

National EMS Database

NEMSIS Public Release Research Data Set

v3.4.0



2020 User Manual

April 2021

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Acknowledgement

The Office of Emergency Medical Services, National Highway Traffic Safety Administration established the NEMSIS National EMS Database as a public service. The National EMS Database is a repository of EMS related data voluntarily reported by participating EMS agencies and states. The National Highway Traffic Safety Administration funds and administers the NEMSIS Program



TERMS OF USE

Please be advised of the following Terms and Conditions of Use. In order to request the NEMSIS Public Release Research Data Set, 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 National EMS Database as a public service. The National EMS Database is a repository of EMS related data voluntarily reported by participating EMS agencies and states. PLEASE NOTE THAT THE PUBLIC RELEASE RESEARCH DATASET IS NOT A POPULATION BASED DATA SET.

NHTSA funds and administers the NEMSIS Program. Therefore, use of any information from the National EMS Database or the NEMSIS Public Release Research Datasets must include a prominent credit line. That line is to read as follows:

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2. Use the information received under the provisions of this Agreement only for the following not-for-profit purposes: research, advocacy, medical education, patient education, or other EMS care-related activities supported by not-for-profit organizations.
3. All Information derived from the NEMSIS National EMS Database shall remain the full property of The National Highway Traffic Safety Administration and shall be so noted in educational material, website presentations, and publications.
4. Warrant that The National Highway Traffic Safety Administration is not responsible for any claims arising from works based on the original Data, Text, Tables, or Figures.
5. Indemnify the National Highway Traffic Safety Administration and the National EMS Information System Technical Assistance Center and their employees and agents from any and all liability, loss, or damage suffered as a result of claims, demands, costs, or judgments arising out of use of NEMSIS National EMS Database information.
6. Requestor may not sublease or permit other parities to use NEMSIS data without advance written approval of NEMSIS Technical Assistance Center.

The Requester's obligations hereunder shall remain in full force and effect and survive the completion of the Requester's defined project described herein above. The terms of this Agreement shall be binding upon the Requester and the organization through which his/her project is conducted.

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 (EMS) Systems Act* is passed. Administered by The Department of Health, Education and Welfare, the EMS Systems Act provides funding for the development of local EMS systems. The Act identifies 15 essential components of an EMS system, including the need for EMS data collection. This is the first federal legislation requiring EMS data collection and documentation of EMS services.

In 1991, the *Utstein Style for Uniform Reporting of Data* is published. This is the first major document to publish data points that specifically addressed data collection for EMS systems. The data points are specific to prehospital cardiac care and include variables on patient outcomes.

In 1994, the NHTSA *Uniform Pre-hospital EMS Dataset (Version 1.0)* is published. The EMS Community recognizes that EMS systems across the country are collecting different data elements for identical types of incidents, emergencies, EMS operations, and prehospital clinical care. There is clearly a need for standardization. In response, NHTSA works with representatives of national EMS organizations and EMS technical experts to develop the NHTSA Uniform Pre-hospital EMS Dataset, a national consensus document that defines 81 elements determined important to an EMS information system.

In 1996, NHTSA's *EMS Agenda for the Future: A Vision for the Nation's EMS System* (Agenda) is published. The Agenda is a collaborative effort involving representatives from State Offices of EMS, National EMS Organizations, and Federal Partners. The Agenda identifies 14 EMS Attributes for continued development and improvement of EMS systems. The Information Systems Attribute includes 5 recommendations related to uniform EMS data elements, information systems for collecting and transmitting data electronically, and integration with other public safety and healthcare data.

In 1997, *Data Elements for Emergency Department Systems* is published. The data elements, developed by the Center for Disease Control and Prevention's National Center for Injury Control and Prevention, extends the concept of information systems for emergency departments by providing standards for data collection and linkages back to EMS.

In 1998, NHTSA's *EMS Agenda for the Future: Implementation Guide* is published. The *Implementation Guide*, a follow-up compendium to the *EMS Agenda for the Future*, identifies approaches for implementing the Agenda's 89 recommendations.

In 2001, the National EMS Information System (NEMSIS) and the National EMS Database are developed. The development of NEMSIS is a collaborative effort by The National Association of State EMS Directors with funding from NHTSA and the Trauma and EMS Systems Program at the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau.

In 2003, an EMS data collection Memorandum of Agreement (MOU) is signed by 51 U.S. States and Territories. The MOU establishes the need for standardized EMS data element definitions, standardized data collection at the state level, and a defined set of national NEMSIS data



elements. By 2008, all states, the District of Columbia and the 5 U.S. Incorporated Territories have signed the MOU.

After 18 months of working with an expert consensus panel, a 400-page NEMSIS data dictionary is completed. The data dictionary includes data element labels, definitions, and standardized value codes.

In 2004, NEMSIS physical database schemas, element traits, and database development scripts are made available. These standardized implementation templates are provided to EMS software vendors for the development of EMS electronic patient care (ePCR) software and to states for development of state-level EMS data collection systems.

Also, during this time, Extensible Markup Language (XML) is designated as the standard to transmit EMS data from EMS agencies at the local-level to state-level EMS data collection systems, and onto the National EMS Database. XML's open format provides an easy way to transmit data for different ePCR software formats.

In 2005, the NEMSIS Version 2.2 Data Standard is created. The Version 2.2 Data Standard is developed using a national consensus process during a NEMSIS project pilot phase administered collaboratively by NHTSA, HRSA, and the CDC.

As a result of the pilot phase, NHTSA, HRSA, and the CDC recognize the value of the NEMSIS Project and initiate funding for a NEMSIS Technical Assistance Center (TAC). Initial development and testing of the NEMSIS standard are completed by the EMS Performance Improvement Center (EMS-PIC) at the University of North Carolina. The TAC agreement is awarded to the University of Utah School of Medicine (Utah). Utah works with closely with the EMS-PIC to ensure an accurate transfer of NEMSIS knowledge and technology developed by the EMS-PIC.

In 2009, NEMSIS Version 3 is created. NEMSIS Version 3 expands the number of NEMSIS data elements, incorporates ICD-10-CM codes for 19 data elements, establishes software business rules to improve data quality, expands recommendations for state EMS datasets, and establishes a data export and transmission standard based on Web Services to facilitate automated and near real-time EMS data transfer.

In 2012, NEMSIS Version 3.2.6 Data Standard ePCR software compliance testing is initiated to ensure adherence to the NEMSIS standard. Also, during this time, NEMSIS Version 3 works with a Standards Development Organization (Health Level Seven) and meets the American National Standards Institute (ANSI) requirements to become a National healthcare data standard. A Data Standard for Trial Use (DSTU) period is initiated and continued for 18 months.

Also, during this time, the number of states submitting Version 2 NEMSIS data to the National EMS Database reaches 37 states and territories.



In 2015, the National EMS Database reaches over 30 million NEMSIS Version 2.2.1 Data Standard records of EMS activations from 49 U.S. States and Territories. NEMSIS Version 3.4.0 is rolled out in 13 states with several additional states planning migration for early 2016.

In 2017, NEMSIS Version 2.2.1 has closed (Dec 31, 2016) for ePCR software compliance testing by the NEMSIS-TAC and for submission to the National EMS Database. The NEMSIS-TAC begins exclusively collecting Version 3 NEMSIS data from states and territories on January 1, 2017. For calendar year 2017, the NEMSIS-TAC collects 7,907,829 NEMSIS Version 3.3.4/3.4.0 records of EMS activations from 4,016 agencies located in 35 states and territories.

In 2019, the date to close NEMSIS Version 3.3.4 submissions is extended to March of 2021. NEMSIS Version 3.5.0 is completed and provided to software companies for implementation. Using NEMSIS Version 3.4.0, 10,062 EMS agencies serving 47 states and territories submit 34,203,087 EMS activations to the National EMS Repository. Over 900 scholarly reports, peer-reviewed papers, and other publications are now available online, using NEMSIS data.

In 2020, during the COVID-19 pandemic, more than 12,000 EMS agencies serving 50 states and territories submitted in excess of 44 million EMS activations to the NEMSIS National EMS Repository. Many scholarly reports were published during that same year highlighting the reduced EMS call volume, excess at-home deaths, decreased vehicular crashes, additional opioid overdoses and increased mental-health related EMS calls that were occurring during the pandemic. The migration to NEMSIS v3.5.0 that was to occur during 2020 was delayed by the pandemic.

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 (<https://nemsis.org/using-ems-data/request-research-data/>). 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 large convenience sample—it consists solely of data submitted by participating EMS agencies within states/territories 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 type of the discovered errors. A data profile report is generated for each submitted file from a state/territory 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 450 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.

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. In addition, several agencies may respond to the same event (i.e., one patient) and each submit a patient care 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 patient care reports (records) would exist in the National EMS Database for the single event. Thus, we refer to the National EMS Database as a registry of “EMS activations”.



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.

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 (e.g., 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 EMS agencies between or within states. If one state demonstrates incomplete data on patients when reporting 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 available 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 (eSituation.02 = 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

For further assistance in using the National EMS Dataset contact:

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REFERENCES

1. Annas GJ. Medical privacy and medical research - judging the new federal regulations. *Engl J Med.*; 346 pp.216-220.
2. Herrmann N, Cayten CG, Senior J, Staroscik R, Walsh S, Woll M. Interobserver and intraobserver reliability in the collection of emergency medical services data. *Health Serv Res.* 1980; 15 pp.127-43.
3. Mann NC, Guice K, Cassidy L, Wright D, Koury J, Anderson C. Are statewide trauma registries comparable? Reaching for a national trauma dataset. *Acad Emerg Med.* 2006; 13(9) pp.946-53.
4. Izquierdo JN, Schoenbach VJ. The potential and limitations of data from population-based state cancer registries. *Am J Public Hlth.* 2000; 90 pp.695-98.



GETTING STARTED WITH NATIONAL EMS DATA

The 2020 NEMSIS Public-Release Research Dataset includes 43,488,767 Version 3.4.0 EMS activations collected from 12,319 agencies located in 50 states and territories. This dataset is organized into a set of relational tables and consists of 42 data files each (including 6 reference tables and 1 computed table). These files are provided in ASCII format (pipe-separated values), SAS and STATA formats. Both types of files can be used to export the data to other formats (e.g., R, SPSS, etc.).

The table named “Pub PCRevents” 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 “PcrKey” is the unique key to match elements for each record contained in the Event Table and all other tables. This “PcrKey” (also known as “Primary Key”) 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 also found in all tables, except the Pub PCRevents Table, and is used to match multiple entries (for multiple entry elements) to the same EMS event. For most multiple entry elements, the included PcrKey is the same PcrKey found in the Pub PCRevents table. MedsGivenComplications, ProceduresComplications and Vitals related elements all contain a foreign key that matches multiple instances to a primary key in the MedsGiven, Procedures and vitals tables.

Please note that the time format changed in 2020 from YYYY-MM-DD HH:MM:SS to DDMMYYYY:HH:MM:SS .

Contact us with any concerns or suggestions you might have regarding table constructions (clay.mann@hsc.utah.edu). A detailed data dictionary of each variable can be found on the NEMSIS website (<https://nemsis.org/technical-resources/version-3/version-3-data-dictionaries/>).

Additional information regarding file size:

UNCOMPRESSED

ASCII	132 GB
SAS	114 GB
STATA	103 GB

COMPRESSED

ASCII	15 GB
SAS	14 GB
STATA	13 GB



FREQUENTLY ASKED QUESTIONS ABOUT USING NATIONAL EMS DATA

1. What are the system requirements for downloading the NEMSIS data?

Relational Tables

Minimum of 256 GB of storage for ASCII files

Minimum of 128 GB of storage for SAS files

Minimum of 128 GB of storage for STATA files

Minimum of 16+ GB of RAM strongly recommended

Files are encrypted using Bitlocker which requires a Windows 10 PC.

2. Can I estimate a number of patients 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 (e.g., PcrKey).

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.

5. How can I gain access to the Additional Variables Requiring Approval?

Data variables found on page 20 are submitted by states to the NEMSIS TAC, but are prohibited from release by existing State Data Use Agreements. Researchers can gain access to these variables by making a direct request to each state for which the researcher wishes access. In addition, the NEMSIS TAC can make use of the HIPAA de-identification clause to statistically “mask” these elements in a fashion that allows for the investigation of a specific hypothesis.

As an example, if a researcher is working with a hypothesis that requires access to geographic boundaries (such as the element “EMS Agency State”), the NEMSIS TAC can collapse data from several states into categories, based on the hypothesis, and provide the researcher a new “blinded” categorical element and include a primary key element for merging to the publicly accessible patient-level data. To make use of this process, contact N. Clay Mann at clay.mann@hsc.utah.edu.



SELECTED NEMSIS PUBLICATIONS

Mears, G., Dawson, D., and Ornato, J. Emergency Medical Services Information Systems and a Future EMS National Database. *Prehospital Emergency Care*, 2002 Jan-Mar; 6(1) pp.123-30.

Dawson DE. National Emergency Medical Services Information System (NEMSIS). *Prehosp Emerg Care*. 2006 Jul-Sep; 10(3) pp.314-6.

Kemp M. Mapping the future: with NEMSIS, the EMS of tomorrow will be shaped by the data of today. *EMS Mag*. 2009 Feb; 38(2) pp.48-50.

Legler J, Taillac P, Larsen B. Monitoring prehospital stroke care in Utah to assess the feasibility of using EMS data for surveillance. *Prev Chronic Dis*. 2009; 6(4), A137.

Williams I, Mears G, Raisor C, Wilson J. An emergency medical services toolkit for improving systems of care for stroke in North Carolina. *Prev Chronic Dis*. 2009 Apr; 6(2), A67.

Mears G. Avoid information overload. Now that you have data, what do you do with it? *JEMS*. 2009 Aug; 34(8) pp.12-5.

Shaeffer Z, Gohdes D, Legler J, Taillac P, Larsen B. Monitoring prehospital stroke care in Utah to assess the feasibility of using EMS data for surveillance. *Prev Chronic Dis*. 2009 Oct; 6(4) A137. Epub 2009 Sep 15.

Hostler D, Thomas EG, Emerson SS, Christenson J, Stiell IG, Rittenberger JC, Gorman KR, Bigham BL, Callaway CW, Vilke GM, Beaudoin T, Cheskes S, Craig A, Davis DP, Reed A, Idris A, Nichol G, and the Resuscitation Outcomes Consortium Investigators. Increased survival after EMS witnessed cardiac arrest. Observations from the Resuscitation Outcomes Consortium (ROC) Epistry - Cardiac Arrest. *Resuscitation*. 2010 July; 81(7) pp.826–830.

Hafley C. Building a PSO “Field of Dreams” for Emergency Medical Services. *Patient Safety and Quality Healthcare*, 2010 Nov-Dec.

Mears GD, Pratt D, Glickman SW, Brice JH, Glickman LT, Cabanas JG, Cairns CB. The North Carolina EMS data system: a comprehensive integrated emergency medical services quality improvement program. *Prehosp Emerg Care*, 2010; 14 pp.85–94.

Mears GD, Rosamond WD, Lohmeier C, Murphy C, O’Brien E, Asimos AW, Brice JH. A Link to Improve Stroke Patient Care: A Successful Linkage Between a Statewide Emergency Medical Services Data System and a Stroke Registry. *Acad Emerg Med*, 2010; 17(12) pp.1398–1404.

Wang HE, Bogucki S. Out-of-hospital Endotracheal Intubation: Are Observational Data Useful? *Acad Emerg Med*, 2010;17(9) pp.987-988.



Newgard CD, Zive D, Malveau S, Leopold R, Worrall W, Sahni R. Developing a statewide emergency medical services database linked to hospital outcomes: a feasibility study. *Prehosp Emerg Care*. 2011 Jul-Sep; 15(3) pp.303-19.

Wang HE, Mann NC, Mears G, Jacobson K, Yealy DM. Out-of-hospital airway management in the United States. *Resuscitation*. 2011; 82 pp.378-85.

Cairns C, Potenziani D, Hoit M, Jenkins C, Edgemon S. Novel approach to statewide biosurveillance using emergency medical services (EMS) information. *Emerging Health Threats Journal*. 2011; 4:11183.

Landman AB, Rokos IC, Burns K, Van Gelder CM, Fisher RM, Dunford JV, Cone DC, Bogucki S. An open, interoperable, and scalable prehospital information technology network architecture. *Prehosp Emerg Care*. 2011; 15 pp.149–157

Newgard CD, Malveau S, Staudenmayer K, Wang NE, Hsia RY, Mann NC, Holmes JF, Kuppermann N, Haukoos JS, Bulger EM, Dai M, Cook LJ. Evaluating the Use of Existing Data Sources, Probabilistic Linkage and Multiple Imputation to Build Population-Based Injury Databases Across Phases of Trauma Care. *Acad Emerg Med*. 2012; 19(4) pp.469-480.

Erich J. What do you do with that data? NEMSIS is power--learn how to take advantage. *EMS World*. 2012 Sep; 41(9) pp.61.

Landman AB, Lee CH, Sasson C, Van Gelder CM, Curry LA (2012) Prehospital Electronic Patient Care Report Systems: Early Experiences from Emergency Medical Services Agency Leaders. *PLoS ONE*. 7(3) e32692

Wang HE, Mann NC, Jacobson K, Dai M, Mears G, Smyrski K, Yealy DM. National Characteristics of Emergency Medical Services Responses in the United States. *Prehosp Emerg Care*. 2013; 17 pp.8-14.

Tataris, K., et al. "Out-of-Hospital Aspirin Administration for Acute Coronary Syndrome in the United States: An EMS Quality Assessment Using the NEMSIS (National EMS Information System) Database." *Annals of Emergency Medicine*. 2013; 62(4) S45.

Newgard CD, Mann NC, Hsia RY, Bulger EM, Ma OJ, Staudenmayer K, Haukoos JS, Sahni R, Kuppermann N. Patient Choice in the Selecting Hospitals by 9-1-1 Emergency Medical Services Providers in Trauma Systems. *Acad Emerg Med*. 2013; 20(9) pp.911-9.

Ostermayer DG, Gausche-Hill M. Supraglottic airways: The history and current state of prehospital airway adjuncts. *Prehosp Emerg Care*. 2014; 18(1) pp.06-115.

Schenk E, Wijetunge G, Mann NC, Lerner EB, Longthorne A, Dawson D. Epidemiology of Mass Casualty Incidents in the United States. *Prehosp Emerg Care*. 2014; 18(3) pp.408-416.



Tunik MG, Mann NC, Lerner EB. Pediatric Emergency Medical Services Research. *Clin Pediatr Emerg Med*. 2014; 15 pp.96-103.

Diggs LA, Yusuf JE, De Leo G. An update on out-of-hospital airway management practices in the United States. *Resuscitation*. 2014; 85(7) pp.885-892.

Lerner EB, Dayan PS Brown K, et al. Characteristics of the Pediatric Patients Treated by the Pediatric Emergency Care Applied Research Network's Affiliated EMS Agencies. *Prehosp Emerg Care*. 2014; 18(1) pp.52-59.

Mann NC, Kane L, Dai M, Jacobson K. Description of the 2012 NEMSIS Public-Release Research Dataset. *Prehosp Emerg Care*. (In Press).

Newgard C, Richardson D, Holmes JF, Rea TD, Hsia RY, Mann NC, Staudenmayer K, Barton ED, Bulger EM, Haukoos JS. Physiologic Field Triage Criteria for Identifying Seriously Injured Older Adults. *Prehosp Emerg Care*. (In Press).

Faul M. Disparity in Naloxone Administration by Emergency Medical Service Providers and the Burden of Drug Overdose in Rural Communities in the United States. *American Journal of Public Health*. 2014.

Hansen M, Lambert W, Guise JM, Warden CR, Mann NC, Wang H. Out-of-hospital pediatric airway management in the United States. *Resuscitation*. May 2015; 90 pp.104-110.

Tataris KL, Mercer MP, Govindarajan P. Prehospital aspirin administration for acute coronary syndrome (ACS) in the USA: an EMS quality assessment using the NEMSIS 2011 database. *Emergency Medicine Journal*. 2015 Feb 12.

Drayna PC, Browne LR, Guse CE, Brousseau DC, Lerner BE. Prehospital Pediatric Care: Opportunities for Training, Treatment, and Research. *Prehospital Emergency Care*. 2015.

Carlson JN, Karns C, Mann NC, Jacobson KE, Dai M, Colleran, C, Wang HE. Classification and Frequency of Emergency Medical Services Procedures Performed in the United States. *Ann Emerg Med*. (In Press).

Carlson JN, Gannon E, Mann NC, Jacobson KE, Dai M, Colleran C, Wang HE. Pediatric Out-of-Hospital Critical Procedures in the United States. *Pediatr Emerg Care*. (In Press).

Sayed ME, Tamim H, Mann NC. Description of Medication Administration by Emergency Medical Services During Mass Casualty Incidents in the United States. *Prehospital and Disaster Medicine*. 2016; 31(2) pp.141-149.

Mueller LR, Donnelly JP, Jacobson KE, Carlson JN, Mann NC, Wang HE. National Characteristics of Emergency Medical Services in Frontier and Remote Areas. *Prehospital Emergency Care*. 2016; 20(2) early online.



Sayed ME, Tamim H, Mann NC. Description of Prehospital Procedures Performed on Patients by Emergency Medical Services Levels During Mass Casualty Incidents in the United States. *Ann Emerg Med*. (In Press).

Mann NC, Dai M, Baeder LL, White K, Newgard CD, Kuppermann N, Wintemute G. Characterizing Pediatric Firearm Injuries in 20 States: Findings from NEMSIS. *Injury Prevention*. (Submitted)

Schwartz J, Dreyer RP, Murugiah K, Ranasinghe I. Contemporary Prehospital Emergency Medical Services Response Times for Suspected Stroke in the United States. *Prehospital Emergency Care*. 2016 Mar; 3 pp.1-5.

Faul M, Stevens JA, Sasser SM, Allee L, Deokar AJ, Kuhls DA, Burke P. Older Adult Falls Seen by Emergency Medical Service Providers: A Prevention Opportunity, *American Journal of Preventive Medicine*. 2016; 50(6) pp.719–726.

Faul M, Aikman SN, Sasser SM. Bystander Intervention Prior to Emergency Medical Service Arrival: Comparing Assistance across types of Medical Emergencies. *Prehospital Emergency Care*. 2016; 20(3) pp.317-323.

Martin A, Lohse CM. A Descriptive Analysis of Prehospital Response to Hazardous Material Events. *Prehospital and Disaster Medicine*. 2015; 30(5) pp.466-471.

Diggs LA, Sheth-Chandra M, De Leo G. Epidemiology of Pediatric Prehospital Basic Support Care in the United States. *Prehospital Emergency Care*. 2016; 20(2) pp.230-238.

Cornwell EY, Currit A. Racial and Social Disparities in Bystander Support during Medical Emergencies in US Streets. *Am J Public Health*. 2016; 106(6) pp.1049-51.

Schwartz J, Dreyer RP, Murugiah K, Ranasinghe I. Contemporary Prehospital Emergency Medical Services Response Times for Suspected Stroke in the United States. *Prehosp Emerg Care* 2016; 20(5) pp.560-65.

Mazen ES, TamimH, Mailhac A, Mann NC. Trends and predictors of tourniquet use by civilian emergency medical services in the United States. *Prehosp Emerg Care*. 2017; 21(1) pp.54-62.

Hsia RY, Dai M, Wei R, Sabbagh S, Mann NC. Geographic Discordance between Patient Residence and Incidence Location in Emergency Medical Services Responses. *Ann Emerg Med*, 2017; 69(1) pp.44-51.

JB Anupam, Mann NC, Wedlund LN, Olenski A. Delays in Emergency Care and Mortality during Major U.S. Marathons. *N Engl J Med*. 2017 Apr 13; 376, pp.1441-1450.



Hewes HA, Dai M, Mann NC, Baca T, Taillac P. Prehospital Pain Management: Disparity by Age and Race. *Prehosp Emerg Care*. 2018; 22(2) pp.189-97.

Benoit SR, Kahn HS, Geller AI, Budnitz DS, Mann NC, Dai M, Gregg EW, Geiss LS. Diabetes-related emergency medical service activations in 23 US states, 2015. *Prehosp Emerg Care*. 2018; 22(6) pp.705-712.

El Sayed M, Tamim H, Mailhac A, Mann NC. Ventilator Use by Emergency Medical Services during 911 calls in the United States. *Am J Emerg Med*. 36(5) pp.763-68.

Hsia RY, Huang D, Mann NC, Colwell C, Mercer MP, Dai M, Niedzwiecki MJ. A US National Study of the Association between Income and Ambulance Response Time in Cardiac Arrest. *JAMA Netw Open*. 2018; 1(7) e185202.

Moskatz L, Slusky D. Did UberX Reduce Ambulance Volume? *Health Economics*. 2019; 28 pp.817–829.

Watanabe BL, Patterson GS, Kempema JM, Magallanes O, Brown LH. Is Use of Warning Lights and Sirens Associated with Increased Risk of Ambulance Crashes? A Contemporary Analysis Using National EMS Information System (NEMSIS) Data. *Ann Emerg Med*. 2019; 74 pp.101-109.

Klassen AB, Marshall M, Dai M, Mann NC, Sztajnkrycer MD. Emergency Medical Services Response to Mass Shooting and Active Shooter Incidents, United States, 2014–2015. *Prehospital Emergency Care*. 2019; 23(2) pp.159-166.

Friedman J, Hoof M, Smith A, Tatum D, Ibraheem K, Guidry C, Schroll R, Duchesne J, McGrew P. Pediatric Firearm Incidents: It is Time to Decrease On-Scene Mortality. *J Trauma Acute Care Surg*. 2019; 86(5) pp.791-796.

Wei R, Mann NC, Dai M, Hsia RY. Injury-based Geographic Access to Trauma Centers. *Academic Emergency Medicine*. 2019; 26 pp.192–204.

Byrne JP, Mann NC, Dai M, et al. Association Between Emergency Medical Service Response Time and Motor Vehicle Crash Mortality in the United States. *JAMA Surg*. 2019;154(4) pp.286–293.

Kahn PA, Dhruva SS, Rhee TG, and Ross JS. Use of Mechanical Cardiopulmonary Resuscitation Devices for Out-of-Hospital Cardiac Arrest, 2010-2016. *JAMA Network Open*. 2019; 2(10) e1913298.

Nwanne T, Jarvis J, Barton D, Donnelly JP, and Wang HE. Advanced airway management success rates in a national cohort of emergency medical services agencies, *Resuscitation*. 2019; 146, pp. 43-49.



Miller KEM, James HJ, Holmes GM, Van Houtven CH. The effect of rural hospital closures on emergency medical service response and transport times. *Health Serv Res*. 2020;55(2).

Cui ER, Beja-Glasser A, Fernandez AR, Grover JM, Mann NC, Patel MD. Emergency Medical Services Time Intervals for Acute Chest Pain in the United States, 2015–2016. *Prehospital Emerg Care*. 2020;24(4).

Lerner EB, Newgard CD, Mann NC. Effect of the Coronavirus Disease 2019 (COVID-19) Pandemic on the U.S. Emergency Medical Services System: A Preliminary Report. *Acad Emerg Med*. 2020;27(8).

Okubo M, Chan HK, Callaway CW, Mann NC, Wang HE. Characteristics of paediatric out-of-hospital cardiac arrest in the United States. *Resuscitation*. 2020;153.

Chan HK, Okubo M, Callaway CW, Mann NC, Wang HE. Characteristics of adult out-of-hospital cardiac arrest in the National Emergency Medical Services Information System. *J Am Coll Emerg Physicians Open*. 2020;1(4).

Friedman J, Beletsky L, Schriger DL. Overdose-Related Cardiac Arrests Observed by Emergency Medical Services During the US COVID-19 Epidemic. *JAMA Psychiatry*. Published online December 3, 2020.

Jadhav S, Gaddam S. Gender and location disparities in prehospital bystander AED usage. *Resuscitation*. 2021;158.

Gaddam S, Singh S. Socioeconomic disparities in prehospital cardiac arrest outcomes: An analysis of the NEMSIS database. *Am J Emerg Med*. 2020;38(10).

Hill T, Weber T, Roberts M, et al. Retrospective cross sectional analysis of demographic disparities in outcomes of CPR performed by EMS providers in the United States. *JRSM Cardiovasc Dis*. 2021;10.



APPENDIX A: PUBLIC USE VARIABLE DESCRIPTION LIST

This section includes the data table name, variable name, and variable description as defined in the v3.4.0 Public Use NEMSIS National EMS Database. Variable definitions and value codes can be found in the NEMSIS Data Dictionary (v3.4.0) <https://nemsis.org/technical-resources/version-3/version-3-data-dictionaries/>.

Table Name	Variable Name	Variable Description
EINJURY_01REF	DiagnosisCodeDescr	ICD 10 code description
EINJURY_01REF	eInjury_01	Cause of Injury
EPROCEDURES_03REF	ProcedureCodeDescr	ICD 10 code description
EPROCEDURES_03REF	eProcedures_03	Procedure
ESITUATION_09REF	DiagnosisCodeDescr	ICD 10 code description
ESITUATION_09REF	eSituation_09	Primary Symptom
ESITUATION_10REF	DiagnosisCodeDescr	ICD 10 code description
ESITUATION_10REF	eSituation_10	Other Associated Symptom
ESITUATION_11REF	DiagnosisCodeDescr	ICD 10 code description
ESITUATION_11REF	eSituation_11	Provider's Primary Impression
ESITUATION_12REF	DiagnosisCodeDescr	ICD 10 code description
ESITUATION_12REF	eSituation_12	Provider's Secondary Impression
FACTPCRADDITIONALRESPONSEMODE	PcrKey	Primary Key for relational table
FACTPCRADDITIONALRESPONSEMODE	eResponse_24	Additional Response Mode Descriptors
FACTPCRADDITIONALSYMPTOM	PcrKey	Primary Key for relational table
FACTPCRADDITIONALSYMPTOM	eSituation_10	Other Associated Symptoms
FACTPCRADDITIONALTRANSPORTMODE	PcrKey	Primary Key for relational table
FACTPCRADDITIONALTRANSPORTMODE	eDisposition_18	Additional Transport Mode Descriptors
FACTPCRALCOHOLDRUGUSEINDICATOR	PcrKey	Primary Key for relational table
FACTPCRALCOHOLDRUGUSEINDICATOR	eHistory_17	Alcohol/Drug Use Indicators
FACTPCRARRESTCPR PROVIDED	PcrKey	Primary Key for relational table
FACTPCRARRESTCPR PROVIDED	eArrest_09	Type of CPR Provided
FACTPCRARRESTRHYTHMDESTINATION	eArrest_17	Cardiac Rhythm on Arrival at Destination
FACTPCRARRESTROSC	PcrKey	Primary Key for relational table
FACTPCRARRESTROSC	eArrest_12	Any Return of Spontaneous Circulation
FACTPCRARRESTWITNESS	PcrKey	Primary Key for relational table
FACTPCRARRESTWITNESS	eArrest_04	Arrest Witnessed By
FACTPCRBARRIERTOCARE	PcrKey	Primary Key for relational table
FACTPCRBARRIERTOCARE	eHistory_01	Barriers to Patient Care
FACTPCRCAUSEOFINJURY	PcrKey	Primary Key for relational table
FACTPCRCAUSEOFINJURY	eInjury_01	Cause of Injury
FACTPCRDESTINATIONREASON	PcrKey	Primary Key for relational table
Table Name	Variable Name	Variable Description
FACTPCRDESTINATIONREASON	eDisposition_20	Reason for Choosing Destination
FACTPCRDESTINATIONTEAM	PcrKey	Primary Key for relational table

FACTPCRDESTINATIONTEAM	eDisposition_24	Destination Team Pre-Arrival Alert or Activation
FACTPCRDESTINATIONTEAM	eDisposition_25	Date/Time Destination Pre-Arrival Alert or Activation
FACTPCRDISPATCHDELAY	PcrKey	Primary Key for relational table
FACTPCRDISPATCHDELAY	eResponse_08	Type of Dispatch Delay
FACTPCRINJURYRISKFACTOR	PcrKey	Primary Key for relational table
FACTPCRINJURYRISKFACTOR	eInjury_04	Vehicular, Pedestrian, or Other Injury Risk Factor
FACTPCRMEDICATION	PcrKey	Primary Key for relational table
FACTPCRMEDICATION	PcrMedicationKey	Primary Key for Medication
FACTPCRMEDICATION	eMedications_01	Date/Time Medication Administered
FACTPCRMEDICATION	eMedications_02	Medication Administered Prior to this Unit's EMS Care
FACTPCRMEDICATION	eMedications_03	Medication Given
FACTPCRMEDICATION	eMedications_05	Medication Dosage
FACTPCRMEDICATION	eMedications_06	Medication Dosage Units
FACTPCRMEDICATION	eMedications_07	Response to Medication
FACTPCRMEDICATION	eMedications_10	Role/Type of Person Administering Medication
FACTPCRMEDICATION	eMedications_03Des_cr	Medication recoded name
FACTPCRPRIMARYIMPRESSION	PcrKey	Primary Key for relational table
FACTPCRPRIMARYIMPRESSION	eSituation_11	Provider's Primary Impression
FACTPCRPRIMARYSYMPTOM	PcrKey	Primary Key for relational table
FACTPCRPRIMARYSYMPTOM	eSituation_09	Primary Symptom
FACTPCRPROCEDURE	PcrKey	Primary Key for relational table
FACTPCRPROCEDURE	PcrProcedureKey	Primary Key for Procedures
FACTPCRPROCEDURE	eProcedures_01	Date/Time Procedure Performed
FACTPCRPROCEDURE	eProcedures_02	Procedure Performed Prior to this Unit's EMS Care
FACTPCRPROCEDURE	eProcedures_03	Procedure
FACTPCRPROCEDURE	eProcedures_05	Number of Procedure Attempts
FACTPCRPROCEDURE	eProcedures_06	Procedure Successful
FACTPCRPROCEDURE	eProcedures_08	Response to Procedure
FACTPCRPROCEDURE	eProcedures_10	Role/Type of Person Performing the Procedure
FACTPCRPROTOCOL	PcrKey	Primary Key for relational table
FACTPCRPROTOCOL	eProtocol_01	Protocols Used
FACTPCRPROTOCOL	eProtocol_02	Protocol Age Category
FACTPCRRESPONSEDELAY	PcrKey	Primary Key for relational table
FACTPCRRESPONSEDELAY	eResponse_09	Type of Response Delay
FACTPCRSCENEDELAY	PcrKey	Primary Key for relational table
FACTPCRSCENEDELAY	eResponse_10	Type of Scene Delay
FACTPCRSECONDARYIMPRESSION	PcrKey	Primary Key for relational table
FACTPCRSECONDARYIMPRESSION	eSituation_12	Provider's Secondary Impressions
FACTPCRTRANSPORTDELAY	PcrKey	Primary Key for relational table
FACTPCRTRANSPORTDELAY	eResponse_11	Type of Transport Delay
Table Name		
Variable Name		
FACTPCRTRAUMACRITERIA	PcrKey	Primary Key for relational table
FACTPCRTRAUMACRITERIA	eInjury_03	Trauma Center Criteria
FACTPCRTURNAROUNDDELAY	PcrKey	Primary Key for relational table

Table Name	Variable Name	Variable Description
PUB_PCREVENTS	eOutcome_02	Hospital Disposition
PUB_PCREVENTS	ePatient_13	Gender
PUB_PCREVENTS	ePatient_15	Age
FACTPCRTURNAROUNDDELAY	eResponse_12	Type of Turn-Around Delay
FACTPCRVITAL	PcrKey	Primary Key for relational table
FACTPCRVITAL	PcrVitalKey	Primary Key for Vitals
FACTPCRVITAL	eVitals_01	Date/Time Vital Signs Taken
FACTPCRVITAL	eVitals_02	Obtained Prior to this Unit's EMS Care
FACTPCRVITAL	eVitals_04	ECG Type
FACTPCRVITAL	eVitals_06	SBP (Systolic Blood Pressure)
FACTPCRVITAL	eVitals_08	Method of Blood Pressure Measurement
FACTPCRVITAL	eVitals_10	Heart Rate
FACTPCRVITAL	eVitals_12	Pulse Oximetry
FACTPCRVITAL	eVitals_14	Respiratory Rate
FACTPCRVITAL	eVitals_16	End Tidal Carbon Dioxide (ETCO2)
FACTPCRVITAL	eVitals_18	Blood Glucose Level
FACTPCRVITAL	eVitals_19	Glasgow Coma Score-Eye
FACTPCRVITAL	eVitals_20	Glasgow Coma Score-Verbal
FACTPCRVITAL	eVitals_21	Glasgow Coma Score-Motor
FACTPCRVITAL	eVitals_26	Level of Responsiveness (AVPU)
FACTPCRVITAL	eVitals_27	Pain Scale Score
FACTPCRVITAL	eVitals_29	Stroke Scale Score
FACTPCRVITAL	eVitals_30	Stroke Scale Type
FACTPCRVITAL	eVitals_31	Reperfusion Checklist
FACTPCRWORKRELATEDEXPOSURE	PcrKey	Primary Key for relational table
FACTPCRWORKRELATEDEXPOSURE	eOther_05	Suspect EMS Work Related Exposure, Injury, or Death
PUB_PCREVENTS	PcrKey	Primary Key for relational table
PUB_PCREVENTS	eArrest_01	Cardiac Arrest
PUB_PCREVENTS	eArrest_02	Cardiac Arrest Etiology
PUB_PCREVENTS	eArrest_05	CPR Care Provided Prior to EMS Arrival
PUB_PCREVENTS	eArrest_07	AED Use Prior to EMS Arrival
PUB_PCREVENTS	eArrest_11	First Monitored Arrest Rhythm of the Patient
PUB_PCREVENTS	eArrest_14	Date/Time of Cardiac Arrest
PUB_PCREVENTS	eArrest_16	Reason CPR/Resuscitation Discontinued
PUB_PCREVENTS	eArrest_18	End of EMS Cardiac Arrest Event
PUB_PCREVENTS	eDispatch_01	Complaint Reported by Dispatch
PUB_PCREVENTS	eDispatch_02	EMD Performed
PUB_PCREVENTS	eDisposition_12	Incident/Patient Disposition
PUB_PCREVENTS	eDisposition_16	EMS Transport Method
PUB_PCREVENTS	eDisposition_17	Transport Mode from Scene
PUB_PCREVENTS	eDisposition_19	Final Patient Acuity
PUB_PCREVENTS	eDisposition_21	Type of Destination
PUB_PCREVENTS	eDisposition_22	Hospital In-Patient Destination
PUB_PCREVENTS	eDisposition_23	Hospital Capability
PUB_PCREVENTS	eOutcome_01	Emergency Department Disposition

Table Name	Variable Name	Variable Description
COMPUTEDELEMENTS	USCensusDivision	US Census Bureau Divisions
COMPUTEDELEMENTS	USCensusRegion	US Census Bureau Regions



COMPUTEDELEMENTS	Urbanicity	Based on 2013 USDA Urban Influence Codes
COMPUTEDELEMENTS	Ageinyear	Age in years
COMPUTEDELEMENTS	NasemsoRegion	NASEMSO Regions



Limited Use Variable Description List

This section includes the variable name and variable description for elements protected from public use in their native form. These variables can be made available as “de-identified data elements” (specified by the HIPAA Privacy Rule) by statistical manipulation to include masked anonymous value codes. Masked value codes can be grouped to address a specific hypothesis and made available to researchers through use of the master Primary Key (i.e., PcrKey) to link back to individual cases. Variable definitions and value codes can be found in the NEMSIS Data Dictionary (v.3.4.0) <https://nemsis.org/technical-resources/version-3/version-3-data-dictionaries/>.

Variable Name	Variable Description
eResponse_01	EMS Agency Number
eResponse_04	EMS Response Number
eResponse_14	EMS Unit Call Sign
ePatient_07	Patient's Home County
ePatient_08	Patient's Home State
ePatient_09	Patient's Home ZIP Code
eDisposition_05	Destination State
eDisposition_06	Destination County
eDisposition_07	Destination ZIP Code
eScene_18	Incident State
eScene_19	Incident ZIP Code
eScene_21	Incident County



APPENDIX B: OVERVIEW OF NATIONAL NEMSIS BUSINESS RULES BY NEMSIS ELEMENT

dAgency.02 - EMS Agency Number

Warning [EMS Agency Number](#) in the patient care report should match [EMS Agency Number](#) in the agency demographic information.

eResponse.01 - EMS Agency Number

Warning [EMS Agency Number](#) in the patient care report should match [EMS Agency Number](#) in the agency demographic information.

eTimes.03 - Unit Notified by Dispatch Date/Time

Warning [Date/Time of Event \(per Medical Device\)](#) should be no earlier than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Event \(per Medical Device\)](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

Warning [Date/Time of Destination Prearrival Alert or Activation](#) should be no earlier than [Unit Notified by Dispatch Date/Time](#).

Warning [Date/Time of Destination Prearrival Alert or Activation](#) should be no later than [Destination Patient Transfer of Care Date/Time](#), [Unit Back in Service Date/Time](#), or [Unit Back at Home Location Date/Time](#).

Warning [Date/Time of Assessment](#) should be no earlier than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Assessment](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

Warning [Date/Time of Laboratory or Imaging Result](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Study/Result Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Study/Result Prior to this Unit's EMS Care](#) is "Yes," [Date/Time of Laboratory or Imaging Result](#) should be no later than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Laboratory or Imaging Result](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

Warning [Date/Time Medication Administered](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Medication Administered Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Medication Administered Prior to this Unit's EMS Care](#) is "Yes," [Date/Time Medication Administered](#) should be no later than [Arrived at Patient Date/Time](#).



Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.04 - Dispatch Acknowledged Date/Time

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.



Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.05 - Unit En Route Date/Time

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)



Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".



Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.06 - Unit Arrived on Scene Date/Time

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.



Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.07 - Arrived at Patient Date/Time

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.



Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.



Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.08 - Transfer of EMS Patient Care Date/Time

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.



Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.09 - Unit Left Scene Date/Time

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

eTimes.11 - Patient Arrived at Destination Date/Time

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

eTimes.12 - Destination Patient Transfer of Care Date/Time

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)



Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit Entered Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.



Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.13 - Unit Back In-Service Date/Time

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.



Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".

Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eTimes.15 - Unit Back at Home Location Date/Time

Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.



Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

ePatient.07 - Patient's Home County

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

Warning Patient's Home County should belong within the Patient's Home State.

ePatient.08 - Patient's Home State



Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

Warning [Patient's Home County](#) should belong within the [Patient's Home State](#).

ePatient.09 - Patient's Home ZIP Code

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

ePatient.13 - Gender

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

ePatient.14 - Race



Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

ePatient.AgeGroup - Age

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

ePatient.15 - Age

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

Warning When [Age](#) is recorded, [Age Units](#) should be recorded.

ePatient.16 - Age Units



Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

Warning When [Age](#) is recorded, [Age Units](#) should be recorded.

ePayment.01 - Primary Method of Payment

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eScene.05 - Date/Time Initial Responder Arrived on Scene

Warning Date/Times should be in order. The following times are too early: ([Date/Time Decision to Manage the Patient with an Invasive Airway](#), [Date/Time Invasive Airway Placement Attempts Abandoned](#), [Date/Time of Hospital Admission](#), [Date/Time of Hospital Discharge](#), [Dispatch Notified Date/Time](#), [Unit Notified by Dispatch Date/Time](#), [Dispatch Acknowledged Date/Time](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Transfer of EMS Patient Care Date/Time](#), [Unit Left Scene Date/Time](#), [Arrival at Destination Landing Area Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#), [Unit Back in Service Date/Time](#), [Unit Canceled Date/Time](#), [Unit Back at Home Location Date/Time](#), [EMS Call Completed Date/Time](#))

Warning Date/Times should not be in the future (the current time according to this system is `formatDateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')`). The following times are too late: ([Unit Back in Service Date/Time current](#), [Unit Back at Home Location Date/Time current](#), [EMS Call Completed Date/Time current](#))



Warning Date/Time of Event (per Medical Device) should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Event (per Medical Device) should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

Warning Date/Time of Assessment should be no earlier than Arrived at Patient Date/Time.

Warning Date/Time of Assessment should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no earlier than Arrived at Patient Date/Time, unless Study/Result Prior to this Unit's EMS Care is "Yes".

Warning When Study/Result Prior to this Unit's EMS Care is "Yes," Date/Time of Laboratory or Imaging Result should be no later than Arrived at Patient Date/Time.

Warning Date/Time of Laboratory or Imaging Result should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

Warning Date/Time Vital Signs Taken should be no earlier than Arrived at Patient Date/Time, unless Obtained Prior to this Unit's EMS Care is "Yes".



Warning When Obtained Prior to this Unit's EMS Care is "Yes," Date/Time Vital Signs Taken should be no later than Arrived at Patient Date/Time.

Warning Date/Time Vital Signs Taken should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eScene.06 - Number of Patients at Scene

Warning When Mass Casualty Incident is "Yes", Number of Patients at Scene should be "Multiple".

Warning When Mass Casualty Incident is "Yes", Triage Classification for MCI Patient should be recorded.

eScene.07 - Mass Casualty Incident

Warning When Mass Casualty Incident is "Yes", Number of Patients at Scene should be "Multiple".

Warning When Mass Casualty Incident is "Yes", Triage Classification for MCI Patient should be recorded.

eScene.08 - Triage Classification for MCI Patient

Warning When Mass Casualty Incident is "Yes", Number of Patients at Scene should be "Multiple".

Warning When Mass Casualty Incident is "Yes", Triage Classification for MCI Patient should be recorded.

eScene.09 - Incident Location Type

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit Entered Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

eScene.18 - Incident State

Warning Incident County should belong within the Incident State.

eScene.21 - Incident County

Warning Incident County should belong within the Incident State.



eSituation.01 - Date/Time of Symptom Onset

Warning Date/Times should be in order. The following times are too early: ([Date/Time Decision to Manage the Patient with an Invasive Airway](#), [Date/Time Invasive Airway Placement Attempts Abandoned](#), [Date/Time of Hospital Admission](#), [Date/Time of Hospital Discharge](#), [Dispatch Notified Date/Time](#), [Unit Notified by Dispatch Date/Time](#), [Dispatch Acknowledged Date/Time](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Transfer of EMS Patient Care Date/Time](#), [Unit Left Scene Date/Time](#), [Arrival at Destination Landing Area Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#), [Unit Back in Service Date/Time](#), [Unit Canceled Date/Time](#), [Unit Back at Home Location Date/Time](#), [EMS Call Completed Date/Time](#))

Warning Date/Times should not be in the future (the current time according to this system is *format-dateTime(currentDateTime(), '[MNn] [DI], [Y000I], [H0I]:[m0I] [ZN]')*). The following times are too late: ([Unit Back in Service Date/Time](#) *current*, [Unit Back at Home Location Date/Time](#) *current*, [EMS Call Completed Date/Time](#) *current*)

eSituation.02 - Possible Injury

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

Warning When [Possible Injury](#) is "Yes", the following information related to injury should be recorded: ([Cause of Injury](#))

Warning Information related to injury should be recorded only when [Possible Injury](#) is "Yes".

Warning When a symptom or impression is injury-related, [Possible Injury](#) should be "Yes".

eSituation.07 - Chief Complaint Anatomic Location

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location](#)



Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

eSituation.08 - Chief Complaint Organ System

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eSituation.09 - Primary Symptom

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

Warning When [Primary Symptom](#) is empty, [Other Associated Symptoms](#) should not be recorded.

Warning When a symptom or impression is injury-related, [Possible Injury](#) should be "Yes".

eSituation.10 - Other Associated Symptoms

Warning When [Primary Symptom](#) is empty, [Other Associated Symptoms](#) should not be recorded.

Warning When a symptom or impression is injury-related, [Possible Injury](#) should be "Yes".

eSituation.11 - Provider's Primary Impression



Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

Warning When [Provider's Primary Impression](#) is empty, [Provider's Secondary Impressions](#) should not be recorded.

Warning When a symptom or impression is injury-related, [Possible Injury](#) should be "Yes".

eSituation.12 - Provider's Secondary Impressions

Warning When [Provider's Primary Impression](#) is empty, [Provider's Secondary Impressions](#) should not be recorded.

Warning When a symptom or impression is injury-related, [Possible Injury](#) should be "Yes".

eSituation.13 - Initial Patient Acuity

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eSituation.18 - Date/Time Last Known Well

Warning Date/Times should be in order. The following times are too early: ([Date/Time Decision to Manage the Patient with an Invasive Airway](#), [Date/Time Invasive Airway Placement Attempts Abandoned](#), [Date/Time of Hospital Admission](#), [Date/Time of Hospital Discharge](#), [Dispatch Notified Date/Time](#), [Unit Notified by Dispatch Date/Time](#), [Dispatch Acknowledged Date/Time](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Transfer of EMS Patient Care Date/Time](#), [Unit Left Scene Date/Time](#), [Arrival at](#)



Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is *formatDateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: (Unit Back in Service Date/Time current, Unit Back at Home Location Date/Time current, EMS Call Completed Date/Time current)

eInjury.01 - Cause of Injury

Warning When Possible Injury is "Yes", the following information related to injury should be recorded: (Cause of Injury)

eInjury.CollisionGroup - ACN System/Company Providing ACN Data

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is *formatDateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: (Unit Back in Service Date/Time current, Unit Back at Home Location Date/Time current, EMS Call Completed Date/Time current)

eInjury.14 - Date/Time of ACN Incident

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is *formatDateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: (Unit Back in Service Date/Time current, Unit Back at Home Location Date/Time current, EMS Call Completed Date/Time current)



eArrest.01 - Cardiac Arrest

Warning When [Cardiac Arrest](#) is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: ([Cardiac Arrest Etiology](#), [Resuscitation Attempted By EMS](#), [Arrest Witnessed By](#), [CPR Care Provided Prior to EMS Arrival](#), [AED Use Prior to EMS Arrival](#), [Cardiac Rhythm on Arrival at Destination](#))

Warning Information related to cardiac arrest and resuscitation should be recorded only when [Cardiac Arrest](#) is "Yes".

eArrest.02 - Cardiac Arrest Etiology

Warning When [Cardiac Arrest](#) is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: ([Cardiac Arrest Etiology](#), [Resuscitation Attempted By EMS](#), [Arrest Witnessed By](#), [CPR Care Provided Prior to EMS Arrival](#), [AED Use Prior to EMS Arrival](#), [Cardiac Rhythm on Arrival at Destination](#))

eArrest.03 - Resuscitation Attempted By EMS

Warning When [Cardiac Arrest](#) is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: ([Cardiac Arrest Etiology](#), [Resuscitation Attempted By EMS](#), [Arrest Witnessed By](#), [CPR Care Provided Prior to EMS Arrival](#), [AED Use Prior to EMS Arrival](#), [Cardiac Rhythm on Arrival at Destination](#))

Warning [Resuscitation Attempted By EMS](#) should not contain both "Attempted/Initiated..." and "Not Attempted..." in the same record.

Warning When [Resuscitation Attempted By EMS](#) contains "Initiated Chest Compressions", [Type of CPR Provided](#) should contain "Compressions...".

Warning When [Resuscitation Attempted By EMS](#) contains "Attempted Ventilation", [Type of CPR Provided](#) should contain "Ventilation...".

Warning When [Type of CPR Provided](#) contains "Compressions...", [Resuscitation Attempted By EMS](#) should contain "Initiated Chest Compressions".

Warning When [Type of CPR Provided](#) contains "Ventilation...", [Resuscitation Attempted By EMS](#) should contain "Attempted Ventilation".

eArrest.04 - Arrest Witnessed By

Warning When [Cardiac Arrest](#) is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: ([Cardiac Arrest Etiology](#), [Resuscitation Attempted By EMS](#), [Arrest Witnessed By](#), [CPR Care Provided Prior to EMS Arrival](#), [AED Use Prior to EMS Arrival](#), [Cardiac Rhythm on Arrival at Destination](#))

eArrest.05 - CPR Care Provided Prior to EMS Arrival



Warning When Cardiac Arrest is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: (Cardiac Arrest Etiology, Resuscitation Attempted By EMS, Arrest Witnessed By, CPR Care Provided Prior to EMS Arrival, AED Use Prior to EMS Arrival, Cardiac Rhythm on Arrival at Destination)

eArrest.07 - AED Use Prior to EMS Arrival

Warning When Cardiac Arrest is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: (Cardiac Arrest Etiology, Resuscitation Attempted By EMS, Arrest Witnessed By, CPR Care Provided Prior to EMS Arrival, AED Use Prior to EMS Arrival, Cardiac Rhythm on Arrival at Destination)

eArrest.09 - Type of CPR Provided

Warning When Resuscitation Attempted By EMS contains "Initiated Chest Compressions", Type of CPR Provided should contain "Compressions...".

Warning When Resuscitation Attempted By EMS contains "Attempted Ventilation", Type of CPR Provided should contain "Ventilation...".

Warning When Type of CPR Provided contains "Compressions...", Resuscitation Attempted By EMS should contain "Initiated Chest Compressions".

Warning When Type of CPR Provided contains "Ventilation...", Resuscitation Attempted By EMS should contain "Attempted Ventilation".

eArrest.14 - Date/Time of Cardiac Arrest

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is *format-dateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: (Unit Back in Service Date/Time current, Unit Back at Home Location Date/Time current, EMS Call Completed Date/Time current)

eArrest.15 - Date/Time Resuscitation Discontinued

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch



Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is *formatDateTime(current-dateTime(), '[MNn] [D1], [Y00I], [H0I]:[m0I] [ZN]')*). The following times are too late: (Unit Back in Service Date/Time *current*, Unit Back at Home Location Date/Time *current*, EMS Call Completed Date/Time *current*)

eArrest.16 - Reason CPR/Resuscitation Discontinued

Error Based on Incident/Patient Disposition, the following should be recorded: (EMS Transport Method, Transport Mode from Scene, Reason for Choosing Destination, Type of Destination)

Warning Based on Incident/Patient Disposition, the following should be recorded: (Reason CPR/Resuscitation Discontinued, Destination State, Destination County, Destination ZIP Code, Final Patient Acuity, Patient's Home County, Patient's Home State, Patient's Home ZIP Code, Gender, Race, Age, Age Units, Primary Method of Payment, Incident Location Type, Possible Injury, Chief Complaint Anatomic Location, Chief Complaint Organ System, Primary Symptom, Provider's Primary Impression, Initial Patient Acuity, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Unit Left Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

eArrest.17 - Cardiac Rhythm on Arrival at Destination

Warning When Cardiac Arrest is "Yes", the following information related to cardiac arrest and resuscitation should be recorded: (Cardiac Arrest Etiology, Resuscitation Attempted By EMS, Arrest Witnessed By, CPR Care Provided Prior to EMS Arrival, AED Use Prior to EMS Arrival, Cardiac Rhythm on Arrival at Destination)

eArrest.19 - Date/Time of Initial CPR

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)



Warning Date/Times should not be in the future (the current time according to this system is *format-dateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: ([Unit Back in Service Date/Time](#) *current*, [Unit Back at Home Location Date/Time](#) *current*, [EMS Call Completed Date/Time](#) *current*)

eHistory.19 - Last Oral Intake

Warning Date/Times should be in order. The following times are too early: ([Date/Time Decision to Manage the Patient with an Invasive Airway](#), [Date/Time Invasive Airway Placement Attempts Abandoned](#), [Date/Time of Hospital Admission](#), [Date/Time of Hospital Discharge](#), [Dispatch Notified Date/Time](#), [Unit Notified by Dispatch Date/Time](#), [Dispatch Acknowledged Date/Time](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Transfer of EMS Patient Care Date/Time](#), [Unit Left Scene Date/Time](#), [Arrival at Destination Landing Area Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#), [Unit Back in Service Date/Time](#), [Unit Canceled Date/Time](#), [Unit Back at Home Location Date/Time](#), [EMS Call Completed Date/Time](#))

Warning Date/Times should not be in the future (the current time according to this system is *format-dateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: ([Unit Back in Service Date/Time](#) *current*, [Unit Back at Home Location Date/Time](#) *current*, [EMS Call Completed Date/Time](#) *current*)

eVitals.01 - Date/Time Vital Signs Taken

Warning When a set of vital signs is obtained, the following should be recorded: ([Date/Time Vital Signs Taken](#))

Warning [Date/Time Vital Signs Taken](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Obtained Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Obtained Prior to this Unit's EMS Care](#) is "Yes," [Date/Time Vital Signs Taken](#) should be no later than [Arrived at Patient Date/Time](#).

Warning [Date/Time Vital Signs Taken](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

eVitals.02 - Obtained Prior to this Unit's EMS Care

Warning When a set of vital signs is obtained, the following should be recorded: ([Date/Time Vital Signs Taken](#))

Warning [Date/Time Vital Signs Taken](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Obtained Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Obtained Prior to this Unit's EMS Care](#) is "Yes," [Date/Time Vital Signs Taken](#) should be no later than [Arrived at Patient Date/Time](#).



Warning [Date/Time Vital Signs Taken](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

eLabs.01 - Date/Time of Laboratory or Imaging Result

Warning [Date/Time of Laboratory or Imaging Result](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Study/Result Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Study/Result Prior to this Unit's EMS Care](#) is "Yes," [Date/Time of Laboratory or Imaging Result](#) should be no later than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Laboratory or Imaging Result](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

eLabs.02 - Study/Result Prior to this Unit's EMS Care

Warning [Date/Time of Laboratory or Imaging Result](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Study/Result Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Study/Result Prior to this Unit's EMS Care](#) is "Yes," [Date/Time of Laboratory or Imaging Result](#) should be no later than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Laboratory or Imaging Result](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

eExam.AssessmentGroup - Date/Time of Assessment

Warning Dummy report needed to make this rule valid. This report will never succeed.

Warning Dummy report needed to make this rule valid. This report will never succeed.

eExam.03 - Date/Time of Assessment

Warning [Date/Time of Assessment](#) should be no earlier than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Assessment](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

eMedications.01 - Date/Time Medication Administered

Warning When a medication is administered, the following should be recorded: ([Date/Time Medication Administered](#), [Medication Given](#))

Warning [Date/Time Medication Administered](#) should be no earlier than [Arrived at Patient Date/Time](#), unless [Medication Administered Prior to this Unit's EMS Care](#) is "Yes".

Warning When [Medication Administered Prior to this Unit's EMS Care](#) is "Yes," [Date/Time Medication Administered](#) should be no later than [Arrived at Patient Date/Time](#).



Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eMedications.02 - Medication Administered Prior to this Unit's EMS Care

Warning When a medication is administered, the following should be recorded: (Date/Time Medication Administered, Medication Given)

Warning Date/Time Medication Administered should be no earlier than Arrived at Patient Date/Time, unless Medication Administered Prior to this Unit's EMS Care is "Yes".

Warning When Medication Administered Prior to this Unit's EMS Care is "Yes," Date/Time Medication Administered should be no later than Arrived at Patient Date/Time.

Warning Date/Time Medication Administered should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eMedications.03 - Medication Given

Warning When a medication is administered, the following should be recorded: (Date/Time Medication Administered, Medication Given)

Error When Medication Given | Procedure has a Pertinent Negative, it should have a value and it should not have a Not Value (Not Applicable, Not Recorded, or Not Reporting).

eProcedures.01 - Date/Time Procedure Performed

Warning When a procedure is performed, the following should be recorded: (Date/Time Procedure Performed, Procedure)

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".

Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eProcedures.02 - Procedure Performed Prior to this Unit's EMS Care

Warning When a procedure is performed, the following should be recorded: (Date/Time Procedure Performed, Procedure)

Warning Date/Time Procedure Performed should be no earlier than Arrived at Patient Date/Time or Date/Time Initial Responder Arrived on Scene, unless Procedure Performed Prior to this Unit's EMS Care is "Yes".



Warning When Procedure Performed Prior to this Unit's EMS Care is "Yes," Date/Time Procedure Performed should be no later than Arrived at Patient Date/Time.

Warning Date/Time Procedure Performed should be no later than Transfer of EMS Patient Care Date/Time or Destination Patient Transfer of Care Date/Time.

eProcedures.03 - Procedure

Warning When a procedure is performed, the following should be recorded: (Date/Time Procedure Performed, Procedure)

Error When Medication Given | Procedure has a Pertinent Negative, it should have a value and it should not have a Not Value (Not Applicable, Not Recorded, or Not Reporting).

eAirway.AirwayGroup - Indications for Invasive Airway

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is `formatDateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')`). The following times are too late: (Unit Back in Service Date/Time current, Unit Back at Home Location Date/Time current, EMS Call Completed Date/Time current)

eAirway.10 - Date/Time Decision to Manage the Patient with an Invasive Airway

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is `formatDateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')`). The following times are too late: (Unit Back in Service Date/Time current, Unit Back at Home Location Date/Time current, EMS Call Completed Date/Time current)



eAirway.11 - Date/Time Invasive Airway Placement Attempts Abandoned

Warning Date/Times should be in order. The following times are too early: ([Date/Time Decision to Manage the Patient with an Invasive Airway](#), [Date/Time Invasive Airway Placement Attempts Abandoned](#), [Date/Time of Hospital Admission](#), [Date/Time of Hospital Discharge](#), [Dispatch Notified Date/Time](#), [Unit Notified by Dispatch Date/Time](#), [Dispatch Acknowledged Date/Time](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Transfer of EMS Patient Care Date/Time](#), [Unit Left Scene Date/Time](#), [Arrival at Destination Landing Area Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#), [Unit Back in Service Date/Time](#), [Unit Canceled Date/Time](#), [Unit Back at Home Location Date/Time](#), [EMS Call Completed Date/Time](#))

Warning Date/Times should not be in the future (the current time according to this system is *formatDateTime(current-dateTime(), '[MNN] [DI], [Y000I], [H0I]:[m0I] [ZN]')*). The following times are too late: ([Unit Back in Service Date/Time](#) *current*, [Unit Back at Home Location Date/Time](#) *current*, [EMS Call Completed Date/Time](#) *current*)

eDevice.02 - Date/Time of Event (per Medical Device)

Warning [Date/Time of Event \(per Medical Device\)](#) should be no earlier than [Arrived at Patient Date/Time](#).

Warning [Date/Time of Event \(per Medical Device\)](#) should be no later than [Transfer of EMS Patient Care Date/Time](#) or [Destination Patient Transfer of Care Date/Time](#).

eDisposition.DestinationGroup - Destination/Transferred To, Name

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.05 - Destination State

Warning [Destination County](#) should belong within the [Destination State](#).

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))



Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.06 - Destination County

Warning [Destination County](#) should belong within the [Destination State](#).

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.07 - Destination ZIP Code

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.12 - Incident/Patient Disposition

Warning Dummy report needed to make this rule valid. This report will never succeed.



Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.16 - EMS Transport Method

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.17 - Transport Mode from Scene

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.19 - Final Patient Acuity

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))



Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.20 - Reason for Choosing Destination

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left Scene Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#))

eDisposition.21 - Type of Destination

Warning When [Type of Destination](#) is "Hospital-Non-Emergency Department Bed", [Hospital In-Patient Destination](#) should be recorded.

Warning When [Type of Destination](#) is "Hospital..." or "Freestanding Emergency Department", [Hospital Capability](#) should be recorded.

Warning When [Type of Destination](#) is not "Hospital..." or "Freestanding Emergency Department", the following should be "Not Applicable": ([Hospital In-Patient Destination](#), [Hospital Capability](#))

Error Based on [Incident/Patient Disposition](#), the following should be recorded: ([EMS Transport Method](#), [Transport Mode from Scene](#), [Reason for Choosing Destination](#), [Type of Destination](#))

Warning Based on [Incident/Patient Disposition](#), the following should be recorded: ([Reason CPR/Resuscitation Discontinued](#), [Destination State](#), [Destination County](#), [Destination ZIP Code](#), [Final Patient Acuity](#), [Patient's Home County](#), [Patient's Home State](#), [Patient's Home ZIP Code](#), [Gender](#), [Race](#), [Age](#), [Age Units](#), [Primary Method of Payment](#), [Incident Location Type](#), [Possible Injury](#), [Chief Complaint Anatomic Location](#), [Chief Complaint Organ System](#), [Primary Symptom](#), [Provider's Primary Impression](#), [Initial Patient Acuity](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Unit Left](#)



Scene Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time)

eDisposition.22 - Hospital In-Patient Destination

Warning When Type of Destination is "Hospital-Non-Emergency Department Bed", Hospital In-Patient Destination should be recorded.

Warning When Type of Destination is "Hospital..." or "Freestanding Emergency Department", Hospital Capability should be recorded.

Warning When Type of Destination is not "Hospital..." or "Freestanding Emergency Department", the following should be "Not Applicable": (Hospital In-Patient Destination, Hospital Capability)

eDisposition.23 - Hospital Capability

Warning When Type of Destination is "Hospital-Non-Emergency Department Bed", Hospital In-Patient Destination should be recorded.

Warning When Type of Destination is "Hospital..." or "Freestanding Emergency Department", Hospital Capability should be recorded.

Warning When Type of Destination is not "Hospital..." or "Freestanding Emergency Department", the following should be "Not Applicable": (Hospital In-Patient Destination, Hospital Capability)

eDisposition.25 - Date/Time of Destination Prearrival Alert or Activation

Warning Date/Time of Destination Prearrival Alert or Activation should be no earlier than Unit Notified by Dispatch Date/Time.

Warning Date/Time of Destination Prearrival Alert or Activation should be no later than Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, or Unit Back at Home Location Date/Time.

eOutcome.11 - Date/Time of Hospital Admission

Warning Date/Times should be in order. The following times are too early: (Date/Time Decision to Manage the Patient with an Invasive Airway, Date/Time Invasive Airway Placement Attempts Abandoned, Date/Time of Hospital Admission, Date/Time of Hospital Discharge, Dispatch Notified Date/Time, Unit Notified by Dispatch Date/Time, Dispatch Acknowledged Date/Time, Unit En Route Date/Time, Unit Arrived on Scene Date/Time, Arrived at Patient Date/Time, Transfer of EMS Patient Care Date/Time, Unit Left Scene Date/Time, Arrival at Destination Landing Area Date/Time, Patient Arrived at Destination Date/Time, Destination Patient Transfer of Care Date/Time, Unit Back in Service Date/Time, Unit Canceled Date/Time, Unit Back at Home Location Date/Time, EMS Call Completed Date/Time)

Warning Date/Times should not be in the future (the current time according to this system is *format-dateTime(currentDateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following



times are too late: ([Unit Back in Service Date/Time current](#), [Unit Back at Home Location Date/Time current](#), [EMS Call Completed Date/Time current](#))

eOutcome.16 - Date/Time of Hospital Discharge

Warning Date/Times should be in order. The following times are too early: ([Date/Time Decision to Manage the Patient with an Invasive Airway](#), [Date/Time Invasive Airway Placement Attempts Abandoned](#), [Date/Time of Hospital Admission](#), [Date/Time of Hospital Discharge](#), [Dispatch Notified Date/Time](#), [Unit Notified by Dispatch Date/Time](#), [Dispatch Acknowledged Date/Time](#), [Unit En Route Date/Time](#), [Unit Arrived on Scene Date/Time](#), [Arrived at Patient Date/Time](#), [Transfer of EMS Patient Care Date/Time](#), [Unit Left Scene Date/Time](#), [Arrival at Destination Landing Area Date/Time](#), [Patient Arrived at Destination Date/Time](#), [Destination Patient Transfer of Care Date/Time](#), [Unit Back in Service Date/Time](#), [Unit Canceled Date/Time](#), [Unit Back at Home Location Date/Time](#), [EMS Call Completed Date/Time](#))

Warning Date/Times should not be in the future (the current time according to this system is *format-dateTime(current-dateTime(), '[MNn] [D1], [Y0001], [H01]:[m01] [ZN]')*). The following times are too late: ([Unit Back in Service Date/Time current](#), [Unit Back at Home Location Date/Time current](#), [EMS Call Completed Date/Time current](#))

eCustomResults.01 - Custom Data Element Result

Warning Dummy report needed to make this rule valid. This report will never succeed.

Warning Dummy report needed to make this rule valid. This report will never succeed.

General Validation Messages (may apply to many elements)

- Error When (*Element*) has a Pertinent Negative, it should be empty and it should not have a Not Value (Not Applicable, Not Recorded, or Not Reporting).
- Error When (*Element*) is empty, it should have a Not Value (Not Applicable, Not Recorded, or Not Reporting, if allowed for the element) or a Pertinent Negative (if allowed for the element), or it should be omitted (if the element is optional).
- Error When (*Element*) has a Not Value (Not Applicable, Not Recorded, or Not Reporting), it should be empty.

Warning When (*Element*) has a Not Value, no other (*Element*) should be recorded.

Warning When (*Element*) has a Pertinent Negative, no other (*Element*) should be recorded.

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 does not 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 values is listed multiple times, keep that specific value only for the 1st five 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 values, contained within an element.)

eHistory.17	shall have no more than six values per event.
eArrest.14	time before 2020.01.01 set to null, keep 2021.01.01
eArrest.03	shall have no more than three values per event.
eArrest.04	shall have no more than three values per event.
eDisposition.20	shall have no more than six values per event.
eDisposition.25	time before 2020.01.01 set to null, keep 2021.01.01
eDisposition.07	all 00000 set to 'not recorded'
eSituation.11	shall have no more than 14 values per event.
eSitution.12	shall have no more than 14 values per event
eInjury.04	shall have no more than six values per event.
eMedication.03	shall have no more than 29 values per event.
eMedication.01	time before 2020.01.01 set to null, keep 2021.01.01
eProcedure.03	shall have no more than 29 values per event.
eProcedure.01	time before 2020.01.01 set to null, keep 2021.01.01
eResponse.24	shall have no more than seven values per event.
eSituation.01	removed time after 2020.12.31
eScene.19	set all 00000 to not recorded
eSituation.09	shall have no more than 20 values per event.



eSituation.10	shall have no more than 20 values per event.
eTimes01	eTimes.13 time before 2018.01.01 set to null, keep 2019.01.01
eDisposition.18	shall have no more than five values per event.
eInjury.03	shall have no more than seven values per event.
eResponse.12	shall have no more than nine values per event.
eOther.05	shall have no more than two values per event.
ePatient.14	shall have no more than six values per event.
eProcedure.07	shall have no more than nine values per event.
Vital Signs	shall have no more than 30 values per event.
eVitals.05	shall have no more than three values per event.

Derived elapsed times are excluded from the dataset if outside the range listed below.

EmsDispatchCenterTimeSec	0-3599 in seconds
EmsChuteTimeMin	0-59 in minutes
EmsSystemResponseTimeMin	0-1439 in minutes
EmsSceneResponseTimeMin	0-1439 in minutes
EmsSceneTimeMin	0-1439 in minutes
EmsSceneToPatientTimeMin	0-719 in minutes
EmsTransportTimeMin	0-1439 in minutes
EmsTotalCallTimeMin	0-1439 in minutes



APPENDIX C: 2020 CONTRIBUTING STATES & TERRITORIES

Alabama	Iowa	New Hampshire	South Dakota
Alaska	Kansas	New Jersey	Tennessee
Arizona	Kentucky	New Mexico	Texas
Arkansas	Louisiana	New York	Utah
California	Maine	North Carolina	Vermont
Colorado	Maryland	North Dakota	Virginia
Connecticut	Michigan	Northern Mariana Islands	Virgin Islands
District of Columbia	Minnesota	Ohio	Washington
Florida	Mississippi	Oklahoma	West Virginia
Georgia	Missouri	Oregon	Wisconsin
Guam	Montana	Pennsylvania	
Illinois	Nebraska	Rhode Island	
Indiana	Nevada	South Carolina	Wyoming



APPENDIX D: EXTENDED DEFINITION DOCUMENT, VERSION 3.4.0

(https://nemesis.org/wp-content/uploads/2018/09/Extended-Data-Definitions_v3_Final.pdf)



EXTENDED DATA DEFINITIONS

May 2016

NEMESIS Version 3.4.0

This document represents an effort to continue the process of defining field values, which was started with NEMESIS v2.2.1. The NASEMSO Data Managers Council (DMC), with help from the NEMESIS Technical Assistance Center (TAC), built off the extended data definitions contained in the 2008 Extended Definition Document, NEMESIS 2.2, to create value definitions contained in the NEMESIS v3.4.0 dataset.

The DMC and NEMESIS TAC are confident that this document will continue to promote the development, standardization, and improvement of state and national EMS data systems.



APPENDIX E: COMPUTED VARIABLE DESCRIPTION LIST*

Variable Name	Short Variable Definition
AgeinYears	Age in Years, computed from Age and Age Units
EMSDispatchCenterTimeSec	Time difference in minutes between eTimes.03 and eTimes.01. Note: if > 3,599 seconds, set to null.
EMSChuteTimeMin	Time difference in minutes between eTimes.03 and eTimes.05. Note: if > 59 minutes, set to null.
EMSSystemResponseTimeMin	Time difference in minutes between eTimes.03 and eTimes.06. Note: if > 1,439 minutes, set to null.
EMSSceneResponseTimeMin	Time difference in minutes between eTimes.06 and eTimes.05. Note: if > 1,439 minutes, set to null.
EMSSceneTimeMin	Time difference in minutes between eTimes.06 and eTimes.09. Note: if > 1,439 minutes, set to null.
EMSSceneToPatientTimeMin	Time difference in minutes between eTimes.06 and eTimes.07. Note: if > 719 minutes, set to null.
EMSTransportTimeMin	Time difference in minutes between eTimes.09 and eTimes.11. Note: if > 1,439 minutes, set to null.
EMSTotalCallTimeMin	Time difference in minutes between eTimes.13 and eTimes.03. Note: if > 1,439 minutes, 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

* For all elapsed times, negative elapsed time values are set to null.



APPENDIX F: NEMSIS 2020 PUBLIC RELEASE RESEARCH DATASET REFERENCE TABLES

Reference Tables

These reference tables contain only code descriptions for ICD-10 codes for user references. These tables should not be linked to a particular PCRkey. They are used to translate ICD-10-CM numerical values to text values.

Table Name: EINJURY_01REF

Elements:

Original Variable	Description
DiagnosisCodeDescr	
eInjury_01	Cause of the injury

Table Name: EPROCEDURES_03REF

Elements:

Original Variable	Description
ProcedureCodeDescr	
eProcedures_03	Procedure performed on the patient

Table Name: ESITUATION_09REF

Elements:

Original Variable	Description
DiagnosisCodeDescr	
eSituation_09	Primary symptom

Table Name: ESITUATION_10REF

Elements:

Original Variable	Description
DiagnosisCodeDescr	
eSituation_10	Other associated symptoms

Table Name: ESITUATION_11REF

Elements:

Original Variable	Description
DiagnosisCodeDescr	
eSituation_11	Provider's primary impression

Table Name: ESITUATION_12REF

Elements:

Original Variable	Description
DiagnosisCodeDescr	



eSituation_12

Provider's secondary impressions

NEMSIS 2020 Public Release Research Dataset

The PCRkey is the unique ID for each record in each table and the primary key to link the tables. There are foreign keys that are used to match multiple instances (for multiple-entry elements) to the same EMS event. PCRMEDCOMP GROUP, PCRPROCCOMP GROUP, and Vitals tables contain foreign keys that match multiple instances to a primary key in the FACTPCRMEDICATION, FACTPCRPROCEDURE, and FACTPCR VITAL tables. PcrMedCompGroupKey, PcrPatientRaceGroupKey, and PcrProcCompGroupKey are Group Keys, which are used to link together multiple vital signs, medications, etc. **DestinationCountyNotValueKey** and **DestinationZipcodeNotValueKey** are NotValue keys for counties and zip codes.

Table Name: COMPUTEDELEMENTS

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event
USCensusRegion	US Census Region
USCensusDivision	US Census Division
NasemsoRegion	NASEMSO Region
Urbanicity	Urbanicity
ageinyear	Age in Years, computed from Age and Age Units
EMSDispatchCenterTimeSec	Difference in seconds between Unit Notified by Dispatch Date/Time (eTimes.03) and PSAP Call Date/Time (eTimes.01).
EMSChuteTimeMin	Difference in minutes between Unit Notified by Dispatch Date/Time (eTimes.03) and Unit En Route Date/Time (eTimes.05).
EMSSystemResponseTimeMin	Difference in minutes between Unit Notified by Dispatch Date/Time (eTimes.03) and Unit Arrived on Scene Date/Time (eTimes.06).
EMSSceneResponseTimeMin	Difference in minutes between Unit Arrived on Scene Date/Time (eTimes.06) and Unit En Route Date/Time (eTimes.05).
EMSSceneTimeMin	Difference in minutes between Unit Arrived on Scene Date/Time (eTimes.06) and Unit Left Scene Date/Time (eTimes.09).
EMSSceneToPatientTimeMin	Difference in minutes between Unit Arrived on Scene Date/Time (eTimes.06) and Arrived at Patient Date/Time (eTimes.07).
EMSTransportTimeMin	Difference in minutes between Unit Left Scene Date/Time (eTimes.09) and Patient Arrived at Destination Date/Time (eTimes.11).
EMSTotalCallTimeMin	Difference in minutes between Unit Back In-Service Date/Time (eTimes.13) and Unit Notified by Dispatch Date/Time (eTimes.03).



Table Name: FACTPCRADDITIONALRESPONSEMODE

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eResponse_24	Additional response mode descriptors

Table Name: FACTPCRADDITIONALSYMPTOM

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eSituation_10	Other associated symptoms

Table Name: FACTPCRADDITIONALTRANSPORTMODE

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eDisposition_18	Additional transport mode descriptors

Table Name: FACTPCRALCOHOLDRUGUSEINDICATOR

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eHistory_17	Alcohol/drug use indicators

Table Name: FACTPCRARRESTCPRPROVIDED

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eArrest_09	Type of CPR provided

Table Name: FACTPCRARRESTRESUSCITATION

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eArrest_03	Resuscitation attempted by EMS

Table Name: FACTPCRARRESTRHYTHMDESTINATION

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eArrest_17	Cardiac rhythm on arrival at destination

Table Name: FACTPCRARRESTROSC

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay



eArrest_12	Any return of spontaneous circulation
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Table Name: FACTPCRARRESTWITNESS

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eArrest_04	Arrest witnessed by

Table Name: FACTPCRBARRIERTOCARE

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eHistory_01	Barriers to patient care

Table Name: FACTPCRCAUSEOFINJURY

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eInjury_01	Cause of injury

Table Name: FACTPCRDESTINATIONREASON

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eDisposition_20	Reason for choosing destination

Table Name: FACTPCRDESTINATIONTEAM

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eDisposition_24	Destination team pre-arrival alert or activation
eDisposition_25	Date/Time of destination pre-arrival alert or activation

Table Name: FACTPCRDISPATCHDELAY

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eResponse_08	Type of dispatch delay

Table Name: FACTPCRINJURYRISKFACTOR

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eInjury_04	Vehicular, pedestrian, or other injury risk factor

Table Name: FACTPCRMEDICATION

Elements:



Original Variable	Description
PcrKey	primary key, unique for each event/delay
PcrMedicationKey	Foreign key
eMedications_01	Date/Time medication administered
eMedications_02	Medication administered prior to this unit's EMS care
eMedications_03	Medication given
eMedications_05	Medication dosage
eMedications_06	Medication dosage units
eMedications_07	Response to medication
eMedications_10	Role/Type of person administering medication
eMedications_03Descr	

Table Name: FACTPCRPRIMARYIMPRESSION

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eSituation_11	Provider's primary impression

Table Name: FACTPCRPRIMARYSYMPTOM

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eSituation_09	Primary symptom

Table Name: FACTPCRPROCEDURE

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
PcrProcedureKey	Foreign key
eProcedures_01	Date/Time procedure performed
eProcedures_02	Procedure performed prior to this unit's EMS care
eProcedures_03	Procedure
eProcedures_05	Number of procedure attempts
eProcedures_06	Procedure successful
eProcedures_08	Response to procedure
eProcedures_10	Role/Type of person performing the procedure

Table Name: FACTPCRPROTOCOL

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eProtocol_01	Protocols used
eProtocol_02	Protocol age category

Table Name: FACTPCRRESPONSEDELAY

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay



eResponse_09	Type of response delay
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Table Name: FACTPCRSCENEDELAY

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eResponse_10	Type of scene delay

Table Name: FACTPCRSECONDARYIMPRESSION

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eSituation_12	Provider's secondary impressions

Table Name: FACTPCRTRANSPORTDELAY

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eResponse_11	Type of transport delay

Table Name: FACTPCRTRAUMACRITERIA

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eInjury_03	Trauma center criteria

Table Name: FACTPCRTURNAROUNDDELAY

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eResponse_12	Type of turn-around delay

Table Name: FACTPCRVITAL

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
PcrVitalKey	foreign key
eVitals_01	Date/Time vital signs taken
eVitals_02	Obtained prior to this unit's EMS care
eVitals_04	ECG Type
eVitals_06	SBP (Systolic Blood Pressure)
eVitals_08	Method of blood pressure measurement
eVitals_10	Heart rate
eVitals_12	Pulse oximetry
eVitals_14	Respiratory rate
eVitals_16	End tidal carbon dioxide (ETCO2)
eVitals_18	Blood glucose level



eVitals_19	Glasgow Coma Score – Eye
eVitals_20	Glasgow Coma Score – Verbal
eVitals_21	Glasgow Coma Score – Motor
eVitals_26	Level of responsiveness (AVPU)
eVitals_27	Pain scale score
eVitals_29	Stroke scale score
eVitals_30	Stroke scale type
eVitals_31	Reperfusion checklist

Table Name: FACTPCRWORKRELATEDEXPOSURE

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eOther_05	Suspected EMS work related exposure, injury, or death

Table Name: PCRMEDCOMPGROUP

Elements:

Original Variable	Description
MedicationKey	foreign key
PcrMedCompGroupKey	group key
eMedications_08	Medication complication

Table Name: PCRPATIENTTRACEGROUP

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
PcrPatientRaceGroupKey	group key
ePatient_14	Race

Table Name: PCRPROCCOMP GROUP

Elements:

Original Variable	Description
PcrProcCompGroupKey	group key
ProcedureKey	foreign key
eProcedures_07	Procedure complication

Table Name: PCRVITALECGGROUP

Elements:

Original Variable	Description
PcrVitalECGGroupKey	group key
VitalKey	foreign key
eVitals_03	Cardiac rhythm / Electrocardiography (ECG)

Table Name: PCRVITALECGINTERPRETATIONGROUP

Elements:



Original Variable	Description
PcrVitalECGInterpretationGroupKe	group key
VitalKey	foreign key
eVitals_05	Method of ECG Interpretation

Table Name: PCRVITALGLASGOWQUALIFIERGROUP

Elements:

Original Variable	Description
PcrVitalECGGroupKey	group key
VitalKey	foreign key
eVitals_22	Glasgow Coma Score – Qualifier

Table Name: PUB_PCREVENTS

Elements:

Original Variable	Description
PcrKey	primary key, unique for each event/delay
eArrest_01	Cardiac arrest
eArrest_02	Cardiac arrest etiology
eArrest_05	CPR care provided prior to EMS arrival
eArrest_07	AED use prior to EMS arrival
eArrest_11	First monitored arrest rhythm of the patient
eArrest_14	Date/Time of cardiac arrest
eArrest_16	Reason CPR/resuscitation discontinued
eArrest_18	End of EMS cardiac arrest event
eDispatch_01	Complaint reported by dispatch
eDispatch_02	EMD performed
eDisposition_12	Incident/patient disposition
eDisposition_16	EMS transport method
eDisposition_17	Transport mode from scene
eDisposition_19	Final patient acuity
eDisposition_21	Type of destination
eDisposition_22	Hospital in-patient destination
eDisposition_23	Hospital capability
eOutcome_01	Emergency department disposition
eOutcome_02	Hospital disposition
ePatient_13	Gender
ePatient_15	Age
ePatient_16	Age units
ePayment_01	Primary method of payment
ePayment_50	CMS service level
eResponse_05	Type of service requested
eResponse_07	Primary role of the unit
eResponse_15	Level of care of this unit
eResponse_23	Response mode to scene
eScene_01	First EMS unit on scene
eScene_06	Number of patients at scene
eScene_07	Mass casualty incident



eScene_08	Triage classification for MCI patient
eScene_09	Incident location type
eSituation_01	Date/Time of symptom onset
eSituation_02	Possibly injury
eSituation_07	Chief complaint anatomic location
eSituation_08	Chief complaint organ system
eSituation_13	Initial patient acuity
eTimes_01	PSAP call date/time
eTimes_03	Unit notified by dispatch date/time
eTimes_05	Unit En Route date/time
eTimes_06	Unit arrived on scene date/time
eTimes_07	Arrived at patient date/time
eTimes_09	Unit left scene date/time
eTimes_11	Patient arrived at destination date/time
eTimes_12	Destination patient transfer of care date/time
eTimes_13	Unit back In-Service date/time