management and Budget).

Field Values:

- 660 American Indian or Alaska Native
- 665 Asian
- 670 Black or African American
- 675 Native Hawaiian or Other Pacific Islander
- 680 White
- 685 Other Race

Extended Definitions:

White - A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or indicate heritage such as Irish, German, Italian, Lebanese, Near Easterner, Arab, or Polish.

Black or African American - A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black, African Am., or Negro," or indicate heritage such as African American, Afro American, Kenyan, Nigerian, or Haitian.

American Indian and Alaska Native - A person having origins in any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment.

Asian - A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian."

Native Hawaiian or Other Pacific Islander - A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other

Pacific Islands - It includes people who indicate their race as "Native Hawaiian," "Guamanian or Chamorro," "Samoan," and "Other Pacific Islander."

Other race - Includes all other responses not included in the "White", "Black or African American", "American Indian and Alaska Native", "Asian" and "Native Hawaiian or Other Pacific Islander" race categories described above.

E06 13 Ethnicity

National Element: Yes, Single Entry

Definition

The patient's ethnicity as defined by the OMB (US Office of Management and Budget).

Field Values:

690 Hispanic or Latino

695 Not Hispanic or Latino

Extended Definitions:

Hispanic or Latino - A person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin regardless of race.

Not Hispanic or Latino - A person not of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin regardless of race.

E06 14 Age

National Element: Yes, Single Entry

Definition

The patient's age (either calculated from date of birth or best approximation).

Field Values:

Relevant Value for Data Element Patient Care

Extended Definitions:

Calculated from Date of Birth; if DOB not available, ask age; if not possible approximate age.

E07 01 Primary Method of Payment

National Element: Yes, Single Entry

Definition

The primary method of payment or type of insurance associated with this EMS encounter.

Field Values:

720 Insurance

- 725 Medicaid
- 730 Medicare
- 735 Not Billed (for any reason)
- 740 Other Government
- 745 Self Pay
- 750 Workers Compensation

Extended Definitions:

Note - *This element is not about what insurance the patient has, but rather how your agency will be reimbursed for this incident.*

Commercial Insurance - Use this value if this incident will be billed to a commercial insurance plan such as health insurance or auto insurance that is paid for privately by the patient, the patient's family, or the patient's employer (excluding Worker's Compensation).

Medicaid - Use this value if this incident will be billed to Medicaid, the state/federal program that pays for medical assistance for individuals and families with low incomes and resources.

Medicare - Use this value if this incident will be billed to Medicare, the federal health insurance program for people 65 and older, or persons under 65 with certain disabilities

Not Billed (for any reason) - Use this value if the patient will not be billed at all for this incident

Other Government (not Medicare, Medicaid, or Worker's Comp) - Use this value if this incident will be billed to a government insurance policy besides Medicare, Medicaid, or Worker's Compensation

Self Pay / Patient Has No Insurance - Use this value if this incident will be billed to the patient directly, or if the patient has no insurance policy that will pay for this incident

Worker's Compensation - Use this value if this incident will be billed to Worker's Compensation

Not Applicable - (e.g.; agency never bills for service or if the call is non-billable)

Not Available - Use this value if this incident will be billed but the type of insurance is not known

E07 34 CMS Service Level

National Element: Yes, Single Entry

Definition

The CMS service level for this EMS encounter.

Field Values:

- 990 BLS
- 995 BLS, Emergency
- 1000 ALS, Level 1
- 1005 ALS, Level 1 Emergency
- 1010 ALS, Level 2
- 1015 Paramedic Intercept
- 1020 Specialty Care Transport
- 1025 Fixed Wing (Airplane)
- 1030 Rotary Wing (Helicopter)

Extended Definitions:

Basic Life Support (BLS) - Basic life support (BLS) is transportation by ground ambulance vehicle and the provision of medically necessary supplies and services, including BLS ambulance services as defined by the State. The ambulance must be staffed by an individual who is qualified in accordance with State and local laws as an emergency medical technician-basic (EMT-Basic). These laws may vary from State to State or within a State. For example, only in some jurisdictions is an EMT-Basic permitted to operate limited equipment onboard the vehicle, assist more qualified personnel in performing assessments and interventions, and establish a peripheral intravenous (IV) line.

Basic Life Support (BLS) - Emergency - When medically necessary, the provision of BLS services, as specified above, in the context of an emergency response. An emergency response is one that, at the time the ambulance provider or supplier is called, it responds immediately. An immediate response is one in which the ambulance provider/supplier begins as quickly as possible to take the steps necessary to respond to the call.

Advanced Life Support, Level 1 (ALS1) - Advanced life support, level 1 (ALS1) is the transportation by ground ambulance vehicle and the provision of medically necessary supplies and services including the provision of an ALS assessment or at least one ALS intervention. An advanced life support (ALS) assessment is an assessment performed by an ALS crew as part of an emergency response that was necessary because the patient's reported condition at the time of dispatch was such that only an ALS crew was qualified to perform the assessment. An ALS assessment does not necessarily result in a determination

that the patient requires an ALS level of service. An advanced life support (ALS) intervention is a procedure that is in accordance with State and local laws, required to be done by an emergency medical technician-intermediate (EMT-Intermediate) or EMT-Paramedic.

Advanced Life Support, Level 1 (ALS1) - Emergency - When medically necessary, the provision of ALS1 services, as specified above, in the context of an emergency response. An emergency response is one that, at the time the ambulance provider or supplier is called, it responds immediately. An immediate response is one in which the ambulance provider/supplier begins as quickly as possible to take the steps necessary to respond to the call.

Advanced Life Support, Level 2 (ALS2) - Advanced life support, level 2 (ALS2) is the transportation by ground ambulance vehicle and the provision of medically necessary supplies and services including (1) at least three separate administrations of one or more medications by intravenous push/bolus or by continuous infusion (excluding crystalloid fluids) or (2) ground ambulance transport, medically necessary supplies and services, and the provision of at least one of the ALS2 procedures listed below: a. Manual defibrillation/cardioversion; b. Endotracheal intubation; c. Central venous line; d. Cardiac pacing; e. Chest decompression; f. Surgical airway; or g. Intraosseous line.

Paramedic Intercept (PI) - Paramedic Intercept services are ALS services provided by an entity that does not provide the ambulance transport. This type of service is most often provided for an emergency ambulance transport in which a local volunteer ambulance that can provide only basic life support (BLS) level of service is dispatched to transport a patient. If the patient needs ALS services such as EKG monitoring, chest decompression, or I.V. therapy, another entity dispatches a paramedic to meet the BLS ambulance at the scene or once the ambulance is on the way to the hospital. The ALS paramedics then provide services to the patient. This tiered approach to life saving is cost effective in many areas because most volunteer ambulances do not charge for their services and one paramedic service can cover many communities. Prior to March 1, 1999, Medicare payment could be made for these services, but only when the claim was submitted by the entity that actually furnished the ambulance transport. Payment could not be made directly to the intercept service provider. In those areas where State laws prohibit volunteer ambulances from billing Medicare and other health insurance, the intercept service could not receive payment for treating a Medicare beneficiary and was forced to bill the beneficiary for the entire service. Paramedic intercept services furnished on or after March 1, 1999, may be payable separate from the ambulance transport, subject to the requirements specified below. The intercept service(s) is:

- Furnished in a rural area;
- Furnished under a contract with one or more volunteer ambulance services; and,

- Medically necessary based on the condition of the beneficiary receiving the ambulance service.

In addition, the volunteer ambulance service involved must:

- Meet the program's certification requirements for furnishing ambulance services;
- Furnish services only at the BLS level at the time of the intercept; and,
- Be prohibited by State law from billing anyone for any service.

Finally, the entity furnishing the ALS paramedic intercept service must:

- Meet the program's certification requirements for furnishing ALS services, and,
- Bill all recipients who receive ALS paramedic intercept services from the entity, regardless of whether or not those recipients are Medicare beneficiaries.

For purposes of the paramedic intercept benefit, a rural area is an area that is designated as rural by a State law or regulation or any area outside of a Metropolitan Statistical Area or in New England, outside a New England County Metropolitan Area as defined by the Office of Management and Budget. The current list of these areas is periodically published in the Federal Register.

Specialty Care Transport (SCT) - Specialty care transport (SCT) is the interfacility transportation of a critically injured or ill beneficiary by a ground ambulance vehicle, including the provision of medically necessary supplies and services, at a level of service beyond the scope of the EMT-Paramedic. SCT is necessary when a beneficiary's condition requires ongoing care that must be furnished by one or more health professionals in an appropriate specialty area, for example, emergency or critical care nursing, emergency medicine, respiratory care, cardiovascular care, or a paramedic with additional training. The EMT-Paramedic level of care is set by each State. Care above that level that is medically necessary and that is furnished at a level of service above the EMT-Paramedic level of care is considered SCT. That is to say, if EMT-Paramedics - without specialty care certification or qualification - are permitted to furnish a given service in a State, then that service does not qualify for SCT. The phrase "EMT-Paramedic with additional training" recognizes that a State may permit a person who is not only certified as an EMT-Paramedic, but who also has successfully completed additional education as determined by the State in furnishing higher level medical services required by critically ill or critically injured patients, to furnish a level of service that otherwise would require a health professional in an appropriate specialty care area (for example, a nurse) to provide. "Additional training" means the specific additional training that a State requires a paramedic to complete in order to qualify to furnish specialty care to a critically ill or injured patient during an SCT.

Fixed Wing (FW) Air Ambulance - Fixed Wing air ambulance is the transportation by a fixed wing aircraft that is certified by the Federal Aviation Administration (FAA) as a fixed wing air ambulance and the provision of medically necessary services and supplies.

Rotary Wing (RW) Air Ambulance - Rotor Wing air ambulance is the transportation by a helicopter that is certified by the FAA as a rotary wing ambulance, including the provision of medically necessary supplies and services.

E08 06 Mass Casualty Incident

National Element: Yes, Single Entry

Definition

Indicator if this event would be considered a mass casualty incident (overwhelmed existing EMS resources).

Field Values:

- 0 No
- 1 Yes

Extended Definitions:

Yes - Indicator if this event would be considered a Mass Casualty Incident (anything overwhelming existing EMS resources).

A mass casualty incident is defined as an event which generates more patients at one time than locally available resources can manage using routine procedures or resulting in a number of victims large enough to disrupt the normal course of emergency and health care services and would require additional non-routine assistance.

E08 07 Incident Location Type

National Element: Yes, Single Entry

Definition

The kind of location where the incident happened.

Field Values:

- 1135 Home/Residence
- 1140 Farm
- 1145 Mine or Quarry
- 1150 Industrial Place and Premises

- 1155 Place of Recreation or Sport
- 1160 Street or Highway
- 1165 Public Building (schools, gov. offices)
- 1170 Trade or service (business, bars, restaurants, etc)
- 1175 Health Care Facility (clinic, hospital, nursing home)
- 1180 Residential Institution (Nursing Home, jail/prison)
- 1185 Lake, River, Ocean
- 1190 Other Location

Extended Definitions:

Home / Residence - Any home, apartment, or residence (not just the patient's home). Includes the yard, driveway, garage, pool, garden, or walk of a home, apartment, or residence. Excludes assisting living facilities.

Farm – A place of agriculture, except for a farmhouse, Includes land under cultivation and non-residential farm buildings.

Mine or Quarry – Includes sand pits, gravel pits, iron ore pits, and tunnels under construction.

Industrial Place and Premises – A place where things are made or are being built, includes construction sites, factories, warehouses, industrial plants, docks, and railway yards.

Place of Recreation or Sport – Includes amusement parks, public parks and playgrounds, sports fields/courts/courses, sports stadiums, skating rinks, gymnasiums, swimming pools, waterparks, and resorts.

Street or Highway – Any public street, road, highway, or avenue including boulevards, sidewalks and ditches.

Public Building (schools, government offices) – Any publicly owned building and its grounds, including schools and government offices.

Trade or Service (business, bars, restaurants, etc.) – Any privately owned building used for business and open to the public. Includes bars, restaurants, office buildings, churches, stores, bus/railway stations. Excludes health care facilities.

Health Care Facility (clinic, hospital) – A place where health care is delivered, includes, clinics, doctor's offices, and hospitals.

Residential Institution (nursing home, assisted living, jail / prison) – A place where people live that is not a private home, apartment, or residence. Includes, nursing homes, assisted living, jail/prison, orphanage, and group homes. (Where assisted living has a medical resource individual available but does not provide patient care on a regular basis.)

Lake, River, Ocean – Any body of water, except swimming pools.

Other Location – Any place that does not fit any of the above categories (this should be very rare).

E09 02 Prior Aid Performed by

National Element: Yes, Multiple Entry

Definition

The type of individual who performed the care prior to the arrival of this unit.

Field Values:

- 1195 EMS Provider
- 1200 Law Enforcement
- 1205 Lay Person
- 1210 Other Healthcare Provider
- 1215 Patient

Extended Definitions:

EMS Provider – Any dispatched responder who provides pre-hospital medical care.

Law Enforcement – Officer who's primary role is not to provide pre-hospital medical care.

Lay Person – An individual without formal medical training with no duty to respond to the incident.

Other Healthcare Provider – Physician, Registered Nurse or other person, not dispatched, that indicates they work in a healthcare related field.

Patient – Person needing emergency medical services treatment or transportation.

E09 03 Outcome of the Prior Aid

National Element: Yes, Single Entry

Definition

What was the outcome or result of the care performed prior to the arrival of the unit?

Field Values:

- 1220 Improved
- 1225 Unchanged

1230 Worse

Values do not need further definition.

E09 04 Possible Injury

National Element: Yes, Single Entry

Definition

Indicates that the reason for the EMS encounter was related to an injury or traumatic event. This data element provides documentation to classify the EMS Reason for Encounter as either injury or non-injury related based on mechanism and not on actual injury.

Field Values:

- 0 No
- 1 Yes

Values do not need further definition

E09 12 Chief Complaint Organ System

National Element: Yes, Single Entry

Definition

The primary organ system of the patient injured or medically affected. This is to be completed by EMS personnel with a minimum of an EMT-Paramedic level of credentialing.

Field Values:

- 1350 Cardiovascular
- 1355 CNS/Nero
- 1360 Endocrine/Metabolic
- 1365 GI
- 1370 Global
- 1375 Musculoskeletal
- 1380 OB/Gyn
- 1385 Psych
- 1390 Pulmonary
- 1395 Renal

1400 Skin

Extended Definitions:

Cardiovascular – heart, arteries, veins

CNS / Neuro – brain, spinal cord, nerves

Endocrine / Metabolic – diabetes, thyroid, liver

GI / Abdomen – mouth, esophagus, stomach, intestines

Global – other organs and systems or multiple organs and systems

Musculoskeletal / Injury – muscles, bones, joints, tendons, ligaments, cartilage

OB / GYN – female reproductive system

Psychiatric / Behavioral – mental, emotional, behavioral

Respiratory – lungs, trachea, airway

Renal / GU Problems – kidneys, male reproductive system

Skin – external (*look up definition*)

E09 13 Primary Symptom

National Element: Yes, Single Entry

Definition

The primary sign and symptom present in the patient or observed by EMS personnel.

Field Values:

- 1405 Bleeding
- 1410 Breathing Problem
- 1415 Change in responsiveness
- 1420 Choking
- 1425 Death
- 1430 Device/Equipment Problem
- 1435 Diarrhea
- 1440 Drainage/Discharge
- 1445 Fever
- 1450 Malaise
- 1455 Mass/Lesion
- 1460 Mental/Psych
- 1465 Nausea/Vomiting
- 1470 None

- 1475 Pain
- 1480 Palpitations
- 1485 Rash/Itching
- 1490 Swelling
- 1495 Transport Only
- 1500 Weakness
- 1505 Wound

Extended Definitions:

Bleeding – Active, Inactive, Internal or External.

Device / Equipment Problem – Patient device (i.e., ICD, Implantable Defibrillator, Insulin Pump, Portacath, Central Line, etc.).

Malaise – General non-specific feeling of illness.

Palpitations – The sensation of a rapidly or irregularly beating heart; fluttering, pounding racing, skipping a beat, jumping around in the chest.

Wound – A type of physical trauma wherein the skin is torn, cut or punctured (i.e., an open wound). This field value is not defined as blunt force trauma causing, for example, a contusion (i.e., a closed wound).

Transport Only – The patient presents with no identifiable injury or illness.

E09 14 Other Associated Symptoms

National Element: Yes, Multiple Entry

Definition

Other symptoms identified by the patient or observed by EMS personnel.

Field Values:

- 1510 Bleeding
- 1515 Breathing Problem
- 1520 Change in responsiveness
- 1525 Choking
- 1530 Death
- 1535 Device/Equipment Problem
- 1540 Diarrhea
- 1545 Drainage/Discharge
- 1550 Fever
- 1555 Malaise

[1560](#) Mass/Lesion
[1565](#) Mental/Psych
[1570](#) Nausea/Vomiting
[1575](#) None
[1580](#) Pain
[1585](#) Palpitations
[1590](#) Rash/Itching
[1595](#) Swelling
[1600](#) Transport Only
[1605](#) Weakness
[1610](#) Wound

Extended Definitions:

See comments for E09_13

E10 01 Cause of Injury

National Element: Yes, Single Entry

Definition

The category of the reported/suspected external cause of the injury

Field Values:

[9595](#) Motor Vehicle traffic accident
[9610](#) Pedestrian traffic accident
[9590](#) Motor Vehicle non-traffic accident
[9505](#) Bicycle Accident
[9650](#) Water Transport accident
[9500](#) Aircraft related accident
[9530](#) Drug poisoning
[9515](#) Chemical poisoning
[9550](#) Falls
[9555](#) Fire and Flames
[9625](#) Smoke Inhalation
[9545](#) Excessive Heat
[9540](#) Excessive Cold
[9645](#) Venomous stings (plants, animals)
[1885](#) Bites

9575	Lightning
9525	Drowning
9585	Mechanical Suffocation
9580	Machinery accidents
9535	Electrocution (non-lightning)
9615	Radiation exposure
9565	Firearm injury (accidental)
9560	Firearm assault
9570	Firearm self inflicted
9620	Rape
9635	Stabbing/Cutting assault
9520	Child battering

Extended Definitions:

Motor vehicle traffic accident - Includes any motor vehicle incident occurring on a public road or highway. Public road or highway includes any road open to the use of the public for purposes of vehicular traffic as a matter of right or custom.

Motor vehicle non-traffic accident - Includes any motor vehicle incident occurring entirely off public roadways or highways. For instance an incident involving an All Terrain Vehicle (ATV) in an off the road location would be counted under this sub-category.

Pedestrian Traffic Accident - Includes responses in which a motor vehicle/pedestrian incident occurs on a public road or highway where the pedestrian was injured. Includes individuals on skates, in baby carriages, in wheelchairs, on skateboards, etc.

Bicycle Accident - Includes bicycle-related incidents not involving a motorized vehicle.

Water Transport - Includes all incidents related to a watercraft. Excludes drowning incidents unless they are related to watercraft use. Thus, if a person falls out of a boat and drowns, it should be counted within this category. If a person drowns in a swimming pool or bathtub, it should be counted under Drowning.

Aircraft Related Crash - Excludes spacecraft.

Drug Poisoning - Includes poisoning by drugs, medicinal substances, or biological products.

Chemical Poisoning - Includes poisoning by solid or liquid substances, gases, and vapors, which are not included under Drug Poisoning.

Falls - Excludes falls which occur in the context of other external causes of injury such as fire, or falling in incidents involving Machinery. These types of injuries should be coded as such.

Fire and Flames - Includes burning by fire, asphyxia or poisoning from conflagration or ignition, and fires secondary to explosions. Excludes injuries related to Machinery, and vehicle related incidents, which should be counted under their respective sub-categories.

Smoke Inhalation - Includes smoke and fume inhalation from conflagration.

Excessive Heat - Includes thermal injuries related to weather or heat produced by man, such as in a boiler room or factory. Excludes heat injury from conflagration, this should be counted under Fire and Flames.

Excessive Cold - Includes cold injury due to weather exposure, or cold produced by man, such as in a freezer.

Venomous Stings (Plant, Animals) - Includes stings from spiders, scorpions, insects, marine life or plants. Excludes “bites” and should be coded as such.

Bites - Includes bites (e.g., dogs, snakes and lizards, etc.). Excludes venomous stings which should be coded as such.

Lightning - Excludes falling off an object secondary to lightning and injuries from fire secondary to lightning.

Drowning - Includes responses to drowning/near drowning that are not related to watercraft use. Includes swimming and snorkeling incidents, bathtubs, hot tubs, holding ponds, buckets, etc.

Mechanical Suffocation - Includes suffocation in bed or cradle (crib death), closed space suffocation, plastic bag, hanging, etc.

Machinery Accidents - Includes responses in which machinery in operation was involved.

Electrocution (Non-Lightning) - Includes responses in which an incident related to electric current from exposed wire, faulty appliance, high voltage cable, live rail, or open electric socket. Excludes electrocution by lightning.

Radiation Exposure - Excludes complications of radiation therapy.

Rape - This sub-category should be entered in all instances where there was sufficient suspicion by the EMS responder that the responder would be required by law to report the case to authorities as a suspected case of rape.

Stabbing Assault - Includes reported cuts, punctures, or stabs to any part of the body.

Child Battering - Includes all forms of suspected child battering. This sub-category should be entered in all instances where there was sufficient suspicion by the EMS responder that the responder would be required by law to report the case to authorities as a suspected case of child abuse.

E12 01 Barriers to Patient Care

National Element: Yes, Multiple Entry

Definition

Indication of whether or not there were any patient specific barriers to serving the patient at the scene.

Field Values:

- 2600 Developmentally Impaired
- 2605 Hearing Impaired
- 2610 Language
- 2615 None
- 2620 Physically Impaired
- 2625 Physically Restrained
- 2630 Speech Impaired
- 2635 Unattended or Unsupervised (including minors)
- 2640 Unconscious

Values do not need further definition.

E19 05 Number of Procedure Attempts

National Element: Yes, Multiple Entry

Definition

The number of attempts taken to complete a procedure or intervention regardless of success.

Field Values:

Relevant Value for Data Element Patient Care

Extended Definitions:

Clarification of the term 'attempt' – An active attempt to perform the procedure. Specific examples include:

Oral airways – The tip of the airway or the laryngoscope breaks the plane of the teeth

Nasal airways – The tip of the airway breaks the plane of the nares

Surgical airways – The skin over the intended airway site is broken

Vascular access – The skin over the intended access site is broken

E19 06 Procedure Successful

National Element: Yes, Multiple Entry

Definition

Indication of whether or not the procedure performed on the patient was successful.

Field Values:

- 0 No
- 1 Yes

Extended Definition:

Clarification of the term 'successful' - An indication of whether the procedure / intervention was completed as intended, regardless of the patient's response or outcome.

E19 07 Procedure Complication

National Element: Yes, Multiple Entry

Definition

Any complication associated with the performance of the procedure on the patient.

Field Values:

- 4500 None
- 4505 Altered Mental Status
- 4510 Apnea
- 4515 Bleeding
- 4520 Bradycardia
- 4525 Diarrhea
- 4530 Esophageal Intubation-immediately
- 4535 Esophageal Intubation-other
- 4540 Extravasation
- 4545 Hypertension
- 4550 Hyperthermia
- 4555 Hypotension
- 4560 Hypoxia
- 4565 Injury
- 4570 Itching/Urticaria
- 4575 Nausea

- 4580 Other
- 4585 Respiratory Distress
- 4590 Tachycardia
- 4595 Vomiting

Extended Definitions:

Clarification of the term 'complication' - These are complications caused by the performance of the procedure by EMS.

4530 - **Esophageal Intubation-immediately detected** means the misplacement/displacement of the airway was detected in the prehospital setting

4535 - **Esophageal Intubation-other** means the misplacement / displacement of the airway was detected in the hospital or clinical setting

E20 10 Incident/Patient Disposition

National Element: Yes, Single Entry

Definition

Type of disposition treatment and/or transport of the patient.

Field Values:

- 4815 Cancelled
- 4820 Dead at Scene
- 4825 No Patient Found
- 4830 No Treatment Required
- 4835 Patient Refused Care
- 4840 Treated and Released
- 4845 Treated, Transferred Care
- 4850 Treated, Transported by EMS
- 4855 Treated, Transported by Law Enforcement
- 4860 Treated, Transported by Private Vehicle

Extended Definitions:

4815 - **Cancelled** - Cancelled prior to patient contact

4820 - **Dead at Scene** - Either dead on arrival or dead after arrival with field resuscitation not successful and not transported

4825 - **No Patient Found** - EMS was unable to find a patient at the scene

4830 - **No treatment required** - Assessment resulted in no identifiable condition requiring treatment by EMS

4835 - **Patient Refused Care** - Patient refused to give consent or withdrew consent for care

4840 - **Treated and released** - The patient was treated by EMS but did not require transport to the hospital

4845 - **Treated, Transferred Care** - The patient was treated but care was transferred to another EMS unit

4850 - **Treated, transported by EMS** - The patient was treated and transported by the reporting EMS unit

4855 - **Treated, transported by law Enforcement** - The patient was treated and transported by a law enforcement unit

4860 - **Treated, Transported by Private Vehicle** - The patient was treated and transported by means other than EMS or law enforcement

E20 16 Reason for Choosing Destination

National Element: Yes, Single Entry

Definition

The reason the unit chose to deliver or transfer the patient to the destination.

Field Values:

- 4990 Closest Facility (none below)
- 4995 Diversion
- 5000 Family Choice
- 5005 Insurance Status
- 5010 Law Enforcement Choice
- 5015 On-Line Medical Direction
- 5020 Other
- 5025 Patient Choice
- 5030 Patient's Physicians Choice
- 5035 Protocol
- 5040 Specialty Resource Center

Extended Definitions:

Closest Facility (none below) – The closest hospital/facility.

Diversion – First choice hospital/facility is unable to accept patient.

Family Choice – Transported to hospital/facility chosen by the patients’ family or a person acting on the patient’s behalf.

Insurance Status – The hospital/facility is chosen based on insurance coverage.

Law Enforcement Choice – Transported to hospital/facility chosen by Law Enforcement.

On-Line Medical Direction – Transported to hospital/facility as directed by medical control either on-line or on-scene.

Other – Not one of the other options listed.

Patient Choice – Transported to hospital/facility of patient’s choice.

Patient’s Physicians Choice – Transported to hospital/facility chosen by the patient’s physician.

Protocol – Patient transport to alternate facility in accordance with Medical Director approved protocols/guidelines.

Specialty Resource Center – Transport to a specialty facility based upon unique needs of the patient.

E20 17 Type of Destination

National Element: Yes, Single Entry

Definition

The type of destination the patient was delivered or transferred to.

Field Values:

- 7270 Home
- 7280 Hospital
- 7290 Medical Office/Clinic
- 7300 Morgue
- 7320 Nursing Home
- 7330 Other
- 7340 Other EMS Responder (air)
- 7350 Other EMS Responder (ground)
- 7360 Police/Jail

Values do not need further definition

APPENDIX E: COMPUTED AND ANCILLARY VARIABLE DESCRIPTION LIST

Variable Name	Short Variable Definition
AgeGroup	Age Group (in deciles)
EMSDispatchCenterTime	Time difference in minutes between E05_04 and E05_02. Note: if > 60 minutes, set to null.
EMSchuteTime	Time difference in minutes between E05_04 and E05_05. Note: if > 60 minutes, set to null.
EMSSystemResponseTime	Time difference in minutes between E05_04 and E05_06. Note: if > 24 hours, set to null.
EMSSceneResponseTime	Time difference in minutes between E05_06 and E05_05. Note: if > 24 hours, set to null.
EMSSceneTime	Time difference in minutes between E05_06 and E05_09. Note: if > 24 hours, set to null.
EMSSceneToPatientTime	Time difference in minutes between E05_06 and E05_07. Note: if > 12 hours, set to null.
EMSTransportTime	Time difference in minutes between E05_09 and E05_10. Note: if > 24 hours, set to null.
EMSTotalCallTime	Time difference in minutes between E05_11 and E05_04. Note: if > 24 hours, set to null.
USCensusRegion	Stratifies events into the five major U.S. Census regions
USCensusDivision	Stratifies events into the ten U.S. Census divisions
NasemsoRegion	Stratifies events into the four NASEMSO regions
Urbanicity	Stratifies events by four urbanicity codes, based upon USDA Urban Influence Codes

APPENDIX F: SOURCE CODE FOR SAMPLE PROGRAMS



Step1_BuildSASDatasets.sas



Step2_BuildFlatSASDatasets.sas



Step3_BuildFileSpecifications.sas