

**Emergency Medical  
Services Patient Care Report**  
**Jan 2022**





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# Chapter 1

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## INTRODUCTION

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### Topics:

- [Overview](#)
- [Audience](#)
- [Scope](#)
- [Approach](#)
- [Organization of This Guide](#)
- [Use of Templates](#)
- [Conventions Used in This Guide](#)

This document is intended to guide software developers in generating CDA-compliant XML patient care reports, also known as run reports, from EMS agency crews to emergency departments and other interested parties. It consists of a set of constraints on the HL7 CDA R2 model mapped to the National EMS Information System (NEMSIS) data elements.

Clinical Document Architecture (CDA) is a standard for information exchange. It is based on the HL7 Reference Information Model, but it constrains that model to a specific set of patterns. This document adds further constraints, so that it specifies not just a generic clinical document, but an Emergency Medical Services (EMS) Patient Care Report—a record of an Emergency Medical Services encounter with a patient.

Further information about CDA is available at [HL7.org](http://HL7.org).

This guide constrains the NEMSIS data set to the HL7 CDA R2 document format. NEMSIS is maintained by the NEMSIS Technical Assistance Center, a US organization funded by the National Highway Transportation Safety Administration, the Centers for Disease Control, and the Health Resources and Services Administration at the University of Utah. The NEMSIS data dictionary is available at [www.nemsis.org](http://www.nemsis.org).

## Overview

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This implementation guide provides constraints to allow implementers to develop CDA-compliant documents that support a common set of information in the emergency medical services (EMS) domain.

This release covers the provision of information from an EMS crew to a receiving hospital or emergency department.

## Audience

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The audience for this document is software developers and development organizations who wish to produce or receive EMS patient care reports.

Software developers should use the CDA XML schema to guide their production of EMS patient care reports, subject to the constraints documented in this guide. Mappings of NEMSIS elements to the CDA schema are included in this document, in the "NEMSIS trace" comment. Coded elements should use the vocabularies referred to in the constraints.

The CDA schema is published by Health Level 7, and is available at <http://www.hl7.org/implement/standards>.

This guide defines the information payload only. Implementers are encouraged to coordinate with one another by using the IHE framework (available at <http://www.ihe.net>) to address expected capabilities of participating systems, including security and audit considerations.

## Scope

---

The NEMSIS data specification content has been developed over the past 20 years by a variety of partners. Professional organizations contributing to the content include American Ambulance Association (AAA), American College of Emergency Physicians (ACEP), American College of Surgeons: Committee on Trauma (ACS-COT), American Heart Association (AHA), Emergency Medical Services Outcomes Project (EMSOP), International Association of Fire Chiefs (IAFC), International Association of Fire Fighters (IAFF), National Academy of Emergency Medical Dispatch (NAEMD), National Association of Emergency Medical Technicians (NAEMT), National Association of EMS Physicians (NAEMSP), National Association of State EMS Officials (NASEMSO), National EMS Management Association (NEMSMA, formerly NAEMSQP), and the National Emergency Number Association (NENA). Supporting federal partners include National Highway Traffic Safety Administration (NHTSA), Health Resources and Services Administration (HRSA), Emergency Medical Services for Children Program (EMSC), EMSC National Resource Center (NRC), EMSC National EMSC Data Analysis Resource Center (NEDARC), Centers for Disease Control and Prevention (CDC), Federal Emergency Management Administration (FEMA), and HRSA's Office of Rural Health Policy (ORHP). NEMSIS has been adopted in 51 states and territories and implemented by scores of software providers.

The NEMSIS data set supports many uses, including the transfer of patient care reports from EMS crews to emergency departments, prepopulation of hospital electronic health records, identification of trauma registry candidates, and preparation of data for submission to NEMSIS for research. The current specification is designed for the first of these use cases.

Implementers may generate the same patient care reports that they generate today and attach them under the CDA header in "level one" documents, or they may populate the structured sections as specified herein.

## Approach

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We first transformed the NEMSIS specification into the Emergency Medical Services Domain Analysis Model (EMS DAM), initially balloted through HL7 in May of 2010 and finalized for the release in May 2011. The static part of the analysis model was then constrained to the HL7 Reference Information Model (RIM) in a Domain Information Model (DIM), balloted in January 2011, and reballoted in September 2011. After a DSTU period, this guide was balloted to Normative status in the autumn of 2013. This "level one" (attachment only, no structured data in body)

was superseded by a "level three" (structured clinical statements) guide in 2016. In the last five years, NEMESIS has collected feedback from implementers and providers and revised their specification; the current guide brings the CDA specification up to date with the NEMESIS 3.5 data set.

The guide aligns with the Consolidated CDA work by leveraging the Consolidated header. Consolidated constraints on the header are inherited but not repeated in this guide. Standard codes provided by LOINC can identify other alignments, both with the Consolidated project and with Emergency Department specification *Data Elements for Emergency Department Systems* (DEEDS).

This release is generated from UML models developed in the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project. The data specifications have been formalized into computational models expressed in UML. These models are used by automated tooling to generate this publication, plus validation tools and Java libraries for implementers.

## Units

Physical quantities use the HL7 PQ data type, in which units are expressed in the Unified Code for Units of Measure (UCUM; 2.16.840.1.113883.6.8), available at [ucum.org](http://ucum.org). Interface values that are not actual physical units are handled differently: see appendices for mappings.

## Null and Negative Values

We use RIM attributes for observations that may require explicit negation or null values. A provider who has checked for signs of drug use can assert that a particular sign was found (with a proper value), that whether there were signs is unknown (with a null) or that there were no signs (with negation).

However, in collections of acts other than observations, epistemological attributes may have uncertain semantics. If a procedure is negated, it may not be clear whether the provider is asserting that the procedure has never been performed on the patient or was not performed in a particular context. Similarly, one may document a history of specific disorders, but including a single, general but negated disorder implies assumptions about the scope of the negated disorder that are not explicitly modeled.

As a result, we manage negation and uncertainty for procedures with explicit Boolean observations. Using an observation allows the clinician to assert a history of zero disorders, or a lack of knowledge about disorders, without tying that assertion to a notional disorder that may imply unanticipated facts or questions.

In the interest of conformance with other guides, we also represent these null and negative acts with null and negated acts, in line with Consolidation Project recommendations. These notional classes should be annotated to ensure that it is clear that they restate the explicit observations, and are not distinct facts.

## Null Value Mapping

NEMESIS contains null values not listed in HL7. "Not applicable" maps directly to "Not applicable", but "Not recorded" and "Not reporting" must be represented as the general concept "No information". These NEMESIS values may also be copied into Observation.text.

NEMESIS also contains "pertinent negatives", most of which are addressed with negation and special cases in this document. Some of the negative action values, however, are actually null values, and are recorded as "NI", no information. A mapping of negative action values is provided in the appendix.

## Organization of This Guide

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The requirements as laid out in the body of this document are subject to change per the policy on implementation guides (see the HL7 Governance and Operations Manual, [http://www.hl7.org/documentcenter/public/membership/HL7\\_Governance\\_and\\_Operations\\_Manual.pdf](http://www.hl7.org/documentcenter/public/membership/HL7_Governance_and_Operations_Manual.pdf) ).

## Templates

Templates are organized by document (see Document Templates), by section (see Section Templates), and by clinical statements (see Clinical Statement Templates). Within a section, templates are arranged hierarchically, where a more specific template is nested under the more generic template that it conforms to.

## Vocabulary and Value Sets

Vocabularies specified in this guide are derived from standard vocabularies where possible; most questions, however, are fairly specific to the EMS domain. These questions have been encoded in clinical LOINC, and the answer sets have been encoded there as well, and they are included in this document. These values can also be obtained from [LOINC.org](http://LOINC.org).

For properties bound to large value systems (e.g., ICD-10 PCS), NEMESIS provides suggested subsets at NEMESIS.org. These are not to be used to validate values (all values in the system are valid), but as suggested aids to providing a manageable user interface. All RxNorm drugs are valid, for instance, but you might wish to provide a selection of drugs commonly found on EMS vehicles for easy selection.

## Use of Templates

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When valued in an instance, the template identifier (`templateId`) signals the imposition of a set of template-defined constraints. The value of this attribute provides a unique identifier for the templates in question.

## Originator Responsibilities

An originator can apply a `templateId` to assert conformance with a particular template.

In the most general forms of CDA exchange, an originator need not apply a `templateId` for every template that an object in an instance document conforms to. This implementation guide asserts when `templateIds` are required for conformance.

## Recipient Responsibilities

A recipient may reject an instance that does not contain a particular `templateId` (e.g., a recipient looking to receive only CCD documents can reject an instance without the appropriate `templateId`).

A recipient may process objects in an instance document that do not contain a `templateId` (e.g., a recipient can process entries that contain Observation acts within a Problems section, even if the entries do not have `templateIds`).

## Conventions Used in This Guide

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### Conformance Requirements

Conformance statements are grouped and identified by the name of the template, along with the `templateId` and the context of the template (e.g., ClinicalDocument, section, observation), which specifies the element under constraint. If a template is a specialization of another template, its first constraint indicates the more general template. In all cases where a more specific template conforms to a more general template, asserting the more specific template also implies conformance to the more general template. An example is shown below.

#### Template name

```
[<type of template>: templateId <XXXX.XX.XXX.XXX>]
```

Description of the template will be here .....

1. Conforms to <The template name> Template (templateId: XXXX<XX>XXX>YYY).



2. **SHALL** contain [1..1] @classCode = <AAA> <code display name> (CodeSystem: 123.456.789 <XXX> Class) **STATIC** (CONF:<number>).
3. ....

### Figure 1: Template name and "conforms to" appearance

The conformance verb keyword at the start of a constraint ( **SHALL** , **SHOULD** , **MAY** , etc.) indicates business conformance, whereas the cardinality indicator (0..1, 1..1, 1..\*, etc.) specifies the allowable occurrences within an instance. Thus, "**MAY** contain 0..1" and "**SHOULD** contain 0..1" both allow for a document to omit the particular component, but the latter is a stronger recommendation that the component be included if it is known.

The following cardinality indicators may be interpreted as follows:

- 0..1 as zero to one present
- 1..1 as one and only one present
- 2..2 as two must be present
- 1..\* as one or more present
- 0..\* as zero to many present

Value set bindings adhere to HL7 Vocabulary Working Group best practices, and include both a conformance verb ( **SHALL** , **SHOULD** , **MAY** , etc.) and an indication of **DYNAMIC** vs. **STATIC** binding. The use of **SHALL** requires that the component be valued with a member from the cited value set; however, in every case any HL7 "null" value such as other (OTH) or unknown (UNK) may be used.

Each constraint is uniquely identified (e.g., "CONF:605") by an identifier placed at or near the end of the constraint. These identifiers are not sequential as they are based on the order of creation of the constraint.

1. **SHALL** contain [1..1] component/structuredBody (CONF:4082).
  - a. This component/structuredBody **SHOULD** contain [0..1] component (CONF:4130) such that it
    - a. **SHALL** contain [1..1] Reporting Parameters section (templateId: 2.16.840.1.113883.10.20.17.2.1) (CONF:4131).
  - b. This component/structuredBody **SHALL** contain [1..1] component (CONF:4132) such that it
    - a. **SHALL** contain [1..1] Patient data section - NCR (templateId: 2.16.840.1.113883.10.20.17.2.5) (CONF:4133).

### Figure 2: Template-based conformance statements example

Note that most constraints in this guide do not contain the "such that" phrase, and this could in some cases give the impression that two statements, each of the form "SHALL contain exactly one . . ." are to be in conflict. This is an artifact of the modeling tool: both statements are required, and they are not in conflict.

## Keywords

The keywords **SHALL**, **SHALL NOT**, **SHOULD**, **SHOULD NOT**, **MAY**, and **NEED NOT** in this document are to be interpreted as described in the [HL7 Version 3 Publishing Facilitator's Guide](#):

- **SHALL**: an absolute requirement
- **SHALL NOT**: an absolute prohibition against inclusion
- **SHOULD/SHOULD NOT**: valid reasons to include or ignore a particular item, but must be understood and carefully weighed
- **MAY/NEED NOT**: truly optional; can be included or omitted as the author decides with no implications

## XML Examples

XML samples appear in this document in a fixed-width font. Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (...) as shown in the example below.

```
<ClinicalDocument xmlns="urn:h17-org:v3">
  ...
```

```
</ClinicalDocument>
```

**Figure 3: ClinicalDocument example**

XPath expressions are used in the narrative and conformance requirements to identify elements because they are familiar to many XML implementers.

---

# Chapter

# 2

---

## DOCUMENT TEMPLATES

---

### Topics:

- [Patient Care Report](#)

This section contains the document level constraints for CDA documents that are compliant with this implementation guide.

## Patient Care Report

[ClinicalDocument: templateId 2.16.840.1.113883.17.3.10.2]

A report from the EMS crew to the emergency department summarizing the patient's condition and any remedial actions taken

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11388) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.2"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** conform to *Consol General Header Constraints* template (templateId: 2.16.840.1.113883.10.20.22.1.1)
3. **SHALL** contain exactly one [1..1] **@classCode**="DOCCLIN" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:10000)
4. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:10001)
5. **SHALL** contain at least one [1..\*] **id** (CONF:5363)

NEMESIS trace: eRecord.01 /@root should be the OID for the EMS Agency; @extension the internally assigned ID The PCR UUID can also be used as an identifier in the /@root property, no extension required.

6. **SHALL** contain exactly one [1..1] **code** (CONF:5253)/**@code**="67796-3" *EMS patient care report - version 3 Document NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10002)
7. **SHALL** contain exactly one [1..1] **title**="EMS Patient Care Report" which **SHALL** equal "EMS Patient Care Report" (CONF:11389)
8. **SHALL** contain exactly one [1..1] **confidentialityCode**="N" /**@code**="N" (CodeSystem: 2.16.840.1.113883.5.25 HL7 Confidentiality) (CONF:11390)

Default value is "N" (normal)

9. **MAY** contain zero or one [0..1] **versionNumber** (CONF:5264)

May be null, and in most cases will not be used. In circumstances where updates are likely, the first instance should be denoted by a versionId of "1."

10. **SHALL** contain exactly one [1..1] **recordTarget** such that it (CONF:10004)

- a. **SHALL** contain exactly one [1..1] **patientRole** such that it (CONF:10870)
  - a. **SHALL** contain at least one [1..\*] **addr** (CONF:10031)

*NEMESIS Trace*

*ePatient.05 . . . /PatientRole/addr/streetAddressLine (multiples supported)*

*ePatient.06 . . . /PatientRole/addr/city*

*ePatient.07 . . . /PatientRole/addr/county*

*ePatient.08 . . . /PatientRole/addr/state*

*ePatient.09 . . . /PatientRole/addr/postalCode*

*ePatient.10 . . . /PatientRole/addr/country*

- b. **SHALL** contain at least one [1..\*] **id** (CONF:10871)

*NEMESIS Trace*

*EPatient.01: root= the OID for the generating EMS agency, or "NI"*

*EPatient.12: root=" 2.16.840.1.113883.3.184" (Social Security Administration)*

*EPatient.20 and EPatient.21: root= the OID for the state department of motor vehicles, found at <http://hl7.org/fhir/R4/identifier-registry.html>, and reproduced in the appendix.*

- c. **MAY** contain zero or more [0..\*] **telecom** (CONF:11621)

*NEMESIS Trace: EPatient.18*

- d. **MAY** contain zero or one [0..1] **providerOrganization** such that it (CONF:5416, R2.1=CONF:1198-5416)
  - a. **SHALL** contain at least one [1..\*] **id** (CONF:5417, R2.1=CONF:1198-5417)
  - b. **SHALL** contain at least one [1..\*] **name** (CONF:5419, R2.1=CONF:1198-5419)
  - c. **SHALL** contain at least one [1..\*] **telecom** (CONF:5420, R2.1=CONF:1198-5420)
  - d. **SHALL** contain at least one [1..\*] **addr** (CONF:5422, R2.1=CONF:1198-5422)
  - e. The id **SHOULD** include zero or one [0..1] id where id/@root="2.16.840.1.113883.4.6" National Provider Identifier (CONF:9996, R2.1=CONF:1198-16820)
- e. **SHALL** contain exactly one [1..1] **patient** such that it (CONF:10872)
  - a. **SHOULD** contain zero or one [0..1] **birthTime** (CONF:10873)

*NEMESIS Trace*  
*EPatient.17*

- b. **MAY** contain zero or one [0..1] **ethnicGroupCode** (CONF:10874), which **SHALL** be selected from ValueSet Ethnicity Group 2.16.840.1.114222.4.11.837 **DYNAMIC** (CONF:10032)

*NEMESIS Trace: EPatient.14*

- c. **SHOULD** contain zero or more [0..\*] **name** (CONF:10875)

*NEMESIS Trace*  
*EPatient.02 . . . /PatientRole/Patient/name/family*  
*EPatient.03 . . . /PatientRole/Patient/name/given*  
*EPatient.04 . . . /PatientRole/Patient/name/given*  
*Name sub-elements SHOULD be in the following order: family, given, middle (also "given").*  
*For names from cultures not following the order assumed above, the "family" name SHOULD be populated with whatever name component should be used to sort by. E.g., for a person with a single name, "family" should be used.*

- d. **SHALL** contain exactly one [1..1] **raceCode** (CONF:10876), which **SHALL** be selected from ValueSet RaceCategory 2.16.840.1.114222.4.11.836 **DYNAMIC** (CONF:10033)

*NEMESIS Trace: EPatient.14*  
*NEMESIS collects race and ethnicity in the one-question format (see guidance at [http://www.whitehouse.gov/omb/fedreg\\_1997standards](http://www.whitehouse.gov/omb/fedreg_1997standards)), but the HL7 RIM and, therefore, the CDA schema contain separate elements. It is necessary to populate both CDA fields based on the values selected for the NEMESIS question. Further, the CDA model includes a single race code. In order to support multiple race codes as required by OMB, we adopt a second race code entry from the HL7 SDWG namespace. All documents with a race code must populate the CDA race code; if more than one race code is recorded, then the SDWG element may also be populated. No semantic priority is implied by the element selection.*

- e. **MAY** contain zero or more [0..\*] **sDTCRaceCode** (CONF:10877), which **SHALL** be selected from ValueSet RaceCategory 2.16.840.1.114222.4.11.836 **DYNAMIC** (CONF:10034)

*NEMESIS Trace: EPatient.14*

- f. **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:10035), which **SHALL** be selected from ValueSet Administrative Gender Excluding Nulls 2.16.840.1.113883.3.2074.1.1.5 **DYNAMIC** (CONF:10878)

*NEMESIS Trace: EPatient.13*

*See terminology map in Appendix.*

- 11. **SHALL** contain at least one [1..\*] **author** such that it (CONF:10027)

- a. **SHALL** contain exactly one [1..1] **time** (CONF:5445, R2.1=CONF:1198-5445)

*The content SHALL be a conformant US Realm Date and Time (DTM.US.FIELDED)  
(2.16.840.1.113883.10.20.22.5.4) (CONF:16866).*

*The content SHALL be a conformant US Realm Date and Time (DTM.US.FIELDED)  
(2.16.840.1.113883.10.20.22.5.4) (CONF:16866).*

- b. **SHALL** contain exactly one [1..1] **assignedAuthor** such that it (CONF:5448)
  - a. **SHALL** contain at least one [1..\*] **id** (CONF:5449, R2.1=CONF:1198-5449)
  - b. **SHOULD** contain zero or one [0..1] **code** (CONF:16787), which **SHOULD** be selected from ValueSet Healthcare Provider Taxonomy (HIPAA) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:16788)
  - c. **SHALL** contain at least one [1..\*] **addr** (CONF:5452, R2.1=CONF:1198-5452)
  - d. **SHALL** contain at least one [1..\*] **telecom** (CONF:5428, R2.1=CONF:1198-5428)
  - e. contain zero or one [0..1] **assignedAuthoringDevice** such that it
    - a. **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:16784, R2.1=CONF:1198-16784)
    - b. **SHALL** contain exactly one [1..1] **softwareName** (CONF:16785, R2.1=CONF:1198-16785)
  - f. contain zero or one [0..1] **assignedPerson** such that it
    - a. **SHALL** contain at least one [1..\*] **name** (CONF:16789, R2.1=CONF:1198-16789)
  - g. There **SHALL** be exactly one assignedAuthor/assignedPerson or exactly one assignedAuthor/assignedAuthoringDevice (CONF:16790, R2.1=CONF:1198-16790)
  - h. If this assignedAuthor is an assignedPerson, the assignedAuthor **SHOULD** contain zero to one [0..1] id 'such that it': **MAY** contain zero or one [0..1] @nullFlavor="UNK" Unknown (CodeSystem: HL7NullFlavor 2.16.840.1.113883.5.1008), **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.4.6" National Provider Identifier, and **SHOULD** contain zero or one [0..1] @extension (CONF:31135, CONF:31694, R2.1=CONF:1198-32882, R2.1=CONF:1198-32883, R2.1=CONF:1198-32884, R2.1=CONF:1198-32885)
- c. **SHALL** contain exactly one [1..1] **assignedAuthor** such that it (CONF:10879)
  - a. **SHOULD** contain zero or one [0..1] **code** (CONF:16787), which **SHOULD** be selected from ValueSet Healthcare Provider Taxonomy (HIPAA) 2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:16788)
  - b. **SHALL** contain at least one [1..\*] **id** (CONF:10039)

*NEMESIS Trace: eResponse.01 (required), eOther.08 (optional)*

- c. **SHALL** contain exactly one [1..1] **addr** (CONF:10040)

*Required for human author; may be null for a software device  
NEMESIS Trace  
dPersonnel.04. . . / AssignedAuthor/addr/streetAddressLine  
dPersonnel.05. . . / AssignedAuthor/addr/city  
dPersonnel.06. . . / AssignedAuthor/addr/state  
dPersonnel.07. . . / AssignedAuthor/addr/postalCode  
dPersonnel.08. . . / AssignedAuthor/addr/country*

- d. **SHALL** contain exactly one [1..1] **telecom** (CONF:10041)

*Required for human author; may be null for a software device  
NEMESIS Trace: dPersonnel.09*

- e. contain zero or one [0..1] **assignedAuthoringDevice** such that it
  - a. **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:16784, R2.1=CONF:1198-16784)
  - b. **SHALL** contain exactly one [1..1] **softwareName** (CONF:16785, R2.1=CONF:1198-16785)
- f. contain zero or one [0..1] **assignedPerson** such that it
  - a. **SHALL** contain at least one [1..\*] **name** (CONF:16789, R2.1=CONF:1198-16789)

g. **MAY** contain zero or one [0..1] **assignedPerson** such that it (CONF:10880)

a. **SHALL** contain at least one [1..\*] **name** (CONF:5470)

*NEMESIS Trace*

*dPersonnel.01 . . . Person/name/family*

*dPersonnel.02 . . . Person/name/given*

*dPersonnel.03 . . . Person/name/given*

h. **MAY** contain zero or one [0..1] **assignedAuthoringDevice** such that it (CONF:10881)

*One authoring device is required for the document.*

a. **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:11630)

*NEMESIS Trace: eRecord.02 Software Creator*

b. **SHALL** contain exactly one [1..1] **softwareName** (CONF:9999)

*NEMESIS Trace: eRecord.03 and eRecord.04 (version), concatenated with an intervening caret ("^")*

12. **SHALL** contain exactly one [1..1] **custodian** such that it (CONF:5519)

a. **SHALL** contain exactly one [1..1] **assignedCustodian** such that it (CONF:5520, R2.1=CONF:1198-5520)

a. **SHALL** contain exactly one [1..1] **representedCustodianOrganization** such that it (CONF:5521, R2.1=CONF:1198-5521)

a. **SHALL** contain at least one [1..\*] **id** (CONF:5522, R2.1=CONF:1198-5522)

b. **SHALL** contain exactly one [1..1] **name** (CONF:5524, R2.1=CONF:1198-5524)

c. **SHALL** contain exactly one [1..1] **telecom** (CONF:5525, R2.1=CONF:1198-5525)

d. **SHALL** contain exactly one [1..1] **addr** (CONF:5559, R2.1=CONF:1198-5559)

e. The **id** **SHOULD** include zero or one [0..1] **@root**="2.16.840.1.113883.4.6" National Provider Identifier (CONF:16822, R2.1=CONF:1198-16822)

b. **SHALL** contain exactly one [1..1] **assignedCustodian** such that it (CONF:10884)

a. **SHALL** contain exactly one [1..1] **representedCustodianOrganization** such that it (CONF:10885)

a. **SHALL** contain exactly one [1..1] **addr** (CONF:10886)

*NEMESIS Trace*

*dContact.05. . . / representedCustodianOrganization/addr/streetAddressLine*

*dContact.06. . . / representedCustodianOrganization/addr/city*

*dContact.07. . . / representedCustodianOrganization/addr/county*

*dContact.08. . . / representedCustodianOrganization/addr/state*

*dContact.09. . . / representedCustodianOrganization/addr/postalCode*

*dContact.10. . . / representedCustodianOrganization/addr/country*

*Optimal address may be where dContact.01 Agency Contact Type is "EMS Agency Director/Chief/Lead Administrator/CEO"*

b. **SHALL** contain at least one [1..\*] **id** (CONF:10887)

*NEMESIS Trace: EResponse.01*

*@extension is the Agency identifier; @root, if included, the OID of the assigning body*

c. **SHALL** contain exactly one [1..1] **name** (CONF:10888)

*NEMESIS Trace: EResponse.02*

13. **SHALL** contain exactly one [1..1] **participant** such that it (CONF:10030)

a. **SHALL** contain exactly one [1..1] **@typeCode**="DST" (CONF:10054)

b. **SHALL** contain exactly one [1..1] **time** with **@xsi:type**="TS" (CONF:11328)

*NEMESIS Trace: eTimes.12 (Destination patient transfer of care date/time)*

- c. contain zero or one [0..1] **associatedEntity** such that it

- a. **SHALL** contain exactly one [1..1] **addr** (CONF:10055)

*NEMESIS Trace: eDisposition.03-08*

*eDisposition.03. . . / AssignedAuthor/addr/streetAddressLine*

*eDisposition.04. . . / AssignedAuthor/addr/city*

*eDisposition.05. . . / AssignedAuthor/addr/state*

*eDisposition.07. . . / AssignedAuthor/addr/postalCode*

*eDisposition.08. . . / AssignedAuthor/addr/country*

- b. **SHALL** contain exactly one [1..1] **code** (CONF:11601), which **SHALL** be selected from ValueSet  
DestinationType 2.16.840.1.113883.17.3.11.69 **DYNAMIC** (CONF:10056)

*NEMESIS Trace: EDisposition.21*

- c. contain exactly one [1..1] **@classCode**="SDLOC"  
d. **SHOULD** contain zero or one [0..1] **id** (CONF:11599)

*NEMESIS Trace: eDisposition.02 - Destination/Transferred To, Code*

14. **SHALL** contain exactly one [1..1] **documentationOf** such that it (CONF:10028)

- a. **SHALL** contain exactly one [1..1] **serviceEvent** such that it (CONF:10889)

- a. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet ServiceType  
2.16.840.1.113883.17.3.11.79 **DYNAMIC** (CONF:10051)

*NEMESIS Trace: EResponse.05, type of service requested*

- b. **SHALL** contain at least two [2..\*] **id** (CONF:10890)

*NEMESIS Trace: eResponse.03 Incident Number*

*id/@extension is the incident number assigned by the 911 Dispatch System, where the id/@root SHOULD be the OID of the dispatching organization*

*NEMESIS Trace: eResponse.04 EMS Vehicle (Unit) Response Number*

*id/@extension is the unit number assigned by the Agency, where the id/@root SHOULD be the OID of the Agency*

- c. **SHALL** contain at least one [1..\*] **performer** such that it (CONF:10891)

- a. **SHALL** contain zero or one [0..1] **functionCode**, which **SHALL** be selected from ValueSet  
ProviderResponseRole 2.16.840.1.113883.17.3.11.80 **DYNAMIC** (CONF:10052)

*NEMESIS Trace: ECrew.03*

- b. **SHALL** contain exactly one [1..1] **assignedEntity** such that it (CONF:10892)

- a. **SHALL** contain zero or one [0..1] **code** (CONF:10893), which **SHALL** be selected from ValueSet  
CrewRoleLevel 2.16.840.1.113883.17.3.11.81 **DYNAMIC** (CONF:10053)

*NEMESIS Trace: ECrew.02*

- b. **SHALL** contain at least one [1..\*] **id** (CONF:10894)

*NEMESIS Trace: ECrew.01*

- c. **MAY** contain zero or one [0..1] **addr** (CONF:10895)

*NEMESIS Trace*

*DPersonnel.04. . . / assignedentity /addr/streetAddressLine*

*DPersonnel.05. . . / assignedentity /addr/city*

*DPersonnel.06. . . / assignedentity /addr/state*

*DPersonnel.07. . . / assignedentity /addr/postalCode*

*DPersonnel.08. . . / assignedentity /addr/country*

- d. **MAY** contain zero or one [0..1] **telecom** (CONF:10896)



*NEMESIS Trace: DPersonnel.09*

- e. **MAY** contain zero or one [0..1] **assignedPerson** such that it (CONF:10897)
  - a. **SHALL** contain exactly one [1..1] **name** (CONF:10898)

*NEMESIS Trace*

*DPersonnel.01 Last: @ENXP="FAM"*

*DPersonnel.02 First: @ENXP="GIV"*

*DPersonnel.03 Middle: @ENXP="GIV"*

- 15. **MAY** contain zero or one [0..1] **relatedDocument** such that it (CONF:10029)

- a. contain exactly one [1..1] **@typeCode="RPLC"**
- b. **MAY** contain zero or one [0..1] **parentDocument** such that it (CONF:10899)
  - a. **SHALL** contain exactly one [1..1] **id** (CONF:10900)

*NEMESIS Trace: ERecord.01*

- 16. **SHALL** contain exactly one [1..1] **componentOf** such that it (CONF:9955)

- a. **SHALL** contain exactly one [1..1] **@typeCode="COMP"** (CONF:10042)
- b. **SHALL** contain exactly one [1..1] **encompassingEncounter** such that it (CONF:10882)
  - a. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10043)

*NEMESIS Trace: ETimes.03, the date the responding unit was notified by dispatch*

- b. **SHALL** contain exactly one [1..1] **id** (CONF:11326)

*NEMESIS Trace: eResponse.04 (response number)*

- c. **SHALL** contain exactly one [1..1] **location** such that it (CONF:10883)
  - a. **SHALL** contain exactly one [1..1] **healthCareFacility** such that it (CONF:10044)
    - a. **SHALL** contain at least one [1..\*] **id** (CONF:10045)

*NEMESIS Trace: eResponse.13 (EMS vehicle/unit number), eResponse.14 (EMS unit call sign)*

- b. **SHALL** contain exactly one [1..1] **code** (CONF:11381), which **SHALL** be selected from ValueSet UnitEquipmentCapability 2.16.840.1.113883.17.3.11.82 **DYNAMIC** (CONF:10047)

*NEMESIS Trace: EResponse.07*

- c. **SHALL** contain exactly one [1..1] **location** such that it (CONF:10046)
  - a. **SHALL** contain exactly one [1..1] **@classCode="PLC"** (CONF:10050)
  - b. **MAY** contain zero or one [0..1] **name** (CONF:10048)

*NEMESIS Trace: EScene.13*

- c. **MAY** contain zero or one [0..1] **addr** (CONF:10049)

*NEMESIS Trace*

*eScene.15 . . . /assignedentity /addr/streetAddressLine*

*eScene.16 . . . /assignedentity /addr/*

*eScene.17 . . . /assignedentity /addr/city*

*eScene.18 . . . /assignedentity /addr/state*

*eScene.19 . . . /assignedentity /addr/postalCode*

*eScene.20 . . . /assignedentity /addr/intersection*

*eScene.21 . . . /assignedentity /addr/county*

*eScene.22 . . . /assignedentity /addr/country*

- d. **MAY** contain zero or more [0..\*] **encounterParticipant** such that it (CONF:11325)
  - a. **SHALL** contain exactly one [1..1] **@typeCode="CON"** (CONF:11623)
  - b. **SHALL** contain exactly one [1..1] **assignedEntity** such that it (CONF:11624)

- a. **SHALL** contain exactly one [1..1] **@classCode="ASSIGNED"** (CONF:11625)
- b. **SHALL** contain exactly one [1..1] **representedOrganization** such that it (CONF:11626)
  - a. **SHALL** contain exactly one [1..1] **name** (CONF:11627)

*NEMESIS Trace: eScene.02, other agency (ies) at scene*

- 17. **SHALL** contain [1..1] **component** such that it (CONF:10008)
  - a. Conforms to *EMS Current Medication Section* (templateId: 2.16.840.1.113883.17.3.10.1.15:2022-01-01)
- 18. **MAY** contain [0..1] **component** such that it (CONF:10009)
  - a. Conforms to *EMS Cardiac Arrest Event Section* (templateId: 2.16.840.1.113883.17.3.10.1.14:2022-01-01)
- 19. **SHOULD** contain [0..1] **component** such that it (CONF:10010)
  - a. Conforms to *EMS Advance Directives Section* (templateId: 2.16.840.1.113883.17.3.10.1.12:2022-01-01)
- 20. **SHALL** contain [1..1] **component** such that it (CONF:10011)
  - a. Conforms to *EMS Allergies And Adverse Reactions Section* (templateId: 2.16.840.1.113883.17.3.10.1.13:2022-01-01)
- 21. **SHALL** contain [1..1] **component** such that it (CONF:10012)
  - a. Conforms to *EMS Past Medical History Section* (templateId: 2.16.840.1.113883.17.3.10.1.19:2022-01-01)
- 22. **SHALL** contain [1..1] **component** such that it (CONF:10013)
  - a. Conforms to *EMS Social History Section* (templateId: 2.16.840.1.113883.17.3.10.1.22:2022-01-01)
- 23. **SHALL** contain [1..1] **component** such that it (CONF:10014)
  - a. Conforms to *EMS Physical Assessment Section* (templateId: 2.16.840.1.113883.17.3.10.1.20:2022-01-01)
- 24. **MAY** contain [0..1] **component** such that it (CONF:10015)
  - a. Conforms to *EMS Medications Administered Section* (templateId: 2.16.840.1.113883.17.3.10.1.18:2022-01-01)
- 25. **SHALL** contain [1..1] **component** such that it (CONF:10016)
  - a. Conforms to *EMS Procedures Performed Section* (templateId: 2.16.840.1.113883.17.3.10.1.21:2022-01-01)
- 26. **SHALL** contain [1..1] **component** such that it (CONF:10017)
  - a. Conforms to *EMS Patient Care Narrative Section* (templateId: 2.16.840.1.113883.17.3.10.1.1:2022-01-01)
- 27. **SHALL** contain [1..1] **component** such that it (CONF:10018)
  - a. Conforms to *EMS Scene Section* (templateId: 2.16.840.1.113883.17.3.10.1.8:2022-01-01)
- 28. **SHALL** contain [1..1] **component** such that it (CONF:10019)
  - a. Conforms to *EMS Dispatch Section* (templateId: 2.16.840.1.113883.17.3.10.1.2:2022-01-01)
- 29. **MAY** contain [0..1] **component** such that it (CONF:10020)
  - a. Conforms to *EMS Disposition Section* (templateId: 2.16.840.1.113883.17.3.10.1.4:2022-01-01)
- 30. **SHALL** contain [1..1] **component** such that it (CONF:10021)
  - a. Conforms to *EMS Personnel Adverse Event Section* (templateId: 2.16.840.1.113883.17.3.10.1.6:2022-01-01)
- 31. **SHALL** contain [1..1] **component** such that it (CONF:10022)

- a. Conforms to *EMS Protocol Section* (templateId: 2.16.840.1.113883.17.3.10.1.7:2022-01-01)
- 32. SHALL contain [1..1] **component** such that it (CONF:10023)
  - a. Conforms to *EMS Response Section* (templateId: 2.16.840.1.113883.17.3.10.1.3:2022-01-01)
- 33. SHALL contain [1..1] **component** such that it (CONF:10024)
  - a. Conforms to *EMS Situation Section* (templateId: 2.16.840.1.113883.17.3.10.1.9:2022-01-01)
- 34. MAY contain [0..1] **component** such that it (CONF:10025)
  - a. Conforms to *EMS Times Section* (templateId: 2.16.840.1.113883.17.3.10.1.10:2022-01-01)
- 35. SHALL contain [1..1] **component** such that it (CONF:10026)
  - a. Conforms to *EMS Vital Signs Section* (templateId: 2.16.840.1.113883.17.3.10.1.23:2022-01-01)
- 36. SHALL contain [1..1] **component** such that it (CONF:10869)
  - a. Conforms to *EMS Injury Incident Description Section* (templateId: 2.16.840.1.113883.17.3.10.1.17:2022-01-01)
- 37. SHOULD contain [0..\*] **component** such that it (CONF:11318)
  - a. Conforms to *EMS Billing Section* (templateId: 2.16.840.1.113883.17.3.10.1.5:2022-01-01)

#### Patient Care Report example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmi:version="2.0" xmlns:xmi="http://www.omg.org/XMI"
  xmlns="urn:hl7-org:v3" classCode="DOCCLIN" moodCode="EVN">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3" extension="testString"/>
  <templateId root="2.16.840.1.113883.17.3.10.2" extension="2022-01-01"/>
  <id/>
  <code code="67796-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  patient care report - version 3 Document NEMESIS"/>
  <title>EMS Patient Care Report</title>
  <effectiveTime/>
  <confidentialityCode code="N" codeSystem="2.16.840.1.113883.5.25"/>
  <languageCode/>
  <recordTarget>
    <patientRole>
      <id/>
      <addr/>
      <patient>
        <administrativeGenderCode/>
        <raceCode/>
      </patient>
    </patientRole>
  </recordTarget>
  <author>
    <time/>
    <assignedAuthor>
      <id/>
      <addr><city/><streetAddressLine/></addr>
      <telecom/>
    </assignedAuthor>
  </author>
  <author>
    <time/>
    <assignedAuthor>
      <id/>
      <addr><city/><streetAddressLine/></addr>
      <telecom/>
    </assignedAuthor>
  </author>
```

```
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  <assignedCustodian>
    <representedCustodianOrganization>
      <id/>
      <name/>
      <telecom/>
      <addr><city/><streetAddressLine/></addr>
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  </assignedCustodian>
</custodian>
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  <associatedEntity classCode="WRTE"/>
</participant>
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  <serviceEvent/>
</documentationOf>
<componentOf typeCode="COMP">
  <encompassingEncounter>
    <id/>
    <effectiveTime/>
    <location>
      <healthCareFacility>
        <id/>
        <code/>
        <location classCode="PLC"/>
      </healthCareFacility>
    </location>
  </encompassingEncounter>
</componentOf>
<component/>
</ClinicalDocument>
```

---

# Chapter

# 3

---

## SECTION TEMPLATES

---

### Topics:

- *EMS Advance Directives Section*
- *EMS Allergies And Adverse Reactions Section*
- *EMS Billing Section*
- *EMS Cardiac Arrest Event Section*
- *EMS Current Medication Section*
- *EMS Dispatch Section*
- *EMS Disposition Section*
- *EMS Injury Incident Description Section*
- *EMS Medications Administered Section*
- *EMS Past Medical History Section*
- *EMS Patient Care Narrative Section*
- *EMS Personnel Adverse Event Section*
- *EMS Physical Assessment Section*
- *EMS Procedures Performed Section*
- *EMS Protocol Section*
- *EMS Response Section*
- *EMS Scene Section*
- *EMS Situation Section*
- *EMS Social History Section*
- *EMS Times Section*
- *EMS Vital Signs Section*

## EMS Advance Directives Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.12]

Information regarding patient advance directives

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11395) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.12"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11634)/**@code**="67840-9" *EMS Advance Directives Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10191)
3. **SHALL** contain exactly one [1..1] **title**="EMS Advance Directive Section" (CONF:10944)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10945)
5. If section/@nullFlavor is not present, **SHALL** contain [1..\*] **entry** such that it (CONF:10946)
  - a. Conforms to [Advance Directive Observation](#) (templateId: 2.16.840.1.113883.17.3.10.1.98:2022-01-01)

### EMS Advance Directives Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.12" extension="2022-01-01"/>
  <code code="67840-9" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Advance Directives Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Allergies And Adverse Reactions Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.13]

Information regarding patient allergies and sensitivities

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11396) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.13"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11635)/**@code**="48765-2" *Allergies and adverse reactions Document* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10196)
3. **SHALL** contain exactly one [1..1] **title**="EMS Allergies and Adverse Reactions" (CONF:10948)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10949)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10953)
  - a. Conforms to [Non Drug Allergy Organizer](#) (templateId: 2.16.840.1.113883.17.3.10.1.49:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11319)
  - a. Conforms to [Drug Allergy Organizer](#) (templateId: 2.16.840.1.113883.17.3.10.1.183:2022-01-01)

### EMS Allergies And Adverse Reactions Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.13" extension="2022-01-01"/>
```

```
<code code="48765-2" codeSystem="2.16.840.1.113883.6.1"
  displayName="Allergies and adverse reactions Document"/>
<title/>
<text/>
</section>
```

## EMS Billing Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.5]

Information pertinent to billing processes

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11392 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.5"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11631)/**@code**="67659-3" *EMS Billing Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10080)
3. **SHALL** contain exactly one [1..1] **title**="EMS Billing Section" (CONF:10907)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10909)
5. If section/@nullFlavor is not present, **SHOULD** contain [0..1] **entry** such that it (CONF:10910)
  - a. Conforms to *Billing Condition* (templateId: 2.16.840.1.113883.17.3.10.1.91:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10912)
  - a. Conforms to *Level Of Service Observation* (templateId: 2.16.840.1.113883.17.3.10.1.92:2022-01-01)

### EMS Billing Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.5" extension="2022-01-01"/>
  <code code="67659-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Billing Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Cardiac Arrest Event Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.14]

Information regarding a cardiac arrest

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11394 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.14"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11633)/**@code**="67799-7" *EMS Cardiac Arrest Event Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10134)
3. **SHALL** contain exactly one [1..1] **title**="EMS Cardiac Arrest Event" which **SHOULD** equal "EMS Cardiac Arrest Event" (CONF:10937)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10938)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10939)
  - a. Conforms to *Cardiac Arrest* (templateId: 2.16.840.1.113883.17.3.10.1.27:2022-01-01)

**EMS Cardiac Arrest Event Section example**

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.14" extension="2022-01-01"/>
  <code code="67799-7" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Cardiac Arrest Event Narrative NEMESIS"/>
  <title>EMS Cardiac Arrest Event</title>
  <text/>
</section>
```

**EMS Current Medication Section**

[Section: templateId 2.16.840.1.113883.17.3.10.1.15]

Information regarding a patient's current medications

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11397 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.15"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11636)/**@code**="67844-1" *EMS current Medications Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10955)
3. **SHALL** contain exactly one [1..1] **title**="EMS Current Medications" (CONF:10219)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10957)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10958)
  - a. Conforms to *Currently On Medication* (templateId: 2.16.840.1.113883.17.3.10.1.75:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..\*] **entry** such that it (CONF:10962)
  - a. Conforms to *Current Medication* (templateId: 2.16.840.1.113883.17.3.10.1.77:2022-01-01)

**EMS Current Medication Section example**

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.15" extension="2022-01-01"/>
  <code code="67844-1" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  current Medications Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

**EMS Dispatch Section**

[Section: templateId 2.16.840.1.113883.17.3.10.1.2]

Information regarding the dispatch process

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11406 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.2"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11638)/**@code**="67660-1" *EMS Dispatch Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10556)
3. **SHALL** contain exactly one [1..1] **title**="EMS Dispatch Section" (CONF:10558)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10557)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10991)



- a. Conforms to *Emergency Medical Dispatch Observation* (templateId: 2.16.840.1.113883.17.3.10.1.73:2022-01-01)
- 6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10993)
  - a. Conforms to *Dispatch Reason* (templateId: 2.16.840.1.113883.17.3.10.1.74:2022-01-01)

### EMS Dispatch Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.2" extension="2022-01-01"/>
  <code code="67660-1" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Dispatch Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Disposition Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.4]

Information regarding the disposition of the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11408 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.4"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10652)/**@code**="67661-9" *EMS Disposition Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10651)
3. **SHALL** contain exactly one [1..1] **title**="EMS Disposition Section" which **SHOULD** equal "EMS Disposition" (CONF:10654)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10653)
5. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:11003)
  - a. Conforms to *Number Of Patients Transported Observation* (templateId: 2.16.840.1.113883.17.3.10.1.31:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11007)
  - a. Conforms to *Transport Mode Observation* (templateId: 2.16.840.1.113883.17.3.10.1.33:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11009)
  - a. Conforms to *Transport Method Observation* (templateId: 2.16.840.1.113883.17.3.10.1.34:2022-01-01)
8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11011)
  - a. Conforms to *Reason For Choosing Destination Observation* (templateId: 2.16.840.1.113883.17.3.10.1.35:2022-01-01)
9. If section/@nullFlavor is not present, **SHALL** contain [1..\*] **entry** such that it (CONF:11013)
  - a. Conforms to *Prearrival Activation Observation* (templateId: 2.16.840.1.113883.17.3.10.1.36:2022-01-01)
10. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11015)
  - a. Conforms to *Patient Condition At Destination Observation* (templateId: 2.16.840.1.113883.17.3.10.1.37:2022-01-01)
11. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11330)

- a. Conforms to *Destination Hospital Capability* (templateId: 2.16.840.1.113883.17.3.10.1.104:2022-01-01)
- 12. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11331)
  - a. Conforms to *Destination Ward* (templateId: 2.16.840.1.113883.17.3.10.1.186:2022-01-01)
- 13. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11409)
  - a. Conforms to *Unit Disposition* (templateId: 2.16.840.1.113883.17.3.10.1.196:2022-01-01)
- 14. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11410)
  - a. Conforms to *Patient Engagement* (templateId: 2.16.840.1.113883.17.3.10.1.197:2022-01-01)
- 15. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11411)
  - a. Conforms to *Crew Disposition* (templateId: 2.16.840.1.113883.17.3.10.1.198:2022-01-01)
- 16. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11412)
  - a. Conforms to *Transport Disposition* (templateId: 2.16.840.1.113883.17.3.10.1.199:2022-01-01)

### EMS Disposition Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.4" extension="2022-01-01"/>
  <code code="67661-9" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
Disposition Narrative NEMESIS"/>
  <title>EMS Disposition</title>
  <text/>
</section>
```

## EMS Injury Incident Description Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.17]

Observations concerning a patient's injury mechanism

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11393 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.17"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11632)/**@code**="67800-3" *EMS Injury Incident Description Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10094)
3. **SHALL** contain exactly one [1..1] **title**="EMS Injury Incident Description Section" (CONF:10914)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10916)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10917)
  - a. Conforms to *Injury Cause Category* (templateId: 2.16.840.1.113883.17.3.10.1.50:2022-01-01)
6. If section/@nullFlavor is not present, **SHOULD** contain [0..1] **entry** such that it (CONF:10919)
  - a. Conforms to *Injury Mechanism* (templateId: 2.16.840.1.113883.17.3.10.1.51:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10921)
  - a. Conforms to *Trauma Triage Criteria Steps1and2* (templateId: 2.16.840.1.113883.17.3.10.1.52:2022-01-01)
8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10923)
  - a. Conforms to *Trauma Triage Criteria Steps3and4* (templateId: 2.16.840.1.113883.17.3.10.1.53:2022-01-01)

9. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10925)
  - a. Conforms to *Vehicle Impact Area* (templateId: 2.16.840.1.113883.17.3.10.1.54:2022-01-01)
10. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10927)
  - a. Conforms to *Patient Location In Vehicle* (templateId: 2.16.840.1.113883.17.3.10.1.55:2022-01-01)
11. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10929)
  - a. Conforms to *Vehicle Occupant Safety Equipment* (templateId: 2.16.840.1.113883.17.3.10.1.56:2022-01-01)
12. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10931)
  - a. Conforms to *Airbag Deployment Status* (templateId: 2.16.840.1.113883.17.3.10.1.57:2022-01-01)
13. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10933)
  - a. Conforms to *Height Of Fall* (templateId: 2.16.840.1.113883.17.3.10.1.58:2022-01-01)
14. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10935)
  - a. Conforms to *Disaster Type* (templateId: 2.16.840.1.113883.17.3.10.1.59:2022-01-01)

#### EMS Injury Incident Description Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.17" extension="2022-01-01"/>
  <code code="67800-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Injury Incident Description Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Medications Administered Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.18]

Collection of information regarding the administration of medications

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11403 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.18"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10439)/**@code**="67849-0" *EMS Medications Administered Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10987)
3. **SHALL** contain exactly one [1..1] **title**="EMS Medications Administered Section" (CONF:10442)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10441)
5. If section/@nullFlavor is not present, **MAY** contain [1..\*] **entry** such that it (CONF:10989)
  - a. Conforms to *Medication Administered* (templateId: 2.16.840.1.113883.17.3.10.1.72:2022-01-01)

#### EMS Medications Administered Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.18" extension="2022-01-01"/>
  <code code="67849-0" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Medications Administered Narrative NEMESIS"/>
  <title/>
```

```
<text/>
</section>
```

## EMS Past Medical History Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.19]

Collection of information regarding the patient's medical history

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11391 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.19"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10059)/**@code**="67842-5" *EMS Past Medical History Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10058)
3. **SHALL** contain exactly one [1..1] **title**="EMS Past Medical History" (CONF:10060)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10902)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10903)
  - a. Conforms to *Existence Of History Of Condition Or Surgery* (templateId: 2.16.840.1.113883.17.3.10.1.60:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..\*] **entry** such that it (CONF:10905)
  - a. Conforms to *Medical/Surgical History* (templateId: 2.16.840.1.113883.17.3.10.1.61:2022-01-01)

### EMS Past Medical History Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.19" extension="2022-01-01"/>
  <code code="67842-5" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Past Medical History Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Patient Care Narrative Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.1]

A narrative description of the EMS encounter

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11405 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.1"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10551)/**@code**="67781-5" *Summarization of Encounter Note Narrative* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10552)
3. **SHALL** contain exactly one [1..1] **title**="EMS Patient Care Narrative Section" (CONF:10554)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10553)
 

NEMESIS Trace: ENarrative.01

### EMS Patient Care Narrative Section example

```
<section>
```

```
<templateId root="2.16.840.1.113883.17.3.10.1.1" extension="2022-01-01"/>
<code code="67781-5" codeSystem="2.16.840.1.113883.6.1"
displayName="Summarization of Encounter Note Narrative"/>
<title/>
<text/>
</section>
```

## EMS Personnel Adverse Event Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.6]

Information regarding adverse events affecting EMS personnel

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11413 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.6"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10698)/**@code**="67658-5" *EMS Exposures or Injuries of EMS Personnel Provider Narrative NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10697)
3. **SHALL** contain exactly one [1..1] **title** which **SHOULD** equal "EMS Personnel Adverse Event Section" (CONF:10700)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10699)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11017)
  - a. Conforms to *Adverse Event Indicator* (templateId: 2.16.840.1.113883.17.3.10.1.89:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..\*] **entry** such that it (CONF:11019)
  - a. Conforms to *Adverse Event Type Observation* (templateId: 2.16.840.1.113883.17.3.10.1.90:2022-01-01)

### EMS Personnel Adverse Event Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.6" extension="2022-01-01"/>
  <code code="67658-5" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
Exposures or Injuries of EMS Personnel Provider Narrative NEMSIS"/>
  <title>EMS Personnel Adverse Event Section</title>
  <text/>
</section>
```

## EMS Physical Assessment Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.20]

A collection of qualitative assessments of the patient's physical condition and other facts

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11400 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.20"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10337)/**@code**="29545-1" *Physical findings Narrative* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10336)
3. **SHALL** contain exactly one [1..1] **title**="EMS Physical Assessment Section" (CONF:10339)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10338)

5. If section/@nullFlavor is not present, **SHOULD** contain [0..\*] **entry** such that it (CONF:10975)
  - a. Conforms to *Physical Assessment Organizer* (templateId: 2.16.840.1.113883.17.3.10.1.78:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10977)
  - a. Conforms to *Patient Pregnancy* (templateId: 2.16.840.1.113883.17.3.10.1.79:2022-01-01)
7. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10979)
  - a. Conforms to *Last Oral Intake* (templateId: 2.16.840.1.113883.17.3.10.1.80:2022-01-01)
8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10981)
  - a. Conforms to *Patient Age* (templateId: 2.16.840.1.113883.17.3.10.1.81:2022-01-01)
9. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10983)
  - a. Conforms to *Thrombolytic Contraindications* (templateId: 2.16.840.1.113883.17.3.10.1.82:2022-01-01)
10. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10985)
  - a. Conforms to *Barriers To Patient Care* (templateId: 2.16.840.1.113883.17.3.10.1.83:2022-01-01)
11. **MAY** contain zero or one [0..1] **entry** such that it (CONF:11401)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Patient Body Weight* (CONF:11099)
12. **MAY** contain zero or one [0..1] **entry** such that it (CONF:11402)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Length Based Patient Body Weight Class* (CONF:11100)

#### EMS Physical Assessment Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.20" extension="2022-01-01"/>
  <code code="29545-1" codeSystem="2.16.840.1.113883.6.1"
  displayName="Physical findings Narrative"/>
  <title/>
  <text/>
</section>
```

## EMS Procedures Performed Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.21]

Information regarding procedures performed by the EMS personnel or by others prior to EMS unit arrival

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11404 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.21"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10490)/**@code**="29554-3" *Procedure Narrative* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10489)
3. **SHALL** contain exactly one [1..1] **title**="EMS Procedures Performed Section" (CONF:10492)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10491)
5. If section/@nullFlavor is not present, **MAY** contain [0..\*] **entry** such that it (CONF:6277)
  - a. Conforms to *Procedure* (templateId: 2.16.840.1.113883.17.3.10.1.181:2022-01-01)

#### EMS Procedures Performed Section example

```
<section>
```

```

<templateId root="2.16.840.1.113883.17.3.10.1.21" extension="2022-01-01"/>
<code code="29554-3" codeSystem="2.16.840.1.113883.6.1"
displayName="Procedure Narrative"/>
<title/>
<text/>
</section>

```

## EMS Protocol Section

---

[Section: templateId 2.16.840.1.113883.17.3.10.1.7]

Information about the protocol used by EMS personnel to direct the clinical care of the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11414 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.7"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11639)/**@code**="67663-5" *EMS Protocol Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10713)
3. **SHALL** contain exactly one [1..1] **title**="EMS Protocol Section" (CONF:11021)
4. **SHALL** contain exactly one [1..1] **text** (CONF:11023)
5. If section/@nullFlavor is not present, **SHALL** contain [1..\*] **entry** such that it (CONF:11024)
  - a. Conforms to *Protocol Observation* (templateId: 2.16.840.1.113883.17.3.10.1.93:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:11026)
  - a. Conforms to *Candidate Patient Registry Type* (templateId: 2.16.840.1.113883.17.3.10.1.94:2022-01-01)

### EMS Protocol Section example

```

<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.7" extension="2022-01-01"/>
  <code code="67663-5" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Protocol Narrative NEMESIS"/>
  <title/>
  <text/>
</section>

```

## EMS Response Section

---

[Section: templateId 2.16.840.1.113883.17.3.10.1.3]

Information regarding the EMS crew's response to dispatch

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11407 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.3"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10573)/**@code**="67664-3" *EMS Response Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10572)
3. **SHALL** contain exactly one [1..1] **title**="EMS Response Section" (CONF:10575)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10574)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10995)
  - a. Conforms to *Delay Organizer* (templateId: 2.16.840.1.113883.17.3.10.1.95:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10997)



- a. Conforms to *Dispatch Location Organizer* (templateId: 2.16.840.1.113883.17.3.10.1.96:2022-01-01)
- 7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10999)
  - a. Conforms to *Response Odometer Reading Organizer* (templateId: 2.16.840.1.113883.17.3.10.1.97:2022-01-01)
- 8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11001)
  - a. Conforms to *Response Mode To Scene* (templateId: 2.16.840.1.113883.17.3.10.1.182:2022-01-01)

#### EMS Response Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.3" extension="2022-01-01"/>
  <code code="67664-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Response Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Scene Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.8]

Information about the environment in which the patient is found

- 1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11415 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.8"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- 2. **SHALL** contain exactly one [1..1] **code** (CONF:11640)/**@code**="67665-0" *EMS Scene Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10732)
- 3. **SHALL** contain exactly one [1..1] **title**="EMS Scene Section" which **SHOULD** equal "EMS Scene" (CONF:10734)
- 4. **SHALL** contain exactly one [1..1] **text** (CONF:10733)
- 5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11028)
  - a. Conforms to *First Unit Indicator* (templateId: 2.16.840.1.113883.17.3.10.1.84:2022-01-01)
- 6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11032)
  - a. Conforms to *Scene Patient Count* (templateId: 2.16.840.1.113883.17.3.10.1.86:2022-01-01)
- 7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11034)
  - a. Conforms to *Mass Casualty Indicator* (templateId: 2.16.840.1.113883.17.3.10.1.87:2022-01-01)
- 8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11036)
  - a. Conforms to *Location Type Observation* (templateId: 2.16.840.1.113883.17.3.10.1.88:2022-01-01)

#### EMS Scene Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.8" extension="2022-01-01"/>
  <code code="67665-0" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Scene Narrative NEMESIS"/>
  <title>EMS Scene</title>
```



```
<text/>
</section>
```

## EMS Situation Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.9]

Information about patient symptoms and complaints

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11416 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.9"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10755)/**@code**="67666-8" *EMS Situation Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10756)
3. **SHALL** contain exactly one [1..1] **title**="EMS Situation Section" (CONF:10758)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10757)
5. If section/@nullFlavor is not present, **SHALL** contain [1..\*] **entry** such that it (CONF:11039)
  - a. Conforms to *Complaint* (templateId: 2.16.840.1.113883.17.3.10.1.63:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11041)
  - a. Conforms to *Possible Injury* (templateId: 2.16.840.1.113883.17.3.10.1.64:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11043)
  - a. Conforms to *Provider Primary Impression* (templateId: 2.16.840.1.113883.17.3.10.1.65:2022-01-01)
8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11045)
  - a. Conforms to *Primary Symptom* (templateId: 2.16.840.1.113883.17.3.10.1.66:2022-01-01)
9. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11047)
  - a. Conforms to *Other Symptoms* (templateId: 2.16.840.1.113883.17.3.10.1.67:2022-01-01)
10. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11049)
  - a. Conforms to *Provider Secondary Impressions* (templateId: 2.16.840.1.113883.17.3.10.1.68:2022-01-01)
11. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11051)
  - a. Conforms to *Initial Patient Acuity* (templateId: 2.16.840.1.113883.17.3.10.1.69:2022-01-01)

### EMS Situation Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.9" extension="2022-01-01"/>
  <code code="67666-8" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Situation Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Social History Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.22]

Information about the patient's social environment

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11398 ) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.22"
- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:10241)/**@code**="67843-3" *EMS Social History Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10240)
3. **SHALL** contain exactly one [1..1] **title**="EMS Social History" (CONF:10243)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10964)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10965)
  - a. Conforms to *Existence Of Drug Use Indication* (templateId: 2.16.840.1.113883.17.3.10.1.70:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..\*] **entry** such that it (CONF:10967)
  - a. Conforms to *Drug Use Indication* (templateId: 2.16.840.1.113883.17.3.10.1.71:2022-01-01)

### EMS Social History Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.22" extension="2022-01-01"/>
  <code code="67843-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Social History Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Times Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.10]

Set of times for defined events in the EMS trip

Contained By	Contains
<i>Patient Care Report</i>	<i>Call Time</i>
	<i>Dispatch Notified Time</i>
	<i>Patient Arrived At Destination Time</i>
	<i>Unit At Patient Time</i>
	<i>Unit Back In Service Time</i>
	<i>Unit En Route Time</i>
	<i>Unit Left Scene Time</i>
	<i>Unit Notified Time</i>
	<i>Unit On Scene Time</i>

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11417 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.10"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11641)/**@code**="67667-6" *EMS Times Narrative NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10820)
3. **SHALL** contain exactly one [1..1] **title**="EMS Times Section" (CONF:10822)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10821)
5. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11053)

- a. Conforms to *Call Time* (templateId: 2.16.840.1.113883.17.3.10.1.38:2022-01-01)
- 6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11055)
  - a. Conforms to *Unit Notified Time* (templateId: 2.16.840.1.113883.17.3.10.1.39:2022-01-01)
- 7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11057)
  - a. Conforms to *Unit En Route Time* (templateId: 2.16.840.1.113883.17.3.10.1.40:2022-01-01)
- 8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11059)
  - a. Conforms to *Unit On Scene Time* (templateId: 2.16.840.1.113883.17.3.10.1.41:2022-01-01)
- 9. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11061)
  - a. Conforms to *Unit At Patient Time* (templateId: 2.16.840.1.113883.17.3.10.1.42:2022-01-01)
- 10. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11063)
  - a. Conforms to *Unit Left Scene Time* (templateId: 2.16.840.1.113883.17.3.10.1.43:2022-01-01)
- 11. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11065)
  - a. Conforms to *Patient Arrived At Destination Time* (templateId: 2.16.840.1.113883.17.3.10.1.44:2022-01-01)
- 12. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11067)
  - a. Conforms to *Unit Back In Service Time* (templateId: 2.16.840.1.113883.17.3.10.1.45:2022-01-01)
- 13. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:11069)
  - a. Conforms to *Dispatch Notified Time* (templateId: 2.16.840.1.113883.17.3.10.1.46:2022-01-01)

#### EMS Times Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.10" extension="2022-01-01"/>
  <code code="67667-6" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Times Narrative NEMESIS"/>
  <title/>
  <text/>
</section>
```

## EMS Vital Signs Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.23]

Collection of vital signs and other observations about the patient's status

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11399 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.23"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11637)/**@code**="8716-3" *Vital Signs* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10252)
3. **SHALL** contain exactly one [1..1] **title**="EMS Vital Signs Section" (CONF:10254)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10969)
5. If section/@nullFlavor is not present, **SHALL** contain [1..\*] **entry** such that it (CONF:10970)
  - a. Conforms to *Vital Signs Organizer* (templateId: 2.16.840.1.113883.17.3.10.1.28:2022-01-01)

### EMS Vital Signs Section example

```
<section>
  <templateId root="2.16.840.1.113883.17.3.10.1.23" extension="2022-01-01"/>
  <code code="8716-3" codeSystem="2.16.840.1.113883.6.1" displayName="Vital
Signs"/>
  <title/>
  <text/>
</section>
```

---

# Chapter

# 4

---

## CLINICAL STATEMENT TEMPLATES

---

### Topics:

- *Abandoned Procedure Reason Observation*
- *Abdomen Assessment*
- *Additional Vital Signs Organizer*
- *Advance Directive Observation*
- *Adverse Event Indicator*
- *Adverse Event Type Observation*
- *Airbag Deployment Status*
- *Airway Confirmation Observation*
- *Arrest Rhythm*
- *Back And Spine Assessment*
- *Barriers To Patient Care*
- *Billing Condition*
- *Blood Glucose*
- *Body Temperature*
- *Call Time*
- *Candidate Patient Registry Type*
- *Carbon Dioxide*
- *Carbon Monoxide*
- *Cardiac Arrest*
- *Cardiac Arrest Cause*
- *Cardiac Arrest Outcome*
- *Cardiac Arrest Timing*
- *Cardiac Rhythm*
- *Chest Assessment*
- *Complaint*
- *Complaint Duration*
- *Complaint Organ System*
- *Complaint Type*
- *Crew Disposition*
- *Current Medication*
- *Currently On Medication*
- *Delay Organizer*

This section of the Implementation Guide details the clinical statement entries referenced in the document section templates. The clinical statement entry templates are arranged alphabetically.

- *Destination Hospital Capability*
- *Destination Rhythm*
- *Destination Ward*
- *Diastolic Blood Pressure*
- *Disaster Type*
- *Dispatch Delay*
- *Dispatch Location Latitude*
- *Dispatch Location Longitude*
- *Dispatch Location Name*
- *Dispatch Location Organizer*
- *Dispatch Notified Time*
- *Dispatch Reason*
- *Drug Allergy*
- *Drug Allergy Organizer*
- *Drug Use Indication*
- *Emergency Medical Dispatch Observation*
- *Existence Of Drug Use Indication*
- *Existence Of History Of Condition Or Surgery*
- *Existence Of Known Drug Allergy Observation*
- *Existence Of Known Non Drug Allergy*
- *Extremities Assessment*
- *Eye Assessment*
- *Face Assessment*
- *First Unit Indicator*
- *Glasgow Coma Score Organizer*
- *Glasgow Eye*
- *Glasgow Motor*
- *Glasgow Qualifier*
- *Glasgow Total*
- *Glasgow Verbal*
- *Head Assessment*
- *Heart Assessment*
- *Heart Rate*
- *Height Of Fall*
- *Initial Patient Acuity*
- *Injury Cause Category*
- *Injury Mechanism*
- *Last Oral Intake*
- *Length Based Patient Body Weight Class*
- *Level Of Responsiveness*
- *Level Of Service Observation*

- *Location Type Observation*
- *Lung Assessment*
- *Mass Casualty Indicator*
- *Medical/Surgical History*
- *Medication Administered*
- *Medication Complication Observation*
- *Medication Not Administered Reason Observation*
- *Medication Prior Administration Observation*
- *Mental Status Assessment*
- *Neck Assessment*
- *Neurological Assessment*
- *Non Drug Allergy*
- *Non Drug Allergy Organizer*
- *Number Of Patients Transported Observation*
- *Other Symptoms*
- *Oxygen Saturation*
- *Pain Score*
- *Patient Age*
- *Patient Arrived At Destination Time*
- *Patient Body Weight*
- *Patient Condition At Destination Observation*
- *Patient Engagement*
- *Patient Location In Vehicle*
- *Patient Pregnancy*
- *Pelvic And Genitourinary Assessment*
- *Physical Assessment Organizer*
- *Possible Injury*
- *Preadmission Activation Observation*
- *Primary Symptom*
- *Prior Aid Vitals*
- *Procedure*
- *Procedure Complications Observation*
- *Procedure Number Of Attempts Observation*
- *Procedure Patient Response Observation*
- *Procedure Prior Indicator*
- *Procedure Successful Observation*
- *Protocol Age Category*

- *Protocol Observation*
- *Provider Primary Impression*
- *Provider Secondary Impressions*
- *Reason For Choosing Destination Observation*
- *Reason Procedure Not Attempted Observation*
- *Respiratory Rate*
- *Response Beginning Odometer Reading*
- *Response Delay*
- *Response Destination Odometer Reading*
- *Response Ending Odometer Reading*
- *Response Mode Qualifier*
- *Response Mode To Scene*
- *Response Odometer Reading Organizer*
- *Response On Scene Odometer Reading*
- *Return Of Spontaneous Circulation*
- *Scene Delay*
- *Scene Patient Count*
- *Skin Assessment*
- *Stroke Score*
- *Systolic Blood Pressure*
- *Thrombolytic Contraindications*
- *Transport Delay*
- *Transport Disposition*
- *Transport Method Observation*
- *Transport Mode Observation*
- *Transport Mode Qualifier*
- *Trauma Triage Criteria (Steps 1 and 2)*
- *Trauma Triage Criteria (Steps 3 and 4)*
- *Turnaround Delay*
- *Unit At Patient Time*
- *Unit Back In Service Time*
- *Unit Disposition*
- *Unit En Route Time*
- *Unit Left Scene Time*
- *Unit Notified Time*
- *Unit On Scene Time*
- *Vehicle Impact Area*



- *Vehicle Occupant Safety Equipment*
- *Vital Signs Organizer*

## Abandoned Procedure Reason Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.130]

An explanation of why efforts to conduct a procedure were abandoned

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11522) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.130"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11255)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10512)/**@code**="ASSERTION" *Assertion* (CodeSystem: 2.16.840.1.113883.5.4 ActCode) (CONF:10511)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10514), which **SHALL** be selected from ValueSet *ResuscitationDiscontinueReason* 2.16.840.1.113883.17.3.11.62 **DYNAMIC** (CONF:10513)

NEMESIS Trace: EArrest.16 (Reason CPR/resuscitation discontinued)

### Abandoned Procedure Reason Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.130"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>
  <value xsi:type="CD" code="LA18204-0" displayName="Physically unable to perform"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</observation>
```

## Abdomen Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.117]

Qualitative assessment of condition of patient's abdomen

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11511) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.117"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11234)
3. **SHALL** contain exactly one [1..1] **code**/ **@code**="67530-6" *Physical findings of Abdomen NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10387)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11235)
 

NEMESIS Trace: EExam.03
5. **SHOULD** contain zero or more [0..\*] **value** with **@xsi:type**="CD" (CONF:11606), which **SHALL** be selected from ValueSet *AbdomenAssessmentFinding* 2.16.840.1.113883.17.3.11.31 **DYNAMIC** (CONF:10388)
 

NEMESIS Trace: EExam.11
6. **SHOULD** contain zero or one [0..1] **targetSiteCode** (CONF:11607), which **SHALL** be selected from ValueSet *AbdominalFindingLocation* 2.16.840.1.113883.17.3.11.32 **DYNAMIC** (CONF:10389)

NEMESIS Trace: EExam.10

**Abdomen Assessment example**

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.117"/>
  <code code="67530-6" displayName="Physical findings of Abdomen NEMESIS"/>
  <value xsi:type="CD" code="LA6626-1" displayName="Normal"
codeSystem="2.16.840.1.113883.6.1"/>
  <targetSiteCode code="LA18721-3" displayName="Generalized"
codeSystem="2.16.840.1.113883.6.1"/>
</observation>
```

**Additional Vital Signs Organizer**

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.30]

Common observations regarding the state of the patient that are not typically included in strict definitions of vital signs.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11571) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.30"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11133)
3. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11134)  
NEMESIS Trace: EVitals.01
4. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11689)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Stroke Score* (CONF:11695)
5. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11690)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Pain Score* (CONF:11696)
6. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11703)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Level Of Responsiveness* (CONF:11697)
7. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11691)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Blood Glucose* (CONF:11698)
8. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11692)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Carbon Monoxide* (CONF:11699)
9. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11693)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Carbon Dioxide* (CONF:11700)
10. **SHOULD** contain zero or more [0..\*] **component** such that it (CONF:11694)
  - a. contain exactly one [1..1] **observation**, where its type is *Cardiac Rhythm*
11. **MAY** contain zero or one [0..1] **component** such that it (CONF:11708)
  - a. **SHALL** contain exactly one [1..1] **organizer**, where its type is *Glasgow Coma Score Organizer* (CONF:11709)

**Additional Vital Signs Organizer example**

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.30"/>
  <id root="2.16.840.1.113883.19.4" extension="243346586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
</organizer>
```

```

    <component>
      . . .
    </component>
  </organizer>

```

## Advance Directive Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.98]

Whether an advance directive exists and how it is expressed

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11439 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.98"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11152)
3. **SHALL** contain exactly one [1..1] **code/@code**="67516-5" *Advance directive NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10194)  
NEMSIS Trace: EHistory.05
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11153), which **SHALL** be selected from ValueSet *AdvanceDirectiveType* 2.16.840.1.113883.17.3.11.63 **DYNAMIC** (CONF:11154)

### Advance Directive Observation example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.98"/>
  <id root="2.16.840.1.113883.19.4" extension="477988662"/>
  <code code="67516-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Advance directive NEMSIS"/>
  <value xsi:type="CD" code="LA137-2"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="None"/>
</observation>

```

## Adverse Event Indicator

[Observation: templateId 2.16.840.1.113883.17.3.10.1.89]

Indication of whether an adverse event occurred involving EMS personnel

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11483 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.89"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11204)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10705)/**@code**="67554-6" *Work related exposure, injury, or death Provider NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10706)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10707)  
NEMSIS Trace: EOther.05

**Adverse Event Indicator example**

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.89"/>
  <id root="2.16.840.1.113883.19.4" extension="1500491815"/>
  <code code="67554-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS personnel exposed or injured"/>
  <value xsi:type="BL" value="false"/>
</observation>
```

**Adverse Event Type Observation**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.90]

Kind of adverse event involving EMS personnel

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11484) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.90"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11205)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10710)/**@code**="67555-3" *Work related exposure, injury, or death Provider NEMSIS type* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10709)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10711), which **SHALL** be selected from ValueSet ProviderAdverseEventType 2.16.840.1.113883.17.3.11.72 **DYNAMIC** (CONF:10712)

NEMSIS Trace: EOther.06

**Adverse Event Type Observation example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.90" extension="2022-01-01"/>
  <code code="67555-3" codeSystem="2.16.840.1.113883.6.1" displayName="Work
related exposure, injury, or death Provider NEMSIS type"/>
  <value xsi:type="CD"/>
</observation>
```

**Airbag Deployment Status**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.57]

Airbag presence, deployment, and location

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11449) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.57"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11162)
3. **SHALL** contain exactly one [1..1] **code**/ **@code**="67500-9" *Airbag deployment NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10126)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11163), which **SHALL** be selected from ValueSet AirbagStatus 2.16.840.1.113883.17.3.11.8 **DYNAMIC** (CONF:10127)

NEMESIS Trace: EInjury.08

### Airbag Deployment Status example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.57" extension="2022-01-01"/>
  <code code="67500-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Airbag deployment NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Airway Confirmation Observation

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.175]

Whether airway placement was confirmed, including time and method

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11528) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.175"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11261)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10542)/**@code**="71576-3" *Airway device placement confirmation NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10541)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10546)

NEMESIS Trace: EAirway.02. If the confirmation is negated, this SHALL be "NA."

5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10545)

NEMESIS Trace: if EAirway.02 is populated, this is TRUE

6. **MAY** contain zero or more [0..\*] **methodCode** (CONF:10544), which **SHALL** be selected from ValueSet *AirwayDeviceConfirmationMethod* 2.16.840.1.113883.17.3.11.60 **DYNAMIC** (CONF:10543)

NEMESIS Trace: EAirway.04

### Airway Confirmation Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.175" extension="2022-01-01"/>
  <code code="71576-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Airway device placement confirmation NEMESIS"/>
  <effectiveTime/>
  <value xsi:type="BL"/>
</observation>
```

## Arrest Rhythm

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.127]

First measurement of cardiac rhythm during or shortly after cardiac arrest

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11519) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.127"

- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  - 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11251)
  - 3. **SHALL** contain exactly one [1..1] **code/@code**="67512-4" *First monitored rhythm NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10179)
  - 4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", which **SHALL** be selected from ValueSet *FirstMonitoredRhythm* 2.16.840.1.113883.17.3.11.14 **DYNAMIC** (CONF:10180)
- NEMESIS Trace: EArrest.11

#### Arrest Rhythm example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.127" extension="2022-01-01"/>
  <code code="67512-4" codeSystem="2.16.840.1.113883.6.1" displayName="First monitored rhythm NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Back And Spine Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.119]

Qualitative assessment of condition of patient's back and spine

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11513) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.119"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  - 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11238)
  - 3. **SHALL** contain exactly one [1..1] **code** (CONF:10394)/**@code**="67532-2" *Physical findings of Back+Spine NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10393)
  - 4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11239)
- NEMESIS Trace: EExam.03
- 5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10397), which **SHALL** be selected from ValueSet *BackSpineAssessmentFinding* 2.16.840.1.113883.17.3.11.34 **DYNAMIC** (CONF:10398)
- NEMESIS Trace: EExam.14
- 6. **SHALL** contain zero or one [0..1] **targetSiteCode** (CONF:10396), which **SHALL** be selected from ValueSet *BackSpineFindingLocation* 2.16.840.1.113883.17.3.11.35 **DYNAMIC** (CONF:10395)
- NEMESIS Trace: EExam.13

#### Back And Spine Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.119" extension="2022-01-01"/>
  <code code="67532-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Back+Spine NEMESIS"/>
  <effectiveTime/>
  <value xsi:type="CD"/>
</observation>
```

## Barriers To Patient Care

[Observation: templateId 2.16.840.1.113883.17.3.10.1.83]

Kinds of circumstances limiting provision of care

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11478 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.83"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11196)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10435)/**@code**="67515-7" *Barriers to patient care NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10436)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10437), which **SHALL** be selected from ValueSet BarrierToCare 2.16.840.1.113883.17.3.11.85 **DYNAMIC** (CONF:10438)

NEMESIS Trace: EHistory.01

### Barriers To Patient Care example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.83" extension="2022-01-01"/>
  <code code="67515-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Barriers to patient care NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Billing Condition

[Observation: templateId 2.16.840.1.113883.17.3.10.1.91]

Patient condition classified by billing category

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11485 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.91"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11207)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10084)/**@code**="67556-1" *EMS condition code NEMESIS (Billing condition)* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10086)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10087), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:11206)

NEMESIS Trace: EPayment.51

### Billing Condition example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.91" extension="2022-01-01"/>
  <code code="67556-1" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
    condition code NEMESIS (Billing condition)"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```



## Blood Glucose

[Observation: templateId 2.16.840.1.113883.17.3.10.1.166]

Patient blood glucose measured as a mass concentration

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11556 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.166"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11303)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10300)/**@code**="2339-0" *Glucose [Mass/volume] in Blood* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10299)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11304)  
NEMESIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10301)  
NEMESIS Trace: EVitals.18 UCUM units will typically be "mg/dl".

### Blood Glucose example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.166" extension="2022-01-01"/>
  <code code="2339-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Glucose [Mass/volume] in Blood"/>
  <value xsi:type="PQ"/>
</observation>
```

## Body Temperature

[Observation: templateId 2.16.840.1.113883.17.3.10.1.176]

Patient's body temperature

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11537 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.176"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11278)
3. **SHALL** contain exactly one [1..1] **code**/ **@code**="8310-5" *Body temperature* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10289)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11279)  
NEMESIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10290)  
NEMESIS Trace: EVitals.24 UCUM units SHOULD be "Cel".

### Body Temperature example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.176" extension="2022-01-01"/>
  <code code="8310-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Body temperature"/>
  <value xsi:type="PQ"/>
</observation>
```

```
<code code="8310-5" codeSystem="2.16.840.1.113883.6.1" displayName="Body
temperature"/>
<value xsi:type="PQ"/>
</observation>
```

## Call Time

[Observation: templateId 2.16.840.1.113883.17.3.10.1.38]

Time at which the public safety answering point call center is notified of an emergency

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11430 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.38"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11143)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10835)/**@code**="69469-5" *911 call to public safety answering point or other designated entity requesting EMS services [Date and time] Facility NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10834)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10836)

NEMSIS Trace: ETimes.01

### Call Time example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.38" extension="2022-01-01"/>
  <code code="69469-5" codeSystem="2.16.840.1.113883.6.1" displayName="911
  call to public safety answering point or other designated entity requesting
  EMS services [Date and time] Facility NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

## Candidate Patient Registry Type

[Observation: templateId 2.16.840.1.113883.17.3.10.1.94]

Kind of patient registry in which it may be appropriate to include the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11488 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.94"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11210)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10728)/**@code**="67553-8" *Condition indicating eligibility for illness or injury registry NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10729)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10730), which **SHALL** be selected from ValueSet RegistryType 2.16.840.1.113883.17.3.11.74 **DYNAMIC** (CONF:10731)

NEMSIS Trace: EOther.02

### Candidate Patient Registry Type example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.94" extension="2022-01-01"/>
```

```
<code code="67553-8" codeSystem="2.16.840.1.113883.6.1"
  displayName="Condition indicating eligibility for illness or injury
  registry NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Carbon Dioxide

[Observation: templateId 2.16.840.1.113883.17.3.10.1.168]

Measurement of end tidal carbon dioxide

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11558 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.168"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11307)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10294)/**@code**="19889-5" *Carbon dioxide/Gas.total.at end expiration in Exhaled gas* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10293)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11308)  
NEMESIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10295)  
NEMESIS Trace: EVitals.16 UCUM units will typically be "%", "mmHg", or "kPa".

### Carbon Dioxide example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.168" extension="2022-01-01"/>
  <code code="19889-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Carbon dioxide/Gas.total.at end expiration in Exhaled gas"/>
  <value xsi:type="PQ"/>
</observation>
```

## Carbon Monoxide

[Observation: templateId 2.16.840.1.113883.17.3.10.1.167]

Measurement of carbon monoxide in patient's bloodstream

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11557 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.167"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11305)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10297)/**@code**="20563-3" *Carboxyhemoglobin/Hemoglobin.total in Blood* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10296)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11306)  
NEMESIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10298)  
NEMESIS Trace: EVitals.17 UCUM units will typically be "%".

**Carbon Monoxide example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.167" extension="2022-01-01"/>
  <code code="20563-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Carboxyhemoglobin/?Hemoglobin.total in Blood"/>
  <value xsi:type="PQ"/>
</observation>
```

**Cardiac Arrest**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.27]

Characteristics of a patient's cardiac arrest

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11420) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.27"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11130)
3. **SHOULD** contain zero or one [0..1] **@negationInd** (CONF:10141)
 

Populate as true if NEMESIS EArrest.01 = "No"
4. **SHALL** contain exactly one [1..1] **code/@code**="ASSERTION" *ASSERTION* (CodeSystem: 2.16.840.1.113883.5.4 ActCode) (CONF:10138)
5. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10139)
 

NEMESIS Trace: EArrest.14
6. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD"/**@code**="410429000" *cardiac arrest* (CodeSystem: 2.16.840.1.113883.6.96 SNOMED CT) (CONF:10140)
 

NEMESIS Trace: EArrest.01
7. **SHALL** contain exactly one [1..1] **entryRelationship** such that it (CONF:10142)
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CONF:10155)
  - b. **SHALL** contain exactly one [1..1] **@inversionInd**="TRUE" (CONF:10154)
  - c. **SHALL** contain exactly one [1..1] **observation**, where its type is *Cardiac Arrest Cause* (CONF:10941)
8. **SHALL** contain at least one [1..\*] **informant** such that it (CONF:10144)
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="INF" (CONF:10158)
  - b. **SHALL** contain exactly one [1..1] **relatedEntity** such that it (CONF:11071)
    - a. **SHALL** contain exactly one [1..1] **@classCode**="AGNT" (CONF:10159)
    - b. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet CardiacArrestWitnessRole 2.16.840.1.113883.17.3.11.11 **DYNAMIC** (CONF:10160)
 

NEMESIS Trace: EArrest.04
9. **SHALL** contain exactly one [1..1] **entryRelationship** such that it (CONF:10147)
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CONF:10182)
  - b. **SHALL** contain exactly one [1..1] **@inversionInd**="TRUE" (CONF:10181)
  - c. **SHALL** contain exactly one [1..1] **observation**, where its type is *Return Of Spontaneous Circulation* (CONF:10183)
10. **SHALL** contain exactly one [1..1] **entryRelationship** such that it (CONF:10148)
  - a. **SHALL** contain exactly one [1..1] **@typeCode**="SUBJ" (CONF:10187)

- b. SHALL contain exactly one [1..1] **@inversionInd="TRUE"** (CONF:10186)
- c. SHALL contain exactly one [1..1] **observation**, where its type is *Destination Rhythm* (CONF:10188)
- 11. SHALL contain exactly one [1..1] **entryRelationship** such that it (CONF:11072)
  - a. SHALL contain exactly one [1..1] **@typeCode="SUBJ"** (CONF:10177)
  - b. SHALL contain exactly one [1..1] **@inversionInd="TRUE"** (CONF:10176)
  - c. SHALL contain exactly one [1..1] **observation**, where its type is *Arrest Rhythm* (CONF:10178)
- 12. SHALL contain exactly one [1..1] **entryRelationship** such that it (CONF:11377)
  - a. SHALL contain exactly one [1..1] **@typeCode="SUBJ"** (CONF:10151)
  - b. SHALL contain exactly one [1..1] **@inversionInd="TRUE"** (CONF:10149)
  - c. contains zero or more [0..\*] **observation**, where its type is *Cardiac Arrest Timing*
- 13. SHALL contain exactly one [1..1] **entryRelationship** such that it (CONF:11332)
  - a. SHALL contain exactly one [1..1] **@typeCode="COMP"** (CONF:11333)
  - b. SHALL contain exactly one [1..1] **observation**, where its type is *Cardiac Arrest Outcome* (CONF:11334)

### Cardiac Arrest example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.27" extension="2022-01-01"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
  displayName="ASSERTION"/>
  <effectiveTime/>
  <value xsi:type="CD" code="410429000" codeSystem="2.16.840.1.113883.6.96"
  displayName="cardiac arrest"/>
  <informant typeCode="INF">
    <relatedEntity classCode="AGNT">
      <code/>
    </relatedEntity>
  </informant>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="SPCOBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.17.3.10.1.124"
      extension="2022-01-01"/>
      <code code="67503-3" codeSystem="2.16.840.1.113883.6.1"
      displayName="Cardiac arrest cause NEMSIS"/>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="SPCOBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.17.3.10.1.128"
      extension="2022-01-01"/>
      <code code="88670-5" codeSystem="2.16.840.1.113883.6.1"
      displayName="Return of spontaneous circulation"/>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="SPCOBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.17.3.10.1.129"
      extension="2022-01-01"/>
      <code code="67519-9" codeSystem="2.16.840.1.113883.6.1"
      displayName="Cardiac rhythm NEMSIS"/>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="SUBJ" inversionInd="true">
    <observation classCode="SPCOBS" moodCode="EVN">
```

```

<templateId root="2.16.840.1.113883.17.3.10.1.127"
extension="2022-01-01"/>
<code code="67512-4" codeSystem="2.16.840.1.113883.6.1"
displayName="First monitored rhythm NEMSIS"/>
<value xsi:type="CD"/>
</observation>
</entryRelationship>
<entryRelationship typeCode="SUBJ" inversionInd="true"/>
<entryRelationship typeCode="COMP">
<observation classCode="SPCOBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.184"
extension="2022-01-01"/>
<code code="77152-7" codeSystem="2.16.840.1.113883.6.1"
displayName="Cardiac arrest event outcome"/>
<value xsi:type="CD"/>
</observation>
</entryRelationship>
</observation>

```

## Cardiac Arrest Cause

[Observation: templateId 2.16.840.1.113883.17.3.10.1.124]

Kind of event or condition causing cardiac arrest

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11518 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.124"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11246)
3. **SHALL** contain exactly one [1..1] **code/@code**="67503-3" *Cardiac arrest cause NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10156)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11671), which **SHALL** be selected from ValueSet CardiacArrestCause 2.16.840.1.113883.17.3.11.10 **DYNAMIC** (CONF:10157)

NEMSIS Trace: EArrest.02

### Cardiac Arrest Cause example

```

<observation classCode="SPCOBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.124" extension="2022-01-01"/>
<code code="67503-3" codeSystem="2.16.840.1.113883.6.1"
displayName="Cardiac arrest cause NEMSIS"/>
<value xsi:type="CD"/>
</observation>

```

## Cardiac Arrest Outcome

[Observation: templateId 2.16.840.1.113883.17.3.10.1.184]

How the arrest was resolved in the experience of the EMS crew

Contained By	Contains

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11565) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.184"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11376)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:11350)/**@code**="77152-7" *Cardiac arrest event outcome* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11351)
  4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11600), which **SHALL** be selected from ValueSet *CardiacArrestOutcome* 2.16.840.1.113883.17.3.11.101 **DYNAMIC** (CONF:11352)
- NEMESIS trace: eArrest.18 (end of arrest event)

#### Cardiac Arrest Outcome example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.184" extension="2022-01-01"/>
  <code code="77152-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Cardiac arrest event outcome"/>
  <value xsi:type="CD"/>
</observation>
```

## Cardiac Arrest Timing

[Observation: templateId 2.16.840.1.113883.17.3.10.1.123]

Whether a cardiac arrest occurred before or after arrival of EMS crew

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11517) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.123"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11245)
  3. **SHALL** contain exactly one [1..1] **code**/ **@code**="67502-5" *Cardiac arrest timing* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11670)
  4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD", which **SHALL** be selected from ValueSet *CardiacArrestTiming* 2.16.840.1.113883.17.3.11.91 **DYNAMIC** (CONF:10153)
- NEMESIS Trace: EArrest.01

#### Cardiac Arrest Timing example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.123" extension="2022-01-01"/>
  <code code="67502-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Cardiac arrest timing"/>
  <value xsi:type="CD"/>
</observation>
```

## Cardiac Rhythm

[Observation: templateId 2.16.840.1.113883.17.3.10.1.169]

Patient's cardiac rhythm classification

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11559) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.169"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11309)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10275)/**@code**="67519-9" *Cardiac rhythm NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10274)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11310)  
NEMSIS Trace: EVitals.01
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10278), which **SHALL** be selected from ValueSet *CardiacRhythmReading* 2.16.840.1.113883.17.3.11.16 **DYNAMIC** (CONF:10279)  
NEMSIS Trace: EVitals.03
6. **SHALL** contain at least one [1..\*] **methodCode** (CONF:10277), which **SHALL** be selected from ValueSet *MethodOfECGInterpretation* 2.16.840.1.113883.17.3.11.20 **DYNAMIC** (CONF:10276)  
NEMSIS Trace: EVitals.05
7. **SHALL** contain exactly one [1..1] **participant** such that it (CONF:11127)
  - a. **SHALL** contain exactly one [1..1] **participantRole** such that it (CONF:11128)
    - a. **SHALL** contain exactly one [1..1] **playingDevice** such that it (CONF:11129)
      - a. **SHALL** contain exactly one [1..1] **code** (CONF:11311), which **SHALL** be selected from ValueSet *ECGType* 2.16.840.1.113883.17.3.11.19 **DYNAMIC** (CONF:11312)  
NEMSIS Trace: EVitals.04
      - b. contain zero or one [0..1] **@classCode**="DEV"
      - c. contain zero or one [0..1] **@determinerCode**="INSTANCE"

### Cardiac Rhythm example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.169" extension="2022-01-01"/>
  <code code="67519-9" codeSystem="2.16.840.1.113883.6.1"
  displayName="Cardiac rhythm NEMSIS"/>
  <value xsi:type="CD"/>
  <methodCode/>
  <participant typeCode="WIT">
    <participantRole>
      <playingDevice>
        <code/>
      </playingDevice>
    </participantRole>
  </participant>
</observation>
```

## Chest Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.195]

The assessment findings associated with the patient's chest.



Contained By	Contains

- SHALL** contain exactly one [1..1] **templateId** (CONF:11609) such that it
  - SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.195"
  - SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- SHALL** contain exactly one [1..1] **code** (CONF:11597)/**@code**="NewExam.25" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11596)
- SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11599), which **SHALL** be selected from ValueSet ChestFinding 2.16.840.1.113883.17.3.11.118 **DYNAMIC** (CONF:11598)  
NEMESIS Trace: eExam.25
- SHOULD** contain zero or one [0..1] **targetSiteCode** (CONF:11610), which **SHALL** be selected from ValueSet ChestFindingLocation 2.16.840.1.113883.17.3.11.119 **DYNAMIC** (CONF:11611)  
NEMESIS Trace: eExam.24

### Chest Assessment example

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.195"
    extension="2022-01-01"/>
  <code code="NewExam.25" codeSystem="2.16.840.1.113883.6.1"/>
  <value xsi:type="CD"/>
</observation>
```

## Complaint

[Observation: templateId 2.16.840.1.113883.17.3.10.1.63]

Statement of the problem by the patient or provider, including duration, system, and whether it is the chief complaint

- SHALL** contain exactly one [1..1] **templateId** (CONF:11456) such that it
  - SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.63"
  - SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11169)
- SHALL** contain exactly one [1..1] **code** (CONF:10768)/**@code**="10154-3" *Chief complaint Narrative - Reported* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10769)
- SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11170)  
effectiveTime.low = NEMESIS Trace: ESituation.01
- MAY** contain zero or one [0..1] **value** with **@xsi:type**="ST" (CONF:10770)  
NEMESIS Trace: ESituation.04
- SHALL** contain exactly one [1..1] **targetSiteCode** (CONF:10773), which **SHALL** be selected from ValueSet AnatomicLocation 2.16.840.1.113883.17.3.11.76 **DYNAMIC** (CONF:10774)  
NEMESIS Trace: ESituation.07 Complaint site is required if complaint is type "Chief complaint"
- MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10771)
  - contain exactly one [1..1] **observation**, where its type is *Complaint Duration*
- MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10772)
  - contains at least one [1..\*] **observation**, where its type is *Complaint Type*
- SHOULD** contain zero or one [0..1] **entryRelationship** such that it (CONF:10775)

*The organ system is required if the complaint is of type "Chief complaint"*

- a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Complaint Organ System* (CONF:10782)

#### Complaint example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.63" extension="2022-01-01"/>
  <code code="10154-3" codeSystem="2.16.840.1.113883.6.1" displayName="Chief
complaint Narrative - Reported"/>
  <effectiveTime/>
  <targetSiteCode/>
</observation>
```

## Complaint Duration

[Observation: templateId 2.16.840.1.113883.17.3.10.1.139]

How long a complaint has lasted

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11531 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.139"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11268)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10779)/**@code**="67491-1" *Duration of chief complaint NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10780)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10781)
 

NEMESIS Trace: ESituation.05, 06 Units SHALL be selected from UCUM time units (i.e., s, min, h, d, wk, mo, a)

#### Complaint Duration example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.139" extension="2022-01-01"/>
  <code code="67491-1" codeSystem="2.16.840.1.113883.6.1"
  displayName="Duration of chief complaint NEMESIS"/>
  <value xsi:type="PQ"/>
</observation>
```

## Complaint Organ System

[Observation: templateId 2.16.840.1.113883.17.3.10.1.140]

The system that a complaint seems to affect

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11532 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.140"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11269)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10784)/**@code**="69468-7" *Primary anatomic organ system of chief complaint NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10783)

4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:10786), which **SHALL** be selected from ValueSet *OrganSystem* 2.16.840.1.113883.17.3.11.77 **DYNAMIC** (CONF:10785)

NEMESIS Trace: ESituation.08

#### Complaint Organ System example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.140" extension="2022-01-01"/>
  <code code="69468-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Primary anatomic organ system of chief complaint NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Complaint Type

[Observation: templateId 2.16.840.1.113883.17.3.10.1.138]

Whether a complaint is a chief complaint

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11530 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.17.3.10.1.138"**
  - b. **SHALL** contain exactly one [1..1] **@extension="2022-01-01"**
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11266)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10777)/**@code="72114-2"** *Complaint NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10776)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:10778), which **SHALL** be selected from ValueSet *Complaint Type* 2.16.840.1.113883.17.3.11.94 **DYNAMIC** (CONF:11267)

NEMESIS Trace: ESituation.03

#### Complaint Type example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.138" extension="2022-01-01"/>
  <code code="72114-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Complaint NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Crew Disposition

[Observation: templateId 2.16.840.1.113883.17.3.10.1.198]

The crew disposition for this EMS event identifying which crew provided primary patient care or whether support services were required.

Contained By	Contains
<a href="#">EMS Disposition Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11588 ) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.198"
- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- 2. **SHALL** contain exactly one [1..1] **code/@code**="neweDisposition.29" *Crew Disposition* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11589)
- 3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11591), which **SHALL** be selected from ValueSet **DYNAMIC** (CONF:11590)

NEMESIS Trace: eDisposition.29

### Crew Disposition example

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.198" extension="2022-01-01"/>
  <code code="neweDisposition.29" codeSystem="2.16.840.1.113883.6.1"
    displayName="Crew Disposition"/>
  <value xsi:type="CD"/>
</observation>
```

## Current Medication

[SubstanceAdministration: templateId 2.16.840.1.113883.17.3.10.1.77]

A medication a patient is currently taking

- 1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11469) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.77"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- 2. **MAY** contain zero or one [0..1] **@negationInd** (CONF:10233)
 

If EHistory.12 has the value "None Reported," the value is "True" This negation of a notional class is parallel to the explicit question "patient on medication"
- 3. **MAY** contain zero or one [0..1] **@nullFlavor** (CONF:10234)
 

If EHistory.12 has the value "Refused" or "Unable to Complete," the value is "NI"; the original value may be recorded in SubstanceAdministration.text. This nulled notional class is parallel to the explicit question "patient on medication"
- 4. **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:10230)
 

NEMESIS Trace: EHistory.13, EHistory.14
- 5. **SHOULD** contain zero or one [0..1] **routeCode** (CONF:10232), which **SHALL** be selected from ValueSet MedicationAdministrationRoute 2.16.840.1.113883.17.3.11.43 **DYNAMIC** (CONF:10231)
 

NEMESIS Trace: EHistory.15
- 6. **SHALL** contain exactly one [1..1] **consumable** such that it (CONF:10235)
  - a. **SHALL** contain exactly one [1..1] **manufacturedProduct** such that it (CONF:10236)
    - a. **SHALL** contain exactly one [1..1] **manufacturedMaterial** such that it (CONF:10237)
      - a. **SHALL** contain exactly one [1..1] **code** (CONF:11191), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.88 RxNorm) (CONF:11190)

NEMESIS Trace: EHistory.12 - Current Medications

**Current Medication example**

```
<substanceAdministration classCode="SBADM" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.77" extension="2022-01-01"/>
  <consumable>
    <manufacturedProduct/>
  </consumable>
</substanceAdministration>
```

**Currently On Medication**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.75]

Whether a patient is currently taking medication

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11468 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.75"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11188)
3. **SHALL** contain exactly one [1..1] **code/@code**="67791-4" *Does the patient take any medications NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10224)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10225)

If EHistory.12 has the value "None Reported," the value is "False" If EHistory.12 has the value "Refused" or "Unable to Complete," the value is "NI"; the original value may be recorded in Observation.text.

**Currently On Medication example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.75" extension="2022-01-01"/>
  <code code="67791-4" codeSystem="2.16.840.1.113883.6.1" displayName="Does the patient take any medications NEMESIS"/>
  <value xsi:type="BL"/>
</observation>
```

**Delay Organizer**

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.95]

Kinds of delays experienced by a responder

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11489 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.95"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **component** such that it (CONF:10583)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Dispatch Delay* (CONF:10588)
3. **SHALL** contain exactly one [1..1] **component** such that it (CONF:10584)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Response Delay* (CONF:10593)
4. **SHALL** contain exactly one [1..1] **component** such that it (CONF:10585)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Scene Delay* (CONF:10598)
5. **SHALL** contain exactly one [1..1] **component** such that it (CONF:10586)

- a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Transport Delay* (CONF:10603)
- 6. **SHALL** contain exactly one [1..1] **component** such that it (CONF:10587)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Turnaround Delay* (CONF:10608)

#### Delay Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.95"/>
  <id root="2.16.840.1.113883.19.4" extension="243446586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    . . .
  </component>
</organizer>
```

## Destination Hospital Capability

[Observation: templateId 2.16.840.1.113883.17.3.10.1.104]

The primary hospital capability associated with the patient's condition for this transport

Contained By	Contains
<i>EMS Disposition Section</i>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11567 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.104"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:11357)
3. **SHALL** contain exactly one [1..1] **@moodCode** (CONF:11360)
4. **SHALL** contain exactly one [1..1] **code** (CONF:11358)/**@code**="77155-0" *Hospital designation capability* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11359)
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11361), which **SHALL** be selected from ValueSet *HospitalCapability* 2.16.840.1.113883.17.3.11.104 **DYNAMIC** (CONF:11362)

NEMESIS trace: eDisposition.23 (Hospital Capability)

#### Destination Hospital Capability example

```
<observation classCode="OBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.104" extension="2022-01-01"/>
  <code code="77155-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Hospital designation capability"/>
  <value xsi:type="CD"/>
</observation>
```

## Destination Rhythm

[Observation: templateId 2.16.840.1.113883.17.3.10.1.129]

Patient's cardiac rhythm classification at destination

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11521 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.129"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11254)
3. **SHALL** contain exactly one [1..1] **code/@code**="67519-9" *Cardiac rhythm NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10189)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11599), which **SHALL** be selected from ValueSet *CardiacRhythmReading* 2.16.840.1.113883.17.3.11.16 **DYNAMIC** (CONF:10190)

NEMESIS Trace: EArrest.17 Cardiac Rhythm on Arrival at Destination

### Destination Rhythm example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.129" extension="2022-01-01"/>
  <code code="67519-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Cardiac rhythm NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Destination Ward

[Observation: templateId 2.16.840.1.113883.17.3.10.1.186]

The location within the hospital that the patient was taken directly by EMS

Contained By	Contains
<i>EMS Disposition Section</i>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11568 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.186"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:11363)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11380)
4. **SHALL** contain exactly one [1..1] **code** (CONF:11364)/**@code**="77154-3" *Hospital inpatient destination* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11365)
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11602), which **SHALL** be selected from ValueSet *DestinationWardKind* 2.16.840.1.113883.17.3.11.103 **DYNAMIC** (CONF:11366)

NEMESIS trace: eDisposition.22 (Hospital In-Patient Destination)

**Destination Ward example**

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.186" extension="2022-01-01"/>
  <code code="77154-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Hospital inpatient destination"/>
  <value xsi:type="CD"/>
</observation>
```

**Diastolic Blood Pressure**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.144]

Patient's diastolic blood pressure

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11534 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.144"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11272)
3. **SHALL** contain exactly one [1..1] **code/@code**="8462-4" *Diastolic blood pressure* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10282)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11273)
 

NEMESIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10283)
 

NEMESIS Trace: EVitals.07 UCUM units SHOULD be "mm[Hg]".
6. **SHALL** contain exactly one [1..1] **methodCode** (CONF:11346), which **SHALL** be selected from ValueSet BloodPressureMeasurementMethod 2.16.840.1.113883.17.3.11.107 **DYNAMIC** (CONF:11347)
 

NEMESIS Trace: eVitals.08 (method of blood pressure measurement)

**Diastolic Blood Pressure example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.144" extension="2022-01-01"/>
  <code code="8462-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Diastolic blood pressure"/>
  <value xsi:type="PQ"/>
  <methodCode/>
</observation>
```

**Disaster Type**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.59]

Kind of disaster causing or contributing to the patient's complaint

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11451 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.59"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"



2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11166)
  3. **SHALL** contain exactly one [1..1] **code/@code**="69463-8" *Suspected intentional or unintentional disaster NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10132)
  4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11611), which **SHALL** be selected from ValueSet DisasterType 2.16.840.1.113883.17.3.11.9 **DYNAMIC** (CONF:10133)
- NEMSIS Trace: EOther.07

#### Disaster Type example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.59" extension="2022-01-01"/>
  <code code="69463-8" codeSystem="2.16.840.1.113883.6.1"
    displayName="Suspected intentional or unintentional disaster NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Dispatch Delay

[Observation: templateId 2.16.840.1.113883.17.3.10.1.153]

Causes of delay to the dispatch process

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11543 ) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.153"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11286)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10590)/**@code**="67480-4" *Dispatch delay NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10589)
  4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10592), which **SHALL** be selected from ValueSet DispatchDelayType 2.16.840.1.113883.17.3.11.50 **DYNAMIC** (CONF:10591)
- NEMSIS Trace: EResponse.08

#### Dispatch Delay example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.153" extension="2022-01-01"/>
  <code code="67480-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Dispatch delay NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Dispatch Location Latitude

[Observation: templateId 2.16.840.1.113883.17.3.10.1.151]

Latitude of the unit when dispatched

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11541 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.151"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11284)
3. **SHALL** contain exactly one [1..1] **code/@code**="69750-8" *EMS unit GPS latitude Vehicle --at dispatch* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10620)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10621)

NEMESIS Trace: EResponse.17 UCUM units SHOULD be "deg". This may require conversion from a parsed "degree + minutes" representation to a decimal representation.

#### Dispatch Location Latitude example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.151" extension="2022-01-01"/>
  <code code="69750-8" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
unit GPS latitude Vehicle --at dispatch"/>
  <value xsi:type="PQ"/>
</observation>
```

## Dispatch Location Longitude

[Observation: templateId 2.16.840.1.113883.17.3.10.1.152]

Longitude of the unit when dispatched

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11542 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.152"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11285)
3. **SHALL** contain exactly one [1..1] **code/@code**="69465-3" *EMS unit GPS longitude Vehicle --at dispatch* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10623)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10624)

NEMESIS Trace: EResponse.17 UCUM units SHOULD be "deg". This may require conversion from a parsed "degree + minutes" representation to a decimal representation.

#### Dispatch Location Longitude example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.152" extension="2022-01-01"/>
  <code code="69465-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
unit GPS longitude Vehicle --at dispatch"/>
  <value xsi:type="PQ"/>
</observation>
```

## Dispatch Location Name

[Observation: templateId 2.16.840.1.113883.17.3.10.1.150]

The name or ID of the dispatch center requesting service from the EMS agency

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11540 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.150"

- b. SHALL contain exactly one [1..1] **@extension**="2022-01-01"
  - 2. SHALL contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11283)
  - 3. SHALL contain exactly one [1..1] **code/@code**="69466-1" *Vehicle location Vehicle NEMSIS --at dispatch* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10617)
  - 4. SHALL contain exactly one [1..1] **value** with **@xsi:type**="ST" (CONF:10618)
- NEMSIS Trace: EResponse.16

#### Dispatch Location Name example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.150" extension="2022-01-01"/>
  <code code="69466-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Vehicle location Vehicle NEMSIS --at dispatch"/>
  <value xsi:type="ST"/>
</observation>
```

## Dispatch Location Organizer

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.96]

Information about the location of the unit when dispatched

- 1. SHALL contain exactly one [1..1] **templateId** (CONF:11490) such that it
  - a. SHALL contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.96"
  - b. SHALL contain exactly one [1..1] **@extension**="2022-01-01"
- 2. MAY contain zero or one [0..1] **component** such that it (CONF:10613)
  - a. SHALL contain exactly one [1..1] **observation**, where its type is *Dispatch Location Name* (CONF:10616)
- 3. MAY contain zero or one [0..1] **component** such that it (CONF:10614)
  - a. SHALL contain exactly one [1..1] **observation**, where its type is *Dispatch Location Latitude* (CONF:10619)
- 4. MAY contain zero or one [0..1] **component** such that it (CONF:10615)
  - a. SHALL contain exactly one [1..1] **observation**, where its type is *Dispatch Location Longitude* (CONF:10622)

#### Dispatch Location Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.96"/>
  <id root="2.16.840.1.113883.19.4" extension="243446586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    .
    .
    .
  </component>
</organizer>
```

## Dispatch Notified Time

[Observation: templateId 2.16.840.1.113883.17.3.10.1.46]

The time the dispatching organization was notified of an emergency

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11438 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.46"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11151)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10867)/**@code**="69470-3" *Dispatch was notified by the 911 call taker [Date and time] Facility NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10866)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10868)

NEMSIS Trace: ETimes.02

### Dispatch Notified Time example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.46" extension="2022-01-01"/>
  <code code="69470-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Dispatch was notified by the 911 call taker [Date and time]
    Facility NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

## Dispatch Reason

[Observation: templateId 2.16.840.1.113883.17.3.10.1.74]

The complaint that dispatch reported to the responding unit

Contained By	Contains
<i>EMS Dispatch Section</i>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11467 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.74"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11187)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10568)/**@code**="67570-2" *Chief complaint per dispatch Reported.dispatch* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10569)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10571), which **SHALL** be selected from ValueSet Dispatch Reason 2.16.840.1.113883.17.3.11.49 **DYNAMIC** (CONF:10570)

NEMSIS Trace: EDispatch.01

### Dispatch Reason example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.74" extension="2022-01-01"/>
```

```
<code code="67570-2" codeSystem="2.16.840.1.113883.6.1" displayName="Chief
complaint per dispatch Reported.dispatch"/>
<value xsi:type="CD"/>
</observation>
```

## Drug Allergy

[Observation: templateId 2.16.840.1.113883.17.3.10.1.48]

An allergy or sensitivity to a drug. This statement follows the pattern of the Consolidated allergy observation, without the intervening "problem act" class. In this observation, as the Consolidated guide specifies, the code is "ASSERTION," and the value selected from 2.16.840.1.113883.3.88.12.3221.6.2. In this case, the value should be 416098002 (Drug allergy (disorder)), System = SNOMED CT, 2.16.840.1.113883.6.96. The drug, to be placed in the participating product, is encoded in RxNorm.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11440) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.48"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="ASSERTION" *ASSERTION* (CodeSystem: 2.16.840.1.113883.5.4 ActCode) (CONF:11340)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD"/**@code**="416098002" *Drug allergy (disorder)* (CodeSystem: 2.16.840.1.113883.6.96 SNOMED CT) (CONF:11341)
5. **SHALL** contain exactly one [1..1] **participant** such that it (CONF:11126)
  - a. **SHALL** contain exactly one [1..1] **participantRole** such that it (CONF:10208)
    - a. **SHALL** contain exactly one [1..1] **playingEntity** such that it (CONF:10209)
      - a. **SHALL** contain exactly one [1..1] **code** (CONF:11646), which **SHOULD** be selected from (CodeSystem: 2.16.840.1.113883.6.88 RxNorm) (CONF:11645)

*NEMESIS Trace: EHistory.06*

*Drug codes are to be taken from RxNorm. Allergies to drug classes may be taken from ICD-10 CM.*

### Drug Allergy example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.48" extension="2022-01-01"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    displayName="ASSERTION"/>
  <value xsi:type="CD" code="416098002" codeSystem="2.16.840.1.113883.6.96"
    displayName="Drug allergy (disorder)"/>
  <participant typeCode="WIT">
    <participantRole/>
  </participant>
</observation>
```

## Drug Allergy Organizer

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.183]

This organizer contains a set of discrete drug allergy observations or an assertion that there are no such allergies.

Contained By	Contains
<a href="#">EMS Allergies And Adverse Reactions Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11564 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.183"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain zero or more [0..\*] **component** such that it (CONF:11687)
  - a. contain zero or one [0..1] **observation**, where its type is [Drug Allergy](#)
3. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11688)
  - a. contain zero or one [0..1] **observation**, where its type is [Existence Of Known Drug Allergy Observation](#)

#### Drug Allergy Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.183"/>
  <id root="2.16.840.1.113883.19.4" extension="243455586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    .
    .
    .
  </component>
</organizer>
```

## Drug Use Indication

[Observation: templateId 2.16.840.1.113883.17.3.10.1.71]

Evidence that a patient has been using alcohol or illicit drugs

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11464 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.71"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11179)
3. **SHALL** contain exactly one [1..1] **code/@code**="67669-2" *Alcohol - drug use NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10250)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11613), which **SHALL** be selected from ValueSet AlcoholDrugUseIndicator 2.16.840.1.113883.17.3.11.18 **DYNAMIC** (CONF:10251)

NEMESIS Trace: EHistory.17, proper values

#### Drug Use Indication example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.71" extension="2022-01-01"/>
  <code code="67669-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Alcohol - drug use NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Emergency Medical Dispatch Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.73]

Whether and how emergency medical dispatch was performed

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11466) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.73"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11186)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10564)/**@code**="67488-7" *Emergency medical dispatch performed NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10563)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10566), which **SHALL** be selected from ValueSet EMDPerformed 2.16.840.1.113883.17.3.11.48 **DYNAMIC** (CONF:10565)

NEMESIS Trace: EDispatch.02

### Emergency Medical Dispatch Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.73" extension="2022-01-01"/>
  <code code="67488-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Emergency medical dispatch performed NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Existence Of Drug Use Indication

[Observation: templateId 2.16.840.1.113883.17.3.10.1.70]

Indicator of whether there are indications of alcohol or illicit drug use

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11463) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.70"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11177)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10248)/**@code**="69757-3" *Indications of drug or alcohol use by the patient NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10247)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:11178)

NEMESIS Trace: EHistory.17, positive, negative, or null values

### Existence Of Drug Use Indication example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.70" extension="2022-01-01"/>
  <code code="69757-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Indications of drug or alcohol use by the patient NEMESIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Existence Of History Of Condition Or Surgery

[Observation: templateId 2.16.840.1.113883.17.3.10.1.60]

Indicator of whether patient has a history of significant medical conditions or procedures

Contained By	Contains
<i>EMS Past Medical History Section</i>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11452 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.60"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11167)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11656)/**@code**="67793-0" *Has the patient had any significant medical conditions NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10067)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10068)

If NEMESIS EHistory. 08 is "Refused " or "Unable to Complete," the value should be "NI"; the original value may be recorded in Observation.text. If NEMESIS EHistory. 08 is "None Reported," the value should be FALSE. If NEMESIS EHistory. 08 has proper values, the value should be TRUE.

### Existence Of History Of Condition Or Surgery example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.60" extension="2022-01-01"/>
  <code code="67793-0" codeSystem="2.16.840.1.113883.6.1" displayName="Has
the patient had any significant medical conditions NEMESIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Existence Of Known Drug Allergy Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.102]

Indicator of whether patient has any allergies or sensitivities to drugs

Contained By	Contains

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11498 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.102"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11213)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11663)/**@code**="67794-8" *Does the patient have any medication allergies NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10203)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10204)

If NEMESIS EHistory.06 is "No Known Drug Allergies," the value should be FALSE. If it is a proper value, the value should be TRUE. If it is a flavor of null, the appropriate flavor should be used here. See the null table to translate NEMESIS flavors into HL7; original values may be stored in Observation.text.



**Existence Of Known Drug Allergy Observation example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.102" extension="2022-01-01"/>
  <code code="67794-8" codeSystem="2.16.840.1.113883.6.1" displayName="Does the patient have any medication allergies NEMESIS"/>
  <value xsi:type="BL"/>
</observation>
```

**Existence Of Known Non Drug Allergy**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.103]

Indicator of whether patient has any allergies or sensitivities to materials other than drugs

Contained By	Contains
<i>Non Drug Allergy Organizer</i>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11499 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.103"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11214)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11664)/**@code**="69747-4" *Does the patient have any environmental allergies NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10214)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10215)

If NEMESIS EHistory.07 has no values, this is FALSE; otherwise it is TRUE.

**Existence Of Known Non Drug Allergy example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.103" extension="2022-01-01"/>
  <code code="69747-4" codeSystem="2.16.840.1.113883.6.1" displayName="Does the patient have any environmental allergies NEMESIS"/>
  <value xsi:type="BL"/>
</observation>
```

**Extremities Assessment**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.120]

Qualitative assessment of condition of patient's extremities

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11514 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.120"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11240)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10399)/**@code**="67533-0" *Physical findings of Extremity NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10400)

4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11241)

NEMESIS Trace: EExam.03

5. **SHOULD** contain zero or more [0..\*] **value** with **@xsi:type="CD"** (CONF:11385), which **SHALL** be selected from ValueSet *ExtremitiesAssessmentFinding* 2.16.840.1.113883.17.3.11.36 **DYNAMIC** (CONF:10403)

NEMESIS Trace: EExam.16

6. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:10402), which **SHALL** be selected from ValueSet *ExtremityFindingLocation* 2.16.840.1.113883.17.3.11.37 **DYNAMIC** (CONF:10401)

NEMESIS Trace: EExam.15

#### Extremities Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.120" extension="2022-01-01"/>
  <code code="67533-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Extremity NEMESIS"/>
  <effectiveTime/>
</observation>
```

## Eye Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.121]

Qualitative assessment of condition of patient's eyes

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11515) such that it
  - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.17.3.10.1.121"**
  - b. **SHALL** contain exactly one [1..1] **@extension="2022-01-01"**
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11242)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10405)/**@code="67534-8"** *Physical findings of Eye NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10404)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11243)

NEMESIS Trace: EExam.03

5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type="CD"** (CONF:10408), which **SHALL** be selected from ValueSet *EyeAssessmentFinding* 2.16.840.1.113883.17.3.11.38 **DYNAMIC** (CONF:10409)

NEMESIS Trace: EExam.18

6. **MAY** contain zero or one [0..1] **targetSiteCode** (CONF:10406), which **SHALL** be selected from ValueSet *EyeFindingLocation* 2.16.840.1.113883.17.3.11.39 **DYNAMIC** (CONF:10407)

NEMESIS Trace: EExam.17

#### Eye Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.121" extension="2022-01-01"/>
  <code code="67534-8" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Eye NEMESIS"/>
  <effectiveTime/>
  <value xsi:type="CD"/>
</observation>
```

```
</observation>
```

## Face Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.112]

Qualitative assessment of condition of patient's face

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11507) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.112"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11224)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10376)/**@code**="67526-4" *Physical findings of Face NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10375)
4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:11225)  
NEMESIS Trace: EExam.03
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10377), which **SHALL** be selected from ValueSet *FaceAssessmentFinding* 2.16.840.1.113883.17.3.11.27 **DYNAMIC** (CONF:10378)  
NEMESIS Trace: EExam.06

### Face Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.112" extension="2022-01-01"/>
  <code code="67526-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Face NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## First Unit Indicator

[Observation: templateId 2.16.840.1.113883.17.3.10.1.84]

Indicator of whether reporter of PCR is the first unit to arrive at the scene

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11479) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.84"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11197)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10741)/**@code**="67481-2" *First EMS unit on scene NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10742)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10743)  
NEMESIS Trace: EScene.01

### First Unit Indicator example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.84" extension="2022-01-01"/>
```

```
<code code="67481-2" codeSystem="2.16.840.1.113883.6.1" displayName="First
EMS unit on scene NEMSIS"/>
<value xsi:type="BL"/>
</observation>
```

## Glasgow Coma Score Organizer

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.170]

Collection of Glasgow Coma Score observations

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11560 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.170"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11313)  
NEMSIS Trace: EVitals.01
3. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11677)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Glasgow Eye* (CONF:11682)
4. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11678)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Glasgow Motor* (CONF:11683)
5. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11679)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Glasgow Qualifier* (CONF:11684)
6. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11680)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Glasgow Total* (CONF:11685)
7. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11681)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Glasgow Verbal* (CONF:11686)

### Glasgow Coma Score Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.170"/>
  <id root="2.16.840.1.113883.19.4" extension="243466586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    .
    .
    .
  </component>
</organizer>
```

## Glasgow Eye

[Observation: templateId 2.16.840.1.113883.17.3.10.1.160]

Glasgow Coma eye score

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11550 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.160"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11294)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10325)/@**code**="9267-6" *Glasgow coma score. eye opening* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10324)
  4. **SHALL** contain exactly one [1..1] **value** with @**xsi:type**="INT" (CONF:10326)
- NEMESIS Trace: EVitals.19

### Glasgow Eye example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.160" extension="2022-01-01"/>
  <code code="9267-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Glasgow coma score. eye opening"/>
  <value xsi:type="INT"/>
</observation>
```

## Glasgow Motor

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.192]

Glasgow Coma motor score

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11551 ) such that it
    - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.192"
    - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11295)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10328)/@**code**="9268-4" *Glasgow coma score. motor* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10329)
  4. **SHALL** contain exactly one [1..1] **value** with @**xsi:type**="INT" (CONF:10330)
- NEMESIS Trace: eVitals.21

### Glasgow Motor example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.192" extension="2022-01-01"/>
  <code code="9268-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Glasgow coma score. motor"/>
  <value xsi:type="INT"/>
</observation>
```

## Glasgow Qualifier

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.159]

Qualifier for Glasgow Coma score

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11549 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.159"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11292)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10322)/@**code**="55285-1" *Glasgow coma score special circumstances* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10321)
4. **MAY** contain zero or more [0..\*] **value** with @**xsi:type**="CD" (CONF:10323), which **SHALL** be selected from ValueSet *GlasgowComaScoreSpecialCircumstances* 2.16.840.1.113883.17.3.11.89 **DYNAMIC** (CONF:11293)

NEMESIS Trace: EVitals.22

#### Glasgow Qualifier example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.159" extension="2022-01-01"/>
  <code code="55285-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Glasgow coma score special circumstances"/>
</observation>
```

## Glasgow Total

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.158]

Total Glasgow Coma score

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11548 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.158"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11291)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10319)/@**code**="9269-2" *Glasgow coma score.total* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10318)
4. **SHALL** contain exactly one [1..1] **value** with @**xsi:type**="INT" (CONF:10320)

NEMESIS Trace: EVitals.23 Integer value equal to the sum of verbal, motor, and eye

#### Glasgow Total example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.158" extension="2022-01-01"/>
  <code code="9269-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Glasgow coma score.total"/>
  <value xsi:type="INT"/>
</observation>
```

## Glasgow Verbal

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.162]

Glasgow Coma verbal score

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11552 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.162"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11296)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10332)/@**code**="9270-0" *Glasgow coma score.verbal* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10333)
4. **SHALL** contain exactly one [1..1] **value** with @**xsi:type**="INT" (CONF:10334)  
NEMESIS Trace: EVitals.20

#### Glasgow Verbal example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.162" extension="2022-01-01"/>
  <code code="9270-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Glasgow coma score.verbal"/>
  <value xsi:type="INT"/>
</observation>
```

## Head Assessment

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.113]

Qualitative assessment of condition of patient's head

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11508 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.113"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11226)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10373)/@**code**="67525-6" *Physical findings of Head NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10372)
4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:11227)  
NEMESIS Trace: EExam.03
5. **SHALL** contain at least one [1..\*] **value** with @**xsi:type**="CD", which **SHALL** be selected from ValueSet HeadAssessmentFinding 2.16.840.1.113883.17.3.11.26 **DYNAMIC** (CONF:10374)  
NEMESIS Trace: EExam.05

#### Head Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.113" extension="2022-01-01"/>
  <code code="67525-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Head NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Heart Assessment

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.116]

Qualitative assessment of condition of patient's heart

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11510 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.116"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11232)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10384)/**@code**="67529-8" *Physical findings of Heart NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10383)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11233)  
NEMSIS Trace: EExam.03
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10385), which **SHALL** be selected from ValueSet HeartAssessmentFinding 2.16.840.1.113883.17.3.11.30 **DYNAMIC** (CONF:10386)  
NEMSIS Trace: EExam.09

### Heart Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.116" extension="2022-01-01"/>
  <code code="67529-8" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Heart NEMSIS"/>
  <effectiveTime/>
  <value xsi:type="CD"/>
</observation>
```

## Heart Rate

[Observation: templateId 2.16.840.1.113883.17.3.10.1.145]

Measurement of rate of heartbeat

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11535 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.145"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11274)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10285)/**@code**="8867-4" *Heart rate* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10284)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11275)  
NEMSIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10286)  
NEMSIS Trace: EVitals.10 UCUM units SHOULD be "/min".

### Heart Rate example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.145" extension="2022-01-01"/>
  <code code="8867-4" codeSystem="2.16.840.1.113883.6.1" displayName="Heart
    rate"/>
  <value xsi:type="PQ"/>
</observation>
```



## Height Of Fall

[Observation: templateId 2.16.840.1.113883.17.3.10.1.58]

Distance patient fell, if injury is fall-related

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11450 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.58"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11164)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11655)/**@code**="67501-7" *Height of fall NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10129)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:11165)  
NEMESIS Trace: eInjury.09 Units SHOULD be in feet (UCUM 'ft\_i')

### Height Of Fall example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.58" extension="2022-01-01"/>
  <code code="67501-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Height of fall NEMESIS"/>
  <value xsi:type="PQ"/>
</observation>
```

## Initial Patient Acuity

[Observation: templateId 2.16.840.1.113883.17.3.10.1.69]

Patient condition indicating urgency of treatment on arrival at patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11462 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.69"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11176)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10816)/**@code**="67493-7" *Initial patient acuity NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10817)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10818), which **SHALL** be selected from ValueSet InitialPatientCondition 2.16.840.1.113883.17.3.11.59 **DYNAMIC** (CONF:10819)

NEMESIS Trace: ESituation.13

### Initial Patient Acuity example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.69" extension="2022-01-01"/>
  <code code="67493-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Initial patient acuity NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Injury Cause Category

[Observation: templateId 2.16.840.1.113883.17.3.10.1.50]

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

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11442 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.50"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11155)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11649)/**@code**="69543-7" *Cause of injury NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10106)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11614), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:10108)

NEMESIS Trace: EInjury.01 Causes are in ICD-10 chapter XX and parts of XIX.

### Injury Cause Category example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.50" extension="2022-01-01"/>
  <code code="69543-7" codeSystem="2.16.840.1.113883.6.1" displayName="Cause
of injury NEMESIS"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```

## Injury Mechanism

[Observation: templateId 2.16.840.1.113883.17.3.10.1.51]

General classification of physical force causing injury

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11443 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.51"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11156)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11650)/**@code**="67494-5" *General mechanism of the forces which caused the injury NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10109)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11615), which **SHALL** be selected from ValueSet MechanismOfInjury 2.16.840.1.113883.17.3.11.1 **DYNAMIC** (CONF:10110)

NEMESIS Trace: EInjury.02

### Injury Mechanism example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.51" extension="2022-01-01"/>
  <code code="67494-5" codeSystem="2.16.840.1.113883.6.1"
displayName="General mechanism of the forces which caused the injury
NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Last Oral Intake

[Observation: templateId 2.16.840.1.113883.17.3.10.1.80]

Time of patient's last oral intake

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11475 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.80"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11193)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10423)/**@code**="67517-3" *Last oral intake [Date and time] NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10424)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10425)

NEMESIS Trace: EHistory.19

### Last Oral Intake example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.80" extension="2022-01-01"/>
  <code code="67517-3" codeSystem="2.16.840.1.113883.6.1" displayName="Last
oral intake [Date and time] NEMESIS"/>
  <value xsi:type="TS"/>
</observation>
```

## Length Based Patient Body Weight Class

[Observation: templateId 2.16.840.1.113883.17.3.10.1.110]

Classification of patient weight based on length

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11506 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.110"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11221)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10366)/**@code**="67670-0" *Length-based tape measure category NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10365)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11603), which **SHALL** be selected from ValueSet LengthBasedWeightClass 2.16.840.1.113883.17.3.11.24 **DYNAMIC** (CONF:10367)

NEMESIS Trace: EExam.02 Length Based Tape Measure. Note: a license is required to implement the Broselow-Luten measure.

### Length Based Patient Body Weight Class example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.110" extension="2022-01-01"/>
  <code code="67670-0" codeSystem="2.16.840.1.113883.6.1"
  displayName="Length-based tape measure category NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Level Of Responsiveness

[Observation: templateId 2.16.840.1.113883.17.3.10.1.165]

Patient's responsiveness

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11555 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.165"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11301)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10303)/**@code**="67775-7" *Level of responsiveness NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10302)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11302)  
NEMSIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10305), which **SHALL** be selected from ValueSet *LevelOfResponsiveness* 2.16.840.1.113883.17.3.11.21 **DYNAMIC** (CONF:10304)  
NEMSIS Trace: EVitals.26

### Level Of Responsiveness example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.165" extension="2022-01-01"/>
  <code code="67775-7" codeSystem="2.16.840.1.113883.6.1" displayName="Level of responsiveness NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Level Of Service Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.92]

CMS classification of service level for billing purposes

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11486 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.92"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11208)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10090)/**@code**="69464-6" *Centers for medicare - medicaid, CMS, service level NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10091)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10092), which **SHALL** be selected from ValueSet *EMSLevelOfService* 2.16.840.1.113883.17.3.11.70 **DYNAMIC** (CONF:10093)  
NEMSIS Trace: EPayment.50

### Level Of Service Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.92" extension="2022-01-01"/>
```

```
<code code="69464-6" codeSystem="2.16.840.1.113883.6.1"
  displayName="Centers for medicare - medicaid, CMS, service level NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Location Type Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.88]

Kind of location where the incident occurred

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11482) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.88"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11662)/**@code**="74496-1" *Injury location ICD code* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11202)
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11387), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:11203)

NEMESIS trace: eScene.09 (Incident location type) See NEMESIS recommended subset at <https://nemesis.org/technical-resources/version-3/version-3-resources/>. ICD-10 CM contains "place of occurrence of external cause" under code Y92.

### Location Type Observation example

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.88" extension="2022-01-01"/>
  <code code="74496-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Injury location ICD code"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```

## Lung Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.194]

Contained By	Contains

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11572) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.194"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11701)/**@code**="NewExam.23" *Lung Assessment Finding* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11573)
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11575), which **SHALL** be selected from ValueSet LungFinding 2.16.840.1.113883.17.3.11.116 **DYNAMIC** (CONF:11574)

NEMESIS Trace: eExam.23

4. **SHOULD** contain zero or more [0..\*] **targetSiteCode** (CONF:11577), which **SHALL** be selected from ValueSet LungFindingLocation 2.16.840.1.113883.17.3.11.117 **DYNAMIC** (CONF:11576)

NEMESIS Trace: eExam.22

**Lung Assessment example**

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.194" extension="2022-01-01"/>
  <code code="NewExam.23" codeSystem="2.16.840.1.113883.6.1"
    displayName="Lung Assessment Finding"/>
  <value xsi:type="CD"/>
</observation>
```

**Mass Casualty Indicator**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.87]

Indicator of whether the patient injury is part of a mass casualty event

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11481) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.87"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11200)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10753)/**@code**="67490-3" *Mass casualty incident NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11201)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10754)

NEMSIS Trace: EScene.07

**Mass Casualty Indicator example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.87" extension="2022-01-01"/>
  <code code="67490-3" codeSystem="2.16.840.1.113883.6.1" displayName="Mass
    casualty incident NEMSIS"/>
  <value xsi:type="BL"/>
</observation>
```

**Medical/Surgical History**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.61]

Medical conditions the patient has or has had

Contained By	Contains
<a href="#">EMS Past Medical History Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11453) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.61"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11168)
3. **MAY** contain zero or one [0..1] **@negationInd** (CONF:11455)

For a categorical "none reported," use the Existence Of History Of Condition or Surgery.

4. **SHALL** contain exactly one [1..1] **code** (CONF:10070)/@code="68487-8" *Medical - surgical history - ICD-9 and 10 codes* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10069)
5. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:10072), which **SHALL** be selected from ValueSet ICD-10 CM AND PCS 2.16.840.1.113883.17.3.11.121 **DYNAMIC** (CONF:11454)

NEMESIS Trace: eHistory.08

#### Medical/Surgical History example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.61" extension="2022-01-01"/>
  <code code="68487-8" codeSystem="2.16.840.1.113883.6.1"
    displayName="Medical - surgical history - ICD-9 and 10 codes"/>
  <value xsi:type="CD"/>
</observation>
```

## Medication Administered

[SubstanceAdministration: templateId 2.16.840.1.113883.17.3.10.1.72]

Medications administered in response to the emergency--usually by the EMS crew.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11465) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.72"
  - b. **SHALL** contain exactly one [1..1] @extension="2022-01-01"
2. **SHALL** contain exactly one [1..1] @classCode="SBADM" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:10445)

3. **MAY** contain zero or one [0..1] @negationInd (CONF:10448)

NEMESIS Trace: EMedications.03 negative action values If a substance is recorded as not given, it shall be recorded with a negationInd=True, and with a MedicationNotAdministeredReasonObservation (2.16.840.1.113883.17.3.10.1.105)

4. **SHALL** contain zero or one [0..1] **effectiveTime** (CONF:10447)

NEMESIS Trace: EMedications.01 Null Flavor for pertinent negative cases = NA

5. **MAY** contain zero or one [0..1] **routeCode** (CONF:10450), which **SHALL** be selected from ValueSet MedicationAdministrationRoute 2.16.840.1.113883.17.3.11.43 **DYNAMIC** (CONF:10449)

NEMESIS Trace: EMedications.04 See appendix for mapping NEMESIS values to FDA values and for postcoordination of device information.

6. **MAY** contain zero or one [0..1] **doseQuantity** (CONF:10446)

NEMESIS Trace: EMedications.05, EMedications.06 Note: rate values should be recorded in rateQuantity, dose in doseQuantity.

7. **MAY** contain zero or one [0..1] **rateQuantity** (CONF:7517)

NEMESIS Trace: EMedications.05, EMedications.06 Note: rate values should be recorded in rateQuantity, dose in doseQuantity.

8. **SHALL** contain zero or more [0..\*] **approachSiteCode** (CONF:11630), which **SHALL** be selected from ValueSet MedicationAdministrationSite 2.16.840.1.113883.17.3.11.109 **DYNAMIC** (CONF:11629)

Two NEMESIS route (eMedications.04) values imply sites in addition to routes: "nasotracheal tube" and "tracheostomy"

9. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10451)

*This observation is required if negationInd = True.*

- a. **SHALL** contain exactly one [1..1] **@inversionInd**="TRUE" (CONF:10458)
- b. **SHALL** contain exactly one [1..1] **@typeCode** (CONF:10460)/**@code**="RSON" Reason (CodeSystem: ) (CONF:10459)
- c. **SHALL** contain exactly one [1..1] **observation**, where its type is *Medication Not Administered Reason Observation* (CONF:10461)

10. **SHALL** contain exactly one [1..1] **consumable** such that it (CONF:10452)

- a. **SHALL** contain exactly one [1..1] **manufacturedProduct** such that it (CONF:10465)
- a. **SHALL** contain exactly one [1..1] **manufacturedMaterial** such that it (CONF:10466)
- a. **SHALL** contain exactly one [1..1] **code** (CONF:11620), which **SHOULD** be selected from (CodeSystem: 2.16.840.1.113883.6.88 RxNorm) (CONF:10467)

*NEMESIS Trace: eMedications.03*

*Note: all of RxNorm is valid in this field, but NEMESIS provides a selected list at <https://nemesis.org/technical-resources/version-3/version-3-resources/>.*

*For blood products, the following SNOMED CT codes may be used:*

*116762002 Administration of blood product  
116795008 Transfusion of cryoprecipitate  
116861002 Transfusion of fresh frozen plasma  
116865006 Administration of albumin  
180208003 Intravenous blood transfusion of platelets  
33389009 Transfusion of whole blood  
71493000 Transfusion of packed red blood cells*

11. **SHALL** contain exactly one [1..1] **entryRelationship** such that it (CONF:10453)

- a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Medication Response Observation* (CONF:10468)

12. **MAY** contain zero or more [0..\*] **entryRelationship** such that it (CONF:10454)

- a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Medication Complication Observation* (CONF:10472)

13. **SHALL** contain exactly one [1..1] **entryRelationship** such that it (CONF:10455)

- a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Medication Prior Administration Observation* (CONF:10477)

14. **MAY** contain zero or more [0..\*] **performer** such that it (CONF:10456)

*This participation is required if the medication is administered by the crew; i.e., if EMSMedicationPriorAdministrationObservation is FALSE.*

- a. **SHALL** contain exactly one [1..1] **assignedEntity** such that it (CONF:10481)
- a. **SHALL** contain exactly one [1..1] **id** (CONF:10484)

*NEMESIS Trace: EMedications.09*

- b. **SHALL** contain exactly one [1..1] **code** (CONF:10482), which **SHALL** be selected from ValueSet ProviderRole 2.16.840.1.113883.17.3.11.46 **DYNAMIC** (CONF:10483)

*NEMESIS Trace: EMedications.10*

15. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10457)

*This relationship is required if the medication is administered by the crew; i.e., if EMSMedicationPriorAdministrationObservation is FALSE.*

- a. **SHALL** contain exactly one [1..1] **act** such that it (CONF:10485)



- a. **SHALL** contain exactly one [1..1] **@classCode** (CONF:10486)/**@code**="INFRM" (CodeSystem: ) (CONF:10487)
- b. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet MedicationAuthorizationType 2.16.840.1.113883.17.3.11.47 **DYNAMIC** (CONF:10488)

*NEMESIS Trace: EMedications.11 - Medication Authorization channel*

**16. MAY** contain zero or one [0..1] **participant** such that it (CONF:11074)

- a. **SHALL** contain exactly one [1..1] **@typeCode**="DEV" (CONF:11182)
- b. **SHALL** contain exactly one [1..1] **participantRole** such that it (CONF:11075)
  - a. **SHALL** contain exactly one [1..1] **@classCode**="MANU" (CONF:11183)
  - b. **SHALL** contain exactly one [1..1] **playingDevice** such that it (CONF:11076)
    - a. **SHALL** contain exactly one [1..1] **code** (CONF:11184), which **SHALL** be selected from ValueSet EMSMedicationAdministrationDevice 2.16.840.1.113883.17.3.11.108 **DYNAMIC** (CONF:11381)

*For NEMESIS route codes that imply devices (eHistory.15 and eMedications.04)*

### Medication Administered example

```
<substanceAdministration classCode="SBADM" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.72" extension="2022-01-01"/>
  <consumable>
    <manufacturedProduct/>
  </consumable>
  <entryRelationship typeCode="XCRPT">
    <observation classCode="SPCOBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.17.3.10.1.106"
extension="2022-01-01"/>
      <code code="67540-5" codeSystem="2.16.840.1.113883.6.1"
displayName="Response to medication NEMESIS"/>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="XCRPT">
    <observation classCode="SPCOBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.17.3.10.1.108"
extension="2022-01-01"/>
      <code code="67539-7" codeSystem="2.16.840.1.113883.6.1"
displayName="Medication administered prior to this unit's EMS care NEMESIS"/>
    </observation>
  </entryRelationship>
</substanceAdministration>
```

## Medication Complication Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.107]

Complications associated with the administration of a medication

- 1. SHALL** contain exactly one [1..1] **templateId** ( CONF:11503 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.107"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11218)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10473)/**@code**="67541-3" *Medication complication NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10474)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10475), which **SHALL** be selected from ValueSet MedicationComplication 2.16.840.1.113883.17.3.11.45 **DYNAMIC** (CONF:10476)

NEMESIS Trace: EMedications.08

#### Medication Complication Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.107" extension="2022-01-01"/>
  <code code="67541-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Medication complication NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Medication Not Administered Reason Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.105]

Reason for declining to administer a medication

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11501 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.105"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11216)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11666)/**@code**="ASSERTION" *Assertion* (CodeSystem: 2.16.840.1.113883.5.4 ActCode) (CONF:10462)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10463), which **SHALL** be selected from ValueSet MedicationNotGivenReason 2.16.840.1.113883.17.3.11.92 **DYNAMIC** (CONF:10464)

NEMESIS Trace: eMedications.03 pertinent negatives

#### Medication Not Administered Reason Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.105" extension="2022-01-01"/>
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    displayName="Assertion"/>
  <value xsi:type="CD"/>
</observation>
```

## Medication Prior Administration Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.108]

Indicator of whether a medication was administered prior to the arrival of the EMS crew

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11504 ) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.108"
- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11219)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10478)/**@code**="67539-7" *Medication administered prior to this unit's EMS care NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10479)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10480)

NEMSIS Trace: EMedications.02

#### Medication Prior Administration Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.108" extension="2022-01-01"/>
  <code code="67539-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Medication administered prior to this unit's EMS care NEMSIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Mental Status Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.122]

Qualitative assessment of condition of patient's mental status

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11516 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.122"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11244)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10410)/**@code**="67535-5" *Mental status assessment NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10411)
4. contain exactly one [1..1] **effectiveTime**

NEMSIS Trace: EExam.03

5. **SHOULD** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11608), which **SHALL** be selected from ValueSet *MentalStatusFinding* 2.16.840.1.113883.17.3.11.84 **DYNAMIC** (CONF:10412)

NEMSIS Trace: EExam.19

#### Mental Status Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.122" extension="2022-01-01"/>
  <code code="67535-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Mental status assessment NEMSIS"/>
  <effectiveTime/>
  <value xsi:type="CD"/>
</observation>
```

## Neck Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.114]

Qualitative assessment of condition of patient's neck

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11509 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.114"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11228)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11668)/**@code**="67527-2" *Physical findings of Neck NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10379)
4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:11229)

NEMESIS Trace: EExam.03

5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11605), which **SHALL** be selected from ValueSet NeckAssessmentFinding 2.16.840.1.113883.17.3.11.28 **DYNAMIC** (CONF:10380)

NEMESIS Trace: EExam.07

### Neck Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.114" extension="2022-01-01"/>
  <code code="67527-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Neck NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Neurological Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.141]

Qualitative assessment of condition of patient's neurological response

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11533 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.141"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11270)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10414)/**@code**="67536-3" *Neurological assessment Nervous system NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10413)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10415), which **SHALL** be selected from ValueSet NeurologicalAssessmentFinding 2.16.840.1.113883.17.3.11.40 **DYNAMIC** (CONF:10416)

NEMESIS Trace: EExam.20

### Neurological Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
```

```
<templateId root="2.16.840.1.113883.17.3.10.1.141" extension="2022-01-01"/>
<code code="67536-3" codeSystem="2.16.840.1.113883.6.1"
  displayName="Neurological assessment Nervous system NEMSIS"/>
<value xsi:type="CD"/>
</observation>
```

## Non Drug Allergy

[Observation: templateId 2.16.840.1.113883.17.3.10.1.104]

Patient allergies and sensitivities to materials other than drugs

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11500 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.104"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11215)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11665)/**@code**="79151-7" *Known allergies to food or environmental agents Narrative NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10216)  
Required if Existence is True
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11612), which **SHALL** be selected from ValueSet NonDrugAllergyType 2.16.840.1.113883.17.3.11.83 **DYNAMIC** (CONF:10217)

NEMSIS Trace: eHistory.07 - Environmental/Food Allergies

### Non Drug Allergy example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.104" extension="2022-01-01"/>
  <code code="79151-7" codeSystem="2.16.840.1.113883.6.1" displayName="Known
    allergies to food or environmental agents Narrative NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Non Drug Allergy Organizer

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.49]

Information regarding patient allergies and sensitivities to materials other than drugs

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11441 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.49"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain [1..1] **component** such that it (CONF:10212)
  - a. Conforms to *Existence Of Known Non Drug Allergy* (templateId: 2.16.840.1.113883.17.3.10.1.103:2022-01-01)
3. **MAY** contain [0..\*] **component** such that it (CONF:10213)
  - a. Conforms to *Non Drug Allergy* (templateId: 2.16.840.1.113883.17.3.10.1.104:2022-01-01)
4. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11647)

- a. contain zero or one [0..1] **observation**, where its type is *Existence Of Known Non Drug Allergy*
- 5. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11648)
  - a. contain zero or one [0..1] **observation**, where its type is *Non Drug Allergy*

#### Non Drug Allergy Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.49"/>
  <id root="2.16.840.1.113883.19.4" extension="247746586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    . . .
  </component>
</organizer>
```

## Number Of Patients Transported Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.31]

The number of patients transported by this EMS crew and unit

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11423 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.31"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11136)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10665)/**@code**="67547-0" *Patients transported in EMS unit [#] NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10664)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="INT" (CONF:10666)

NEMSIS Trace: eDisposition.11

#### Number Of Patients Transported Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.31" extension="2022-01-01"/>
  <code code="67547-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Patients transported in EMS unit [#] NEMSIS"/>
  <value xsi:type="INT"/>
</observation>
```

## Other Symptoms

[Observation: templateId 2.16.840.1.113883.17.3.10.1.67]

Symptoms other than the primary symptom

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11460 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.67"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11174)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10806)/@code="67776-5" *Other symptoms NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10807)
4. **MAY** contain zero or more [0..\*] **value** with @xsi:type="CD" (CONF:10808), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:10809)

NEMESIS Trace: ESituation.10

#### Other Symptoms example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.67" extension="2022-01-01"/>
  <code code="67776-5" codeSystem="2.16.840.1.113883.6.1" displayName="Other
symptoms NEMESIS"/>
</observation>
```

## Oxygen Saturation

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.177]

Measurement of the patient's arterial blood oxygen saturation

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11538 ) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.177"
  - b. **SHALL** contain exactly one [1..1] @extension="2022-01-01"
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11281)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11675)/@code="2708-6" *Oxygen saturation in Arterial blood* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10291)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11348)
5. **SHALL** contain exactly one [1..1] **value** with @xsi:type="PQ" (CONF:10292)

NEMESIS Trace: EVitals.12 UCUM units will typically be "%".

#### Oxygen Saturation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.177" extension="2022-01-01"/>
  <code code="2708-6" codeSystem="2.16.840.1.113883.6.1" displayName="Oxygen
saturation in Arterial blood"/>
  <value xsi:type="PQ"/>
</observation>
```

## Pain Score

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.164]

Assessment of the patient's level of pain

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11554 ) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.164"
  - b. **SHALL** contain exactly one [1..1] @extension="2022-01-01"
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11299)

3. **SHALL** contain exactly one [1..1] **code** (CONF:11676)/@**code**="56840-2" *Pain severity verbal numeric scale* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10306)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11300)  
NEMESIS Trace: EVitals.01
5. contain exactly one [1..1] **value** with @**xsi:type**="INT"  
NEMESIS Trace: EVitals.27 An ordinal value between 0 and 10, inclusive. There are three scales, but the values are equivalent.

#### Pain Score example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.164" extension="2022-01-01"/>
  <code code="56840-2" codeSystem="2.16.840.1.113883.6.1" displayName="Pain severity verbal numeric scale"/>
  <value xsi:type="INT"/>
</observation>
```

## Patient Age

[Observation: templateId 2.16.840.1.113883.17.3.10.1.81]

The age of the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11476 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.81"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] @**moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11194)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10427)/@**code**="30525-0" *Age* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10428)
4. **SHALL** contain exactly one [1..1] **value** with @**xsi:type**="PQ" (CONF:10429)  
NEMESIS Trace: EPatient.15, 16 UCUM units SHOULD be 'min' 'h' 'd' 'wk' 'mo' or 'a'

#### Patient Age example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.81" extension="2022-01-01"/>
  <code code="30525-0" codeSystem="2.16.840.1.113883.6.1" displayName="Age"/>
  <value xsi:type="PQ"/>
</observation>
```

## Patient Arrived At Destination Time

[Observation: templateId 2.16.840.1.113883.17.3.10.1.44]

The time the EMS crew delivered the patient to the destination

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11436 ) such that it
  - a. **SHALL** contain exactly one [1..1] @**root**="2.16.840.1.113883.17.3.10.1.44"
  - b. **SHALL** contain exactly one [1..1] @**extension**="2022-01-01"



2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11149)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10859)/**@code**="69476-0" *Responding unit arrived with the patient at the destination or transfer point [Date and time] Vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10858)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10860)  
NEMSIS Trace: ETimes.11

#### Patient Arrived At Destination Time example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.44" extension="2022-01-01"/>
  <code code="69476-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Responding unit arrived with the patient at the destination or
    transfer point [Date and time] Vehicle NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

## Patient Body Weight

[Observation: templateId 2.16.840.1.113883.17.3.10.1.178]

Patient's body weight

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11505 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.178"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11220)  
NEMSIS Trace: EExam.03
3. **SHALL** contain exactly one [1..1] **code** (CONF:11667)/**@code**="8335-2" *Body weight Estimated* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10363)
4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:11604)
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10364)  
NEMSIS Trace: EExam.01 UCUM units should be 'kg'

#### Patient Body Weight example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.178" extension="2022-01-01"/>
  <code code="8335-2" codeSystem="2.16.840.1.113883.6.1" displayName="Body
  weight Estimated"/>
  <value xsi:type="PQ"/>
</observation>
```

## Patient Condition At Destination Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.37]

Whether the patient's condition had changed on arrival at destination

Contained By	Contains
<a href="#">EMS Disposition Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11429 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.37"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11142)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10694)/**@code**="77941-3" *Final patient acuity NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10693)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10695), which **SHALL** be selected from ValueSet InitialPatientCondition 2.16.840.1.113883.17.3.11.59 **DYNAMIC** (CONF:10696)

NEMESIS Trace: EDisposition.19

#### Patient Condition At Destination Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.37" extension="2022-01-01"/>
  <code code="77941-3" codeSystem="2.16.840.1.113883.6.1" displayName="Final
patient acuity NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Patient Engagement

[Observation: templateId 2.16.840.1.113883.17.3.10.1.197]

The patient disposition for an EMS event identifying whether a patient was evaluated and care or services were provided.

Contained By	Contains
<a href="#">EMS Disposition Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11583 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.197"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11585)/**@code**="neweDisposition.28" *Patient Engagement* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11584)
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11587), which **SHALL** be selected from ValueSet PatientEngagement 2.16.840.1.113883.17.3.11.113 **DYNAMIC** (CONF:11586)

NEMESIS Trace: eDisposition.28

#### Patient Engagement example

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.197" extension="2022-01-01"/>
  <code code="neweDisposition.28" codeSystem="2.16.840.1.113883.6.1"
displayName="Patient Engagement"/>
  <value xsi:type="CD"/>
</observation>
```

```
</observation>
```

## Patient Location In Vehicle

[Observation: templateId 2.16.840.1.113883.17.3.10.1.55]

Patient's location in a vehicle during a vehicle collision

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11447) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.55"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11160)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11653)/**@code**="67498-6" *Location of patient in vehicle NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10120)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11618), which **SHALL** be selected from ValueSet VehiclePassengerLocation 2.16.840.1.113883.17.3.11.6 **DYNAMIC** (CONF:10121)

NEMESIS Trace: EInjury.06 - Location of Patient in Vehicle

### Patient Location In Vehicle example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.55" extension="2022-01-01"/>
  <code code="67498-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Location of patient in vehicle NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Patient Pregnancy

[Observation: templateId 2.16.840.1.113883.17.3.10.1.79]

Indication of whether the patient is pregnant

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11474) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.79"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11192)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10418)/**@code**="67471-3" *Pregnancy* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10419)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10420), which **SHALL** be selected from ValueSet Pregnancy 2.16.840.1.113883.17.3.11.42 **DYNAMIC** (CONF:10421)

NEMESIS Trace: EHistory.18

### Patient Pregnancy example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.79" extension="2022-01-01"/>
  <code code="67471-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Pregnancy"/>
  <value xsi:type="CD"/>
</observation>
```

&lt;/observation&gt;

## Pelvic And Genitourinary Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.118]

Qualitative assessment of condition of patient's pelvic and genitourinary region

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11512) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.118"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11236)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11669)/**@code**="67531-4" *Physical findings of Pelvis +Genitourinary NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10390)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11237)  
NEMESIS Trace: EExam.03
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10392), which **SHALL** be selected from ValueSet *PelvisGenitourinaryAssessment* 2.16.840.1.113883.17.3.11.33 **DYNAMIC** (CONF:10391)  
NEMESIS Trace: EExam.12

### Pelvic And Genitourinary Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.118" extension="2022-01-01"/>
  <code code="67531-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Pelvis+Genitourinary NEMESIS"/>
  <effectiveTime/>
  <value xsi:type="CD"/>
</observation>
```

## Physical Assessment Organizer

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.78]

A collection of qualitative assessments of the patient's physical condition

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11470) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.78"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **MAY** contain zero or one [0..1] **component** such that it (CONF:11103)
  - a. contain exactly one [1..1] **observation**, where its type is *Skin Assessment*
3. **MAY** contain zero or one [0..1] **component** such that it (CONF:11105)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Head Assessment* (CONF:11104)
4. **MAY** contain zero or one [0..1] **component** such that it (CONF:11342)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Neurological Assessment* (CONF:11659)
5. **MAY** contain zero or one [0..1] **component** such that it (CONF:11107)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Face Assessment* (CONF:11106)

6. **MAY** contain zero or one [0..1] **component** such that it (CONF:11109)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Neck Assessment* (CONF:11108)
7. **MAY** contain zero or one [0..1] **component** such that it (CONF:11113)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Heart Assessment* (CONF:11112)
8. **MAY** contain zero or more [0..\*] **component** such that it (CONF:11115)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Abdomen Assessment* (CONF:11114)
9. **MAY** contain zero or one [0..1] **component** such that it (CONF:11117)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Pelvic And Genitourinary Assessment* (CONF:11116)
10. **MAY** contain zero or more [0..\*] **component** such that it (CONF:11119)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Back And Spine Assessment* (CONF:11118)
11. **MAY** contain zero or more [0..\*] **component** such that it (CONF:11121)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Extremities Assessment* (CONF:11120)
12. **MAY** contain zero or more [0..\*] **component** such that it (CONF:11123)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Eye Assessment* (CONF:11122)
13. **MAY** contain zero or one [0..1] **component** such that it (CONF:11125)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Mental Status Assessment* (CONF:11124)
14. **MAY** contain zero or more [0..\*] **component** such that it (CONF:11657)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Lung Assessment* (CONF:11660)
15. **MAY** contain zero or more [0..\*] **component** such that it (CONF:11658)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Chest Assessment* (CONF:11661)

#### Physical Assessment Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.78"/>
  <id root="2.16.840.1.113883.19.4" extension="243432586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    .
    .
    .
  </component>
</organizer>
```

## Possible Injury

[Observation: templateId 2.16.840.1.113883.17.3.10.1.64]

Indicator of whether a patient may have an injury

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11457 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.64"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11171)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10792)/@code="69467-9" *Possible injury NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10793)
4. **SHALL** contain exactly one [1..1] **value** with @xsi:type="BL" (CONF:10794)  
NEMESIS Trace: eSituation.02 For "unknown," use NullFlavor=UNK.

#### Possible Injury example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.64" extension="2022-01-01"/>
  <code code="69467-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Possible injury NEMESIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Prearrival Activation Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.36]

Indication of whether destination was activated prior to patient arrival

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11427) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.36"
  - b. **SHALL** contain exactly one [1..1] @extension="2022-01-01"
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11141)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10689)/@code="69462-0" *Activation of the destination healthcare facility team NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10688)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10691)  
NEMESIS Trace: EDisposition.25 Required if element value is a positive value (not "no").
5. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:10690), which **SHALL** be selected from ValueSet DestinationPrearrivalActivation 2.16.840.1.113883.17.3.11.87 **DYNAMIC** (CONF:11428)

NEMESIS Trace: EDisposition.24

#### Prearrival Activation Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.36" extension="2022-01-01"/>
  <code code="69462-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Activation of the destination healthcare facility team
    NEMESIS"/>
  <effectiveTime/>
  <value xsi:type="CD"/>
</observation>
```

## Primary Symptom

[Observation: templateId 2.16.840.1.113883.17.3.10.1.66]

The primary symptom present in the patient

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11459) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.66"

- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11173)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10801)/**@code**="67774-0" *Primary sign and symptom NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10802)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10803), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:10804)

NEMSIS Trace: ESituation.09

#### Primary Symptom example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.66" extension="2022-01-01"/>
  <code code="67774-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Primary sign and symptom NEMSIS"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```

## Prior Aid Vitals

[Observation: templateId 2.16.840.1.113883.17.3.10.1.29]

Indication of whether this set of vital signs was obtained prior to the documenting EMS unit's care

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11422 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.29"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11131)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11644)/**@code**="67518-1" *Obtained prior to units EMS care NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10273)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:11132)

NEMSIS Trace: EVitals.02

#### Prior Aid Vitals example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.29" extension="2022-01-01"/>
  <code code="67518-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Obtained prior to units EMS care NEMSIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Procedure

[Procedure: templateId 2.16.840.1.113883.17.3.10.1.181]

Procedure performed by EMS unit

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11496 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.181"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **MAY** contain zero or one [0..1] **negationInd** (CONF:11212)

Required to document a procedure not performed, with required "reason not performed" observation

3. **SHALL** contain exactly one [1..1] **code** (CONF:10496), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.96 SNOMED CT) (CONF:11497)

NEMESIS Trace: eProcedures.03, for which use SNOMED CT. See the NEMESIS Suggested Lists at <https://nemsis.org/>. NEMESIS Trace: eArrest.09, for which use 439569004 [Resuscitation (procedure)], with a translation of Cardiopulmonary Resuscitation type (VS 2.16.840.1.113883.17.3.11.57). NEMESIS Trace: eArrest.10 (therapeutic hypothermia); include here as 308693008 [Induction of hypothermia (procedure)], using negation indicator if not done NEMESIS Trace: eArrest.03 3003001 Attempted Defibrillation = ICD10-PCS Defibrillation 5A2204Z 3003005 Initiated Chest Compressions: use more detailed Cardiopulmonary Resuscitation Type (2.16.840.1.113883.17.3.11.57); reader may infer from this value if necessary 3003003 Attempted Ventilation: use more detailed Cardiopulmonary Resuscitation Type (2.16.840.1.113883.17.3.11.57); reader may infer from this value if necessary 3003007 Not Attempted-Considered Futile = Assistance 5A0; procedure negation = True; ReasonNotAttempted required 3003009 Not Attempted-DNR Orders = Assistance 5A0; procedure negation = True; ReasonNotAttempted required 3003011 Not Attempted-Signs of Circulation = Assistance 5A0; procedure negation = True; ReasonNotAttempted required

4. **MAY** contain zero or one [0..1] **statusCode** (CONF:10499)

NEMESIS Trace: EArrest.15 Use value "aborted" for discontinued resuscitation (eArrest.15)

5. **SHALL** contain zero or one [0..1] **effectiveTime** (CONF:10497)

NEMESIS Trace: EProcedures.01 goes in effectiveTime.low If an abandoned time is recorded, EArrest.15 goes in effectiveTime.high

6. **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:10502), which **SHALL** be selected from ValueSet Infusion Site 2.16.840.1.113883.17.3.11.56 **DYNAMIC** (CONF:10501)

NEMESIS Trace: EProcedures.13 Required conditionally if procedure code is insertion of an infusion device Some NEMESIS values require additional information: see Appendix for details.

7. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10498)

*Required for cardiac resuscitation procedures (eArrest.16)*

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Abandoned Procedure Reason Observation* (CONF:10510)

8. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10503)

*For eArrest.07, may be used twice, for AED and for defibrillation.*

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Procedure Prior Indicator* (CONF:10515)

9. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10504)

*Important for airway insertion*

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Procedure Number Of Attempts Observation* (CONF:10519)

10. **SHOULD** contain zero or one [0..1] **entryRelationship** such that it (CONF:10505)

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Procedure Successful Observation* (CONF:10523)

11. **MAY** contain zero or more [0..\*] **entryRelationship** such that it (CONF:10506)

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Procedure Complications Observation* (CONF:10527)

12. **SHOULD** contain zero or one [0..1] **entryRelationship** such that it (CONF:10507)

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Procedure Patient Response Observation* (CONF:10531)

13. **SHOULD** contain zero or one [0..1] **performer** such that it (CONF:10508)



For procedures documented in eProcedures section, use the ProviderRole classification for provider.

For procedures documented in eArrest section (eArrest.20 Who first initiated CPR, eArrest.21 Who first applied AED, eArrest.22 Who first defibrillated?), use the ProviderCategory classification for provider.

a. **SHALL** contain exactly one [1..1] **assignedEntity** such that it (CONF:10536)

a. **MAY** contain zero or one [0..1] **id** (CONF:10539)

NEMESIS Trace: EProcedures.09, ID equal to the EMS professional's agency ID number

b. **SHALL** contain exactly one [1..1] **code** (CONF:10537), which **SHALL** be selected from ValueSet ProviderRole 2.16.840.1.113883.17.3.11.46 **DYNAMIC** (CONF:10538)

NEMESIS Trace: EProcedures.10 - Role/Type of Person Performing the Procedure; eArrest.20 - Who First Initiated CPR; eArrest.21 - Who First Applied the AED; eArrest.22 - Who First Defibrillated the Patient

b. contain zero or one [0..1] **assignedEntity**, where its type is CDA Assigned Entity

14. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10509)

NEMESIS Trace: EAirway.04; required if procedure code is airway placement, i.e., 0CHY7BZ

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Airway Confirmation Observation* (CONF:10540)

15. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:11089)

a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Reason Procedure Not Attempted Observation* (CONF:11088)

16. **MAY** contain zero or more [0..\*] **participant** such that it (CONF:11387)

a. **SHALL** contain exactly one [1..1] **participantRole** such that it (CONF:10548)

a. **SHALL** contain exactly one [1..1] **playingDevice** such that it (CONF:10549)

a. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet AirwayDeviceType 2.16.840.1.113883.17.3.11.61 **DYNAMIC** (CONF:10550)

NEMESIS Trace: EAirway.03

### Procedure example

```
<procedure classCode="XACT" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.181" extension="2022-01-01"/>
  <code codeSystem="2.16.840.1.113883.6.96"/>
</procedure>
```

## Procedure Complications Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.179]

Complications associated with a procedure performed by the EMS unit

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11526) such that it

a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.179"

b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11259)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10528)/**@code**="67545-4" *Procedure complication NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10529)

4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type="CD"** (CONF:11622), which **SHALL** be selected from ValueSet ProcedureComplicationType 2.16.840.1.113883.17.3.11.58 **DYNAMIC** (CONF:10530)

NEMESIS Trace: EProcedures.07

#### Procedure Complications Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.179" extension="2022-01-01"/>
  <code code="67545-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Procedure complication NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Procedure Number Of Attempts Observation

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.132]

How many times the EMS unit attempted a procedure

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11524 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.17.3.10.1.132"**
  - b. **SHALL** contain exactly one [1..1] **@extension="2022-01-01"**
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11257)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10520)/**@code="67543-9"** *Procedure attempts [#]* *NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10521)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="INT"** (CONF:10522)

NEMESIS Trace: EProcedures.05

#### Procedure Number Of Attempts Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.132" extension="2022-01-01"/>
  <code code="67543-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Procedure attempts [#] NEMESIS"/>
  <value xsi:type="INT"/>
</observation>
```

## Procedure Patient Response Observation

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.135]

How a patient responded to a procedure

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11527 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root="2.16.840.1.113883.17.3.10.1.135"**
  - b. **SHALL** contain exactly one [1..1] **@extension="2022-01-01"**
2. **SHALL** contain exactly one [1..1] **@moodCode="EVN"** *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11260)

3. **SHALL** contain exactly one [1..1] **code** (CONF:10532)/@code="67546-2" *Response to procedure NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10533)
4. **SHALL** contain exactly one [1..1] **value** with @xsi:type="CD" (CONF:10534), which **SHALL** be selected from ValueSet *ChangeInPatientStatus* 2.16.840.1.113883.17.3.11.78 **DYNAMIC** (CONF:10535)

NEMSIS Trace: EProcedures.08

#### Procedure Patient Response Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.135" extension="2022-01-01"/>
  <code code="67546-2" codeSystem="2.16.840.1.113883.6.1"
    displayName="Response to procedure NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Procedure Prior Indicator

[Observation: templateId 2.16.840.1.113883.17.3.10.1.131]

Indication of whether a procedure was provided prior to the documenting EMS unit's care

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11523 ) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.131"
  - b. **SHALL** contain exactly one [1..1] @extension="2022-01-01"
2. **SHALL** contain exactly one [1..1] @moodCode="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11256)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10516)/@code="67542-1" *Procedure performed prior to this units EMS care NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10517)
4. **SHALL** contain exactly one [1..1] **value** with @xsi:type="BL" (CONF:10518)

NEMSIS Trace: EProcedures.02 Procedure Performed Prior to this Unit's EMS Care; EArrest.07 AED Use Prior to EMS Arrival

#### Procedure Prior Indicator example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.131" extension="2022-01-01"/>
  <code code="67542-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Procedure performed prior to this units EMS care NEMSIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Procedure Successful Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.133]

Indication of whether a procedure was successful

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11525 ) such that it
  - a. **SHALL** contain exactly one [1..1] @root="2.16.840.1.113883.17.3.10.1.133"
  - b. **SHALL** contain exactly one [1..1] @extension="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11258)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10524)/**@code**="67544-7" *Procedure successful NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10525)
  4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="BL" (CONF:10526)
- NEMSIS Trace: EProcedures.06

#### Procedure Successful Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.133" extension="2022-01-01"/>
  <code code="67544-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Procedure successful NEMSIS"/>
  <value xsi:type="BL"/>
</observation>
```

## Protocol Age Category

[Observation: templateId 2.16.840.1.113883.17.3.10.1.149]

Age range for which a protocol is appropriate

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11539 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.149"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11282)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10723)/**@code**="67538-9" *Protocol age category NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10724)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10725), which **SHALL** be selected from ValueSet ProtocolAgeCategory 2.16.840.1.113883.17.3.11.86 **DYNAMIC** (CONF:10726)

NEMSIS Trace: EProtocols.02

#### Protocol Age Category example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.149" extension="2022-01-01"/>
  <code code="67538-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Protocol age category NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Protocol Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.93]

The protocol used by EMS personnel to direct the clinical care of the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11487 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.93"

- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11209)
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:10719)/**@code**="67537-1" *Protocol used NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10718)
- 4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10720), which **SHALL** be selected from ValueSet Protocol 2.16.840.1.113883.17.3.11.73 **DYNAMIC** (CONF:10721)  
NEMESIS Trace: EProtocols.01
- 5. contain zero or one [0..1] **entryRelationship** such that it
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Protocol Age Category* (CONF:11073)

#### Protocol Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.93" extension="2022-01-01"/>
  <code code="67537-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Protocol used NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Provider Primary Impression

[Observation: templateId 2.16.840.1.113883.17.3.10.1.65]

The EMS personnel's impression of the patient's primary problem or most significant condition

- 1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11458 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.65"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
- 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11172)
- 3. **SHALL** contain exactly one [1..1] **code** (CONF:10796)/**@code**="67492-9" *Primary problem NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10797)
- 4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10798), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:10799)  
NEMESIS Trace: ESituation.11

#### Provider Primary Impression example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.65" extension="2022-01-01"/>
  <code code="67492-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Primary problem NEMESIS"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```

## Provider Secondary Impressions

[Observation: templateId 2.16.840.1.113883.17.3.10.1.68]

The EMS personnel's impression of the patient's secondary problems or conditions

- 1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11461 ) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.68"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11175)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10811)/**@code**="69542-9" *Secondary problem NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10812)
  4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10813), which **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:10814)
- NEMESIS Trace: ESituation.12

#### Provider Secondary Impressions example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.68" extension="2022-01-01"/>
  <code code="69542-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Secondary problem NEMESIS"/>
  <value xsi:type="CD" codeSystem="2.16.840.1.113883.6.90"/>
</observation>
```

## Reason For Choosing Destination Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.35]

The reason the unit chose to deliver the patient to the destination

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11426 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.35"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11140)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10684)/**@code**="67552-0" *Reason for choosing destination NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10683)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10685), which **SHALL** be selected from ValueSet DestinationChoiceReason 2.16.840.1.113883.17.3.11.68 **DYNAMIC** (CONF:10686)

NEMESIS Trace: EDisposition.20

#### Reason For Choosing Destination Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.35" extension="2022-01-01"/>
  <code code="67552-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Reason for choosing destination NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Reason Procedure Not Attempted Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.137]

Why the EMS crew did not attempt to perform a specific procedure

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11529 ) such that it

- a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.137"
- b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11262)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11673)/**@code**="72112-6" *Reason resuscitation not attempted NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11263)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11264), which **SHALL** be selected from ValueSet *Reason Procedure not Performed Superset* 2.16.840.1.113883.17.3.11.100 **DYNAMIC** (CONF:11265)

NEMSIS Trace: EProcedures.03 pertinent negatives, EArrest.03 negative values This is a superset of both value sets: the question is the same, even if the .90 values are appropriate only for CPR and the .95 for all other procedures. Note: CPR procedures have appropriate values "Not Attempted-Considered Futile," "Not Attempted-DNR Orders," "Not Attempted-Signs of Circulation"; other procedures have values "Contraindication Noted," "Denied By Order," "Refused," "Unable to Complete"

#### Reason Procedure Not Attempted Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.137" extension="2022-01-01"/>
  <code code="72112-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Reason resuscitation not attempted NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Respiratory Rate

[Observation: templateId 2.16.840.1.113883.17.3.10.1.146]

Patient's rate of respiration

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11536) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.146"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11276)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11674)/**@code**="9279-1" *Respiratory rate* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10287)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11277)

NEMSIS Trace: EVitals.01

5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10288)

NEMSIS Trace: EVitals.14 UCUM units SHOULD be "/min".

#### Respiratory Rate example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.146" extension="2022-01-01"/>
  <code code="9279-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Respiratory rate"/>
  <value xsi:type="PQ"/>
</observation>
```

## Response Beginning Odometer Reading

[Observation: templateId 2.16.840.1.113883.17.3.10.1.171]

Odometer reading for the EMS vehicle when dispatched

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11561) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.171"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11314)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10631)/**@code**="67484-6" *Counter or odometer reading NEMSIS --beginning of call* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10632)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10633)

NEMSIS Trace: EResponse.19 UCUM units SHOULD be "[mi\_i]"

### Response Beginning Odometer Reading example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.171" extension="2022-01-01"/>
  <code code="67484-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Counter or odometer reading NEMSIS --beginning of call"/>
  <value xsi:type="PQ"/>
</observation>
```

## Response Delay

[Observation: templateId 2.16.840.1.113883.17.3.10.1.154]

Causes of delay to the response process

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11544) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.154"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11287)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10595)/**@code**="67557-9" *Response delay NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10594)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10597), which **SHALL** be selected from ValueSet ResponseDelayType 2.16.840.1.113883.17.3.11.51 **DYNAMIC** (CONF:10596)

NEMSIS Trace: EResponse.09

### Response Delay example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.154" extension="2022-01-01"/>
  <code code="67557-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Response delay NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```



## Response Destination Odometer Reading

[Observation: templateId 2.16.840.1.113883.17.3.10.1.173]

Odometer reading for the EMS vehicle at patient destination

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11563) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.173"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11316)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10639)/**@code**="67486-1" *Counter or odometer reading NEMESIS --patient destination* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10640)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10641)  
NEMESIS Trace: EResponse.21 UCUM units SHOULD be "[mi\_i]"

### Response Destination Odometer Reading example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.173" extension="2022-01-01"/>
  <code code="67486-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Counter or odometer reading NEMESIS --patient destination"/>
  <value xsi:type="PQ"/>
</observation>
```

## Response Ending Odometer Reading

[Observation: templateId 2.16.840.1.113883.17.3.10.1.174]

Odometer reading for the EMS vehicle when call is complete

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11418) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.174"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11317)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10643)/**@code**="67487-9" *Counter or odometer reading NEMESIS --end of call* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10644)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10645)  
NEMESIS Trace: EResponse.22 UCUM units SHOULD be "[mi\_i]"

### Response Ending Odometer Reading example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.174" extension="2022-01-01"/>
  <code code="67487-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Counter or odometer reading NEMESIS --end of call"/>
  <value xsi:type="PQ"/>
</observation>
```

## Response Mode Qualifier

[Observation: templateId 2.16.840.1.113883.17.3.10.1.191]

Characteristics of the response mode

Contained By	Contains
<i>Response Mode To Scene</i>	

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11569) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.191"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:11371)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11374)
4. **SHALL** contain exactly one [1..1] **code** (CONF:11372)/**@code**="77157-6" *Response mode descriptors* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11373)
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11376), which **SHALL** be selected from ValueSet *ResponseModeQualifier* 2.16.840.1.113883.17.3.11.106 **DYNAMIC** (CONF:11375)

NEMESIS Trace: eResponse.24 (Additional Response Mode Descriptors)

### Response Mode Qualifier example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.191" extension="2022-01-01"/>
  <code code="77157-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Response mode descriptors"/>
  <value xsi:type="CD"/>
</observation>
```

## Response Mode To Scene

[Observation: templateId 2.16.840.1.113883.17.3.10.1.182]

Indication of whether the response was emergent or non-emergent

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11495) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.182"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11211)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10647)/**@code**="67482-0" *Response mode to scene NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10648)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10650), which **SHALL** be selected from ValueSet *TransportationMode* 2.16.840.1.113883.17.3.11.66 **DYNAMIC** (CONF:10649)

NEMESIS Trace: EResponse.23

5. **SHALL** contain [1..1] **entryRelationship** such that it (CONF:11343)

- a. Conforms to [Response Mode Qualifier](#) (templateId:  
2.16.840.1.113883.17.3.10.1.191:2022-01-01)

#### Response Mode To Scene example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.182" extension="2022-01-01"/>
  <code code="67482-0" codeSystem="2.16.840.1.113883.6.1"
    displayName="Response mode to scene NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Response Odometer Reading Organizer

---

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.97]

Collection of odometer readings at various points in an EMS crew's trip

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11494 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.97"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **MAY** contain zero or one [0..1] **component** such that it (CONF:10626)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is [Response Beginning Odometer Reading](#) (CONF:10630)
3. **MAY** contain zero or one [0..1] **component** such that it (CONF:10627)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is [Response On Scene Odometer Reading](#) (CONF:10634)
4. **MAY** contain zero or one [0..1] **component** such that it (CONF:10628)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is [Response Destination Odometer Reading](#) (CONF:10638)
5. **MAY** contain zero or one [0..1] **component** such that it (CONF:10629)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is [Response Ending Odometer Reading](#) (CONF:10642)

#### Response Odometer Reading Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.97"/>
  <id root="2.16.840.1.113883.19.4" extension="243446586"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    .
    .
    .
  </component>
</organizer>
```

## Response On Scene Odometer Reading

---

[Observation: templateId 2.16.840.1.113883.17.3.10.1.172]

Odometer reading for the EMS vehicle when the unit arrives at the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11562 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.172"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11315)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10635)/**@code**="67485-3" *Counter or odometer reading NEMSIS --patient arrival* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10636)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10637)  
NEMSIS Trace: EResponse.20 UCUM units SHOULD be "[mi\_i]"

#### Response On Scene Odometer Reading example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.172" extension="2022-01-01"/>
  <code code="67485-3" codeSystem="2.16.840.1.113883.6.1"
    displayName="Counter or odometer reading NEMSIS --patient arrival"/>
  <value xsi:type="PQ"/>
</observation>
```

## Return Of Spontaneous Circulation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.128]

Indication whether or not there was any return of spontaneous circulation, and if so, when

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11520 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.128"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11252)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11672)/**@code**="88670-5" *Return of spontaneous circulation* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10184)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11253), which **SHALL** be selected from ValueSet ReturnOfSpontaneousCirculation 2.16.840.1.113883.17.3.11.15 **DYNAMIC** (CONF:10185)

NEMSIS Trace: EArrest.12

#### Return Of Spontaneous Circulation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.128" extension="2022-01-01"/>
  <code code="88670-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Return of spontaneous circulation"/>
  <value xsi:type="CD"/>
</observation>
```

## Scene Delay

[Observation: templateId 2.16.840.1.113883.17.3.10.1.155]

Causes of delay at the event scene

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11545) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.155"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11288)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10600)/**@code**="67558-7" *Scene delay NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10599)
  4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10602), which **SHALL** be selected from ValueSet *SceneDelayType* 2.16.840.1.113883.17.3.11.52 **DYNAMIC** (CONF:10601)
- NEMESIS Trace: EResponse.10

### Scene Delay example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.155" extension="2022-01-01"/>
  <code code="67558-7" codeSystem="2.16.840.1.113883.6.1" displayName="Scene
  delay NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Scene Patient Count

[Observation: templateId 2.16.840.1.113883.17.3.10.1.86]

How many patients were at the scene

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11480) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.86"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11199)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10750)/**@code**="67489-5" *Total patients at the scene NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10749)
  4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="ST" (CONF:10751)
- NEMESIS Trace: EScene.06

### Scene Patient Count example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.86" extension="2022-01-01"/>
  <code code="67489-5" codeSystem="2.16.840.1.113883.6.1" displayName="Total
  patients at the scene NEMESIS"/>
  <value xsi:type="ST"/>
</observation>
```

## Skin Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.180]

Qualitative assessment of condition of patient's skin

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11570) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.180"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11223)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10368)/**@code**="67524-9" *Physical findings of Skin NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10369)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11386)  
NEMESIS Trace: EExam.03
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10370), which **SHALL** be selected from ValueSet *SkinAssessment* 2.16.840.1.113883.17.3.11.25 **DYNAMIC** (CONF:10371)  
NEMESIS Trace: EExam.04

### Skin Assessment example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.180" extension="2022-01-01"/>
  <code code="67524-9" codeSystem="2.16.840.1.113883.6.1"
    displayName="Physical findings of Skin NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Stroke Score

[Observation: templateId 2.16.840.1.113883.17.3.10.1.163]

Result of a stroke scale instrument

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11553) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.163"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11297)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10308)/**@code**="67520-7" *Stroke scale overall interpretation NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10307)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11298)  
NEMESIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10310), which **SHALL** be selected from ValueSet *Stroke Scale Interpretation* 2.16.840.1.113883.17.3.11.93 **DYNAMIC** (CONF:10309)  
NEMESIS Trace: EVitals.29
6. **SHALL** contain exactly one [1..1] **methodCode** (CONF:10312), which **SHALL** be selected from ValueSet *StrokeScale* 2.16.840.1.113883.17.3.11.88 **DYNAMIC** (CONF:10311)  
NEMESIS Trace: EVitals.30

**Stroke Score example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.163" extension="2022-01-01"/>
  <code code="67520-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Stroke scale overall interpretation NEMSIS"/>
  <value xsi:type="CD"/>
  <methodCode/>
</observation>
```

**Systolic Blood Pressure**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.23.1]

Measurement of the patient's systolic blood pressure

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11419 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.23.1"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11271)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11630)/**@code**="8480-6" *Systolic blood pressure* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10280)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:7304)
 

NEMSIS Trace: EVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10281)
 

NEMSIS Trace: EVitals.06 UCUM units SHOULD be "mm[Hg]".
6. **MAY** contain zero or one [0..1] **methodCode** (CONF:11344), which **SHALL** be selected from ValueSet BloodPressureMeasurementMethod 2.16.840.1.113883.17.3.11.107 **DYNAMIC** (CONF:11345)
 

NEMSIS Trace: eVitals.08 (method of blood pressure measurement)

**Systolic Blood Pressure example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.23.1"
    extension="2022-01-01"/>
  <code code="8480-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Systolic blood pressure"/>
  <value xsi:type="PQ"/>
</observation>
```

**Thrombolytic Contraindications**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.82]

Indicator of contraindications to thrombolytic use

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11477 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.82"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11195)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10431)/**@code**="67523-1" *Contraindication for thrombolytic use NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10432)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11623), which **SHALL** be selected from ValueSet *ExistenceOfContraindicationsToThrombolyticUse* 2.16.840.1.113883.17.3.11.41 **DYNAMIC** (CONF:10433)

NEMSIS Trace: EVitals.31

#### Thrombolytic Contraindications example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.82" extension="2022-01-01"/>
  <code code="67523-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Contraindication for thrombolytic use NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Transport Delay

[Observation: templateId 2.16.840.1.113883.17.3.10.1.156]

Causes of delay to the transport process

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11546) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.156"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11289)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10605)/**@code**="67559-5" *Transport delay NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10604)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10607), which **SHALL** be selected from ValueSet *TransportDelayType* 2.16.840.1.113883.17.3.11.53 **DYNAMIC** (CONF:10606)

NEMSIS Trace: EResponse.11

#### Transport Delay example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.156" extension="2022-01-01"/>
  <code code="67559-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Transport delay NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Transport Disposition

[Observation: templateId 2.16.840.1.113883.17.3.10.1.199]

The transport disposition for an EMS event identifying whether a transport occurred and by which unit.



Contained By	Contains
<a href="#">EMS Disposition Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11592 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.199"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11702)/**@code**="neweDisposition.30" *Transport Disposition* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11593)
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11595), which **SHALL** be selected from ValueSet *TransportDisposition* 2.16.840.1.113883.17.3.11.115 **DYNAMIC** (CONF:11594)

NEMESIS Trace: eDisposition.30

#### Transport Disposition example

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.199" extension="2022-01-01"/>
  <code code="neweDisposition.30" codeSystem="2.16.840.1.113883.6.1"
    displayName="Transport Disposition"/>
  <value xsi:type="CD"/>
</observation>
```

## Transport Method Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.34]

Vehicle or device used to transport patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11425 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.34"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11139)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10679)/**@code**="67549-6" *Transport method NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10678)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10680), which **SHALL** be selected from ValueSet *TransportMethod* 2.16.840.1.113883.17.3.11.65 **DYNAMIC** (CONF:10681)

NEMESIS Trace: EDisposition.16

#### Transport Method Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.34" extension="2022-01-01"/>
  <code code="67549-6" codeSystem="2.16.840.1.113883.6.1"
    displayName="Transport method NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Transport Mode Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.33]

Indication of whether the transport was emergent or non-emergent

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11424) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.33"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11138)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10674)/**@code**="67550-4" *Transport mode from scene NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10673)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10675), which **SHALL** be selected from ValueSet *TransportationMode* 2.16.840.1.113883.17.3.11.66 **DYNAMIC** (CONF:10676)  
NEMSIS Trace: EDisposition.17 (disposition transport mode)
5. **SHALL** contain exactly one [1..1] **entryRelationship** such that it (CONF:11379)
  - a. contain exactly one [1..1] **@typeCode**="COMP"
  - b. **SHALL** contain exactly one [1..1] **observation**, where its type is *Transport Mode Qualifier* (CONF:11339)

### Transport Mode Observation example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.33" extension="2022-01-01"/>
  <code code="67550-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Transport mode from scene NEMSIS"/>
  <value xsi:type="CD"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.17.3.10.1.193"
        extension="2022-01-01"/>
      <code code="77153-5" codeSystem="2.16.840.1.113883.6.1"
        displayName="Transport Mode Descriptors"/>
      <value xsi:type="CD"/>
    </observation>
  </entryRelationship>
</observation>
```

## Transport Mode Qualifier

[Observation: templateId 2.16.840.1.113883.17.3.10.1.193]

Characteristics of the transport mode

Contained By	Contains

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11566) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.193"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:11353)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11378)
4. **SHALL** contain exactly one [1..1] **code** (CONF:11354)/**@code**="77153-5" *Transport Mode Descriptors* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11355)
5. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11600), which **SHALL** be selected from ValueSet *TransportModeQualifier* 2.16.840.1.113883.17.3.11.102 **DYNAMIC** (CONF:11356)

NEMESIS Trace: eDisposition.18 (additional transport mode descriptors)

#### Transport Mode Qualifier example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.193" extension="2022-01-01"/>
  <code code="77153-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Transport Mode Descriptors"/>
  <value xsi:type="CD"/>
</observation>
```

## Trauma Triage Criteria (Steps 1 and 2)

[Observation: templateId 2.16.840.1.113883.17.3.10.1.52]

Field Triage Criteria for transport to a trauma center as defined by the Centers for Disease Control and Prevention and the American College of Surgeons-Committee on Trauma

Contained By	Contains
<a href="#">EMS Injury Incident Description Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11444 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.52"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11157)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11651)/**@code**="67495-2" *CDC field triage criteria NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10111)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11616), which **SHALL** be selected from ValueSet *TraumaCenterCriteria* 2.16.840.1.113883.17.3.11.3 **DYNAMIC** (CONF:10112)

NEMESIS Trace: EInjury.03

#### Trauma Triage Criteria (Steps 1 and 2) example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.52" extension="2022-01-01"/>
  <code code="67495-2" codeSystem="2.16.840.1.113883.6.1" displayName="CDC
    field triage criteria NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Trauma Triage Criteria (Steps 3 and 4)

[Observation: templateId 2.16.840.1.113883.17.3.10.1.53]

Factors predictive of need for trauma center care

Contained By	Contains
<a href="#">EMS Injury Incident Description Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11445 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.53"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11158)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11383)/**@code**="67496-0" *Other injury risk factors NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10114)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11382), which **SHALL** be selected from ValueSet *InjuryRiskFactor* 2.16.840.1.113883.17.3.11.4 **DYNAMIC** (CONF:10115)  
NEMSIS Trace: eInjury.04

### Trauma Triage Criteria (Steps 3 and 4) example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.53" extension="2022-01-01"/>
  <code code="67496-0" codeSystem="2.16.840.1.113883.6.1" displayName="Other
injury risk factors NEMSIS"/>
  <value xsi:type="CD"/>
</observation>
```

## Turnaround Delay

[Observation: templateId 2.16.840.1.113883.17.3.10.1.157]

Causes of delay to the unit turnaround process

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11547 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.157"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11290)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10610)/**@code**="67560-3" *Turn-around delay NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10609)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:10612), which **SHALL** be selected from ValueSet *TurnAroundDelayType* 2.16.840.1.113883.17.3.11.54 **DYNAMIC** (CONF:10611)  
NEMSIS Trace: EResponse.12

### Turnaround Delay example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.157" extension="2022-01-01"/>
  <value xsi:type="CD"/>
</observation>
```

```
<code code="67560-3" codeSystem="2.16.840.1.113883.6.1" displayName="Turn-around delay NEMSIS"/>
<value xsi:type="CD"/>
</observation>
```

## Unit At Patient Time

[Observation: templateId 2.16.840.1.113883.17.3.10.1.42]

Time the unit arrived at the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11434 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.42"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11147)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10851)/**@code**="69474-5" *Responding unit arrived at the patient's side [Date and time] Vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10850)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10852)  
NEMSIS Trace: ETimes.07

### Unit At Patient Time example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.42" extension="2022-01-01"/>
  <code code="69474-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Responding unit arrived at the patient's side [Date and time]
    Vehicle NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

## Unit Back In Service Time

[Observation: templateId 2.16.840.1.113883.17.3.10.1.45]

Time the unit is back in service

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11437 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.45"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11150)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10863)/**@code**="69477-8" *Unit was back in service and available for response [Date and time] Vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10862)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10864)  
NEMSIS Trace: ETimes.13

### Unit Back In Service Time example

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.45" extension="2022-01-01"/>
```

```
<code code="69477-8" codeSystem="2.16.840.1.113883.6.1" displayName="Unit
was back in service and available for response [Date and time] Vehicle
NEMESIS"/>
<value xsi:type="TS"/>
</observation>
```

## Unit Disposition

[Observation: templateId 2.16.840.1.113883.17.3.10.1.196]

The patient disposition for an EMS event identifying whether patient contact was made.

Contained By	Contains
<a href="#">EMS Disposition Section</a>	

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11578 ) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.196"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **code** (CONF:11580)/**@code**="neweDisposition.27" *Unit Disposition* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11579)
  3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11582), which **SHALL** be selected from ValueSet Unit Disposition 2.16.840.1.113883.17.3.11.112 **DYNAMIC** (CONF:11581)
- NEMESIS trace: eDisposition.27

### Unit Disposition example

```
<observation classCode="SPCOBS" moodCode="RQO">
  <templateId root="2.16.840.1.113883.17.3.10.1.196" extension="2022-01-01"/>
  <code code="neweDisposition.27" codeSystem="2.16.840.1.113883.6.1"
    displayName="Unit Disposition"/>
  <value xsi:type="CD"/>
</observation>
```

## Unit En Route Time

[Observation: templateId 2.16.840.1.113883.17.3.10.1.40]

Time unit begins moving toward the patient

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11432 ) such that it
    - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.40"
    - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
  2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11145)
  3. **SHALL** contain exactly one [1..1] **code** (CONF:10843)/**@code**="69472-9" *Unit responded [Date and time] Vehicle NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10842)
  4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10844)
- NEMESIS Trace: ETimes.05

**Unit En Route Time example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.40" extension="2022-01-01"/>
  <code code="69472-9" codeSystem="2.16.840.1.113883.6.1" displayName="Unit
  responded [Date and time] Vehicle NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

**Unit Left Scene Time**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.43]

Time the unit left the incident scene

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11435 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.43"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11148)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10855)/**@code**="69475-2" *Responding unit left the scene with a patient [Date and time] Vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10854)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10856)  
NEMSIS Trace: ETimes.09

**Unit Left Scene Time example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.43" extension="2022-01-01"/>
  <code code="69475-2" codeSystem="2.16.840.1.113883.6.1"
  displayName="Responding unit left the scene with a patient [Date and time]
  Vehicle NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

**Unit Notified Time**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.39]

Time the unit was dispatched

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11431 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.39"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11144)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10839)/**@code**="69471-1" *Responding unit was notified by dispatch [Date and time] Vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10838)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10840)  
NEMSIS Trace: ETimes.03 This is the value represented in the header for the encompassing encounter

**Unit Notified Time example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.39" extension="2022-01-01"/>
  <code code="69471-1" codeSystem="2.16.840.1.113883.6.1"
    displayName="Responding unit was notified by dispatch [Date and time]
    Vehicle NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

**Unit On Scene Time**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.41]

Time the unit arrived at the incident scene

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11433 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.41"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11146)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10847)/**@code**="69473-7" *Responding unit arrived on the scene [Date and time] Vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10846)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10848)

NEMSIS Trace: ETimes.06

**Unit On Scene Time example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.41" extension="2022-01-01"/>
  <code code="69473-7" codeSystem="2.16.840.1.113883.6.1"
    displayName="Responding unit arrived on the scene [Date and time] Vehicle
    NEMSIS"/>
  <value xsi:type="TS"/>
</observation>
```

**Vehicle Impact Area**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.54]

Area of vehicle struck in a vehicle collision

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11446 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.54"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11159)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11652)/**@code**="67497-8" *Location of impact on the vehicle NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10117)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11617), which **SHALL** be selected from ValueSet VehicleImpactArea 2.16.840.1.113883.17.3.11.5 **DYNAMIC** (CONF:10118)

NEMSIS Trace: EInjury.05



**Vehicle Impact Area example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.54" extension="2022-01-01"/>
  <code code="67497-8" codeSystem="2.16.840.1.113883.6.1"
    displayName="Location of impact on the vehicle NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

**Vehicle Occupant Safety Equipment**

[Observation: templateId 2.16.840.1.113883.17.3.10.1.56]

Safety equipment in use by the patient at the time of the injury

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11448 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.56"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:11161)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11654)/**@code**="67499-4" *Safety equipment NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10123)
4. **SHALL** contain at least one [1..\*] **value** with **@xsi:type**="CD" (CONF:11619), which **SHALL** be selected from ValueSet *SafetyEquipmentType* 2.16.840.1.113883.17.3.11.7 **DYNAMIC** (CONF:10124)

NEMESIS Trace: EInjury.07

**Vehicle Occupant Safety Equipment example**

```
<observation classCode="SPCOBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.56" extension="2022-01-01"/>
  <code code="67499-4" codeSystem="2.16.840.1.113883.6.1"
    displayName="Safety equipment NEMESIS"/>
  <value xsi:type="CD"/>
</observation>
```

**Vital Signs Organizer**

[Organizer: templateId 2.16.840.1.113883.17.3.10.1.28]

A collection of vital signs observations For any observation within the organizer, if the NEMESIS value is "Refused," the value **SHALL** be "NI;" the string "Refused" **MAY** be recorded in Observation.text. Note that NEMESIS collects times at the vitals cluster level, whereas systems may record them at the observation level. No preference is indicated regarding how close individual observation timestamps must be to allow their inclusion in a cluster or how the cluster effectiveTime is determined. effectiveTime is modeled on the observations to support unanticipated uses and to conform more closely to the Consolidated CDA pattern, though the exclusion of the id property makes it impossible to assert compliance to the Consolidated template in this guide (though it remains possible to do so in an implementation).

1. **SHALL** contain exactly one [1..1] **templateId** ( CONF:11421 ) such that it
  - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.28"
  - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"

2. **SHALL** contain exactly one [1..1] **code** (CONF:11338)/@code="46680005" *Vital signs* (CodeSystem: 2.16.840.1.113883.6.96 SNOMED CT) (CONF:11337)  
  
May also use LOINC 74728-7 "Vital signs, weight, height, head circumference, oximetry, BMI, and BSA panel - HL7.CCDAr1.1"
3. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10257)  
NEMESIS Trace: EVitals.01
4. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11078)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Systolic Blood Pressure* (CONF:11077)
5. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11084)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Respiratory Rate* (CONF:11083)
6. **SHOULD** contain zero or one [0..1] **component** such that it (CONF:11086)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Body Temperature* (CONF:11085)
7. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11090)
  - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Oxygen Saturation* (CONF:11087)
8. **SHALL** contain zero or one [0..1] **component** such that it (CONF:11704)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Diastolic Blood Pressure* (CONF:11642)
9. **MAY** contain zero or one [0..1] **component** such that it (CONF:11705)
  - a. **SHALL** contain zero or one [0..1] **observation**, where its type is *Prior Aid Vitals* (CONF:11643)
10. **MAY** contain zero or one [0..1] **component** such that it (CONF:11706)
  - a. **SHALL** contain zero or one [0..1] **organizer**, where its type is *Additional Vital Signs Organizer* (CONF:11707)

#### Vital Signs Organizer example

```

<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.28"/>
  <templateId root="2.16.840.1.113883.10.20.22.4.26"/>
  <id root="2.16.840.1.113883.19.4" extension="247546586"/>
  <code code="46680005" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMEDCT" displayName="Vital signs"/>
  <statusCode code="completed"/>
  <effectiveTime value="201201011602+0600"/>
  <component>
    . . .
  </component>
</organizer>

```

---

# Chapter

# 5

---

## VALUE SETS

---

### Topics:

- *Abdomen Assessment Finding*
- *Abdominal Finding Location*
- *Act Code*
- *Act Status*
- *Administrative Gender Excluding Nulls*
- *Administrative Gender (HL7 V3)*
- *Advance Directive Type*
- *Airbag Status*
- *Airway Device Confirmation Method*
- *Airway Device Type*
- *Alcohol Drug Use Indicator*
- *Anatomic Location*
- *Back Spine Assessment Finding*
- *Back Spine Finding Location*
- *Barrier To Care*
- *Blood Pressure Measurement Method*
- *Cardiac Arrest Cause*
- *Cardiac Arrest Outcome*
- *Cardiac Arrest Witness Role*
- *Cardiac Rhythm Reading*
- *Cardiopulmonary Resuscitation Type*
- *Change In Patient Status*
- *Chest Finding*
- *Chest Finding Location*
- *Complaint Type*
- *Confidentiality*
- *Crew Disposition*
- *Crew Role Level*
- *Destination Choice Reason*
- *Destination Prearrival Activation*
- *Destination Type*
- *Destination Ward Kind*

The following tables summarize the value sets used in this Implementation Guide.

- *Disaster Type*
- *Dispatch Delay Type*
- *Dispatch Reason*
- *ECG Type*
- *EMD Performed*
- *EMS Level Of Service*
- *EMS Medication Administration Device*
- *EMS Transport Disposition*
- *EMS Unit Disposition*
- *Entity Name Use*
- *Ethnicity*
- *Ethnicity Group*
- *Ethnicity Value Set*
- *Existence Of Contraindications To Thrombolytic Use*
- *Extremities Assessment Finding*
- *Extremity Finding Location*
- *Eye Assessment Finding*
- *Eye Finding Location*
- *FDA Route of Administration*
- *Face Assessment Finding*
- *Final Patient Condition*
- *First Monitored Rhythm*
- *Glasgow Coma Score Special Circumstances*
- *HL7 BasicConfidentialityKind*
- *HL7 Confidentiality*
- *HL7 Human Language*
- *HL7 LanguageAbilityMode*
- *HL7 Marital Status*
- *HL7 Religious Affiliation*
- *Head Assessment Finding*
- *Healthcare Provider Taxonomy (HIPAA)*
- *Heart Assessment Finding*
- *Hospital Capability*
- *Human language*
- *IC D-10*
- *ICD-10 CM*
- *ICD-10 CM AND PCS*
- *ICD-10 PCS*
- *Infusion Site*
- *Initial Patient Condition*
- *Injury Risk Factor*
- *LOINC*
- *Language*
- *Language Ability Proficiency*

- *Length Based Weight Class*
- *Level Of Responsiveness*
- *Lung Finding*
- *Lung Finding Location*
- *Mechanism Of Injury*
- *Medication Administration Route*
- *Medication Administration Site*
- *Medication Authorization Type*
- *Medication Complication*
- *Medication Not Given Reason*
- *Mental Status Finding*
- *Method Of ECG Interpretation*
- *NEMSIS*
- *Neck Assessment Finding*
- *Neurological Assessment Finding*
- *Non Drug Allergy Type*
- *Organ System*
- *Patient Engagement*
- *Pelvis Genitourinary Assessment*
- *Postal Address Use*
- *Pregnancy*
- *Procedure Complication Type*
- *Protocol*
- *Protocol Age Category*
- *Provider Adverse Event Type*
- *Provider Category*
- *Provider Response Role*
- *Provider Role*
- *Race*
- *Race and Ethnicity - CDC*
- *Race Category*
- *Reason Procedure not Performed*
- *Reason Procedure not Performed Superset*
- *Reason Resuscitation Not Attempted*
- *Registry Type*
- *Response Delay Type*
- *Response Mode Qualifier*
- *Resuscitation Discontinue Reason*
- *Return Of Spontaneous Circulation*
- *Rx Norm*
- *SNOMED CT*

- *Safety Equipment Type*
- *Scene Delay Type*
- *Service Type*
- *Skin Assessment*
- *Stroke Scale*
- *Stroke Scale Interpretation*
- *Transport Delay Type*
- *Transport Disposition*
- *Transport Method*
- *Transport Mode Qualifier*
- *Transportation Mode*
- *Trauma Center Criteria*
- *Turn Around Delay Type*
- *Unit Disposition*
- *Unit Equipment Capability*
- *Vehicle Impact Area*
- *Vehicle Passenger Location*

## Abdomen Assessment Finding

Value Set	AbdomenAssessmentFinding - 2.16.840.1.113883.17.3.11.31
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS abdominal assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17242-1	LOINC	Distention
LA17243-9	LOINC	Guarding
LA17212-4	LOINC	Gunshot wound
LA17246-2	LOINC	Mass-pulsating
LA17247-0	LOINC	Pregnant-palpable uterus
LA17709-9	LOINC	Tenderness
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18226-3	LOINC	Foreign body
LA18247-9	LOINC	Bowel sounds-absent
LA18248-7	LOINC	Bowel sounds-present
LA6626-1	LOINC	Normal
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain
LA23814-9	LOINC	Rebound Tenderness
LA23815-6	LOINC	Rigidity
LA17229-8	LOINC	Crush injury
LA22440-4	LOINC	Swelling
LA7423-2	LOINC	Contusion
LA18225-5	LOINC	Deformity

## Abdominal Finding Location

Value Set	AbdominalFindingLocation - 2.16.840.1.113883.17.3.11.32
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Location of finding resulting from EMS abdominal assessment

Code	Code System	Print Name
LA12698-9	LOINC	Left upper quadrant
LA18721-3	LOINC	Generalized
LA18722-1	LOINC	Left lower quadrant
LA18723-9	LOINC	Right upper quadrant
LA18724-7	LOINC	Periumbilical
LA18725-4	LOINC	Right lower quadrant
LA23813-1	LOINC	Epigastric

## Act Code

Value Set	ActCode
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## Act Status

Value Set	ActStatus
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## Administrative Gender Excluding Nulls

Value Set	Administrative Gender Excluding Nulls - 2.16.840.1.113883.3.2074.1.1.5
Definition	Gender of the patient for administrative purposes, excluding the problematic value UN

Code	Code System	Print Name
M	MISSING	Male
F	MISSING	Female

## Administrative Gender (HL7 V3)

Value Set	Administrative Gender (HL7 V3) - 2.16.840.1.113883.1.11.1
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Code	Code System	Print Name
F		Female
M		Male



Code	Code System	Print Name
UN		Undifferentiated

## Advance Directive Type

Value Set	AdvanceDirectiveType - 2.16.840.1.113883.17.3.11.63
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Type of advance directive documentation

Code	Code System	Print Name
LA137-2	LOINC	None
LA17059-9	LOINC	Other (not listed)
LA17319-7	LOINC	State EMS DNR or medical order form
LA17320-5	LOINC	Other healthcare advanced directive form
LA17321-3	LOINC	Living will
LA17322-1	LOINC	Family/guardian request DNR (but no documentation)

## Airbag Status

Value Set	AirbagStatus - 2.16.840.1.113883.17.3.11.8
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Configuration of airbag deployment

Code	Code System	Print Name
LA17384-1	LOINC	Airbag deployed front
LA17385-8	LOINC	Airbag deployed side
LA17386-6	LOINC	Airbag deployed other (knee, airbelt, etc.)
LA17387-4	LOINC	No airbag deployed
LA17388-2	LOINC	No airbag present
LA46-8	LOINC	Other

## Airway Device Confirmation Method

Value Set	AirwayDeviceConfirmationMethod - 2.16.840.1.113883.17.3.11.60
Code System	LOINC - 2.16.840.1.113883.6.1
Version	2022
Definition	Procedure for confirming airway device placement

Code	Code System	Print Name
LA18672-8	LOINC	Auscultation
LA18673-6	LOINC	Bulb syringe aspiration
LA18674-4	LOINC	Colorimetric ETCO2
LA18675-1	LOINC	Condensation in tube
LA18676-9	LOINC	Digital (numeric) ETCO2
LA18677-7	LOINC	Direct re-visualization of tube in place
LA18678-5	LOINC	Endotracheal tube whistle (BAAM, etc)
LA18680-1	LOINC	Visualization of vocal cords
LA18681-9	LOINC	Waveform ETCO2
LA18679-3	LOINC	Other airway device placement confirmation
NewLA-4004021	LOINC	Chest rise

## Airway Device Type

Value Set	AirwayDeviceType - 2.16.840.1.113883.17.3.11.61
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of airway device

Code	Code System	Print Name
LA18004-4	LOINC	Tracheostomy tube
LA18657-9	LOINC	Cricothyrotomy tube
LA18658-7	LOINC	Endotrachial tube
LA18659-5	LOINC	Other invasive airway
LA18660-3	LOINC	Supraglottic airway device-combitube
LA18661-1	LOINC	Supraglottic airway device-king
LA18662-9	LOINC	Supraglottic airway device-LMA
LA18663-7	LOINC	Supraglottic airway device-other

## Alcohol Drug Use Indicator

Value Set	AlcoholDrugUseIndicator - 2.16.840.1.113883.17.3.11.18
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Indications that a patient may have engaged in alcohol or drug use

Code	Code System	Print Name
LA17323-9	LOINC	Alcohol containers/paraphernalia at scene

Code	Code System	Print Name
LA17324-7	LOINC	Drug paraphernalia at scene
LA17325-4	LOINC	Patient admits to alcohol use
LA17326-2	LOINC	Patient admits to drug use
LA17327-0	LOINC	Positive level known from law enforcement or hospital record
NewLA-3117013	LOINC	Physical Exam Indicates Suspected Alcohol or Drug Use

## Anatomic Location

Value Set	AnatomicLocation - 2.16.840.1.113883.17.3.11.76
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Part of the patient body

Code	Code System	Print Name
LA12703-7	LOINC	Neck
LA12705-2	LOINC	Back
LA12706-0	LOINC	Abdomen
LA18111-7	LOINC	Chest
LA18112-5	LOINC	Extremity-lower
LA18113-3	LOINC	Extremity-upper
LA18114-1	LOINC	General/global
LA18115-8	LOINC	Genitalia
LA18116-6	LOINC	Head

## Back Spine Assessment Finding

Value Set	BackSpineAssessmentFinding - 2.16.840.1.113883.17.3.11.34
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS back and spine assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17214-0	LOINC	Puncture/stab wound
LA17212-4	LOINC	Gunshot wound
LA17256-1	LOINC	Pain with range of motion

Code	Code System	Print Name
LA17257-9	LOINC	Tenderness costovertebral angle (CVA)
LA17258-7	LOINC	Tenderness midline spinous process
LA17259-5	LOINC	Tenderness paraspinous
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain
LA17709-9	LOINC	Tenderness
LA17229-8	LOINC	Crush injury
LA22440-4	LOINC	Swelling
LA7423-2	LOINC	Contusion
LA17212-4	LOINC	Gunshot wound

## Back Spine Finding Location

Value Set	BackSpineFindingLocation - 2.16.840.1.113883.17.3.11.35
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Location of finding resulting from EMS back and spine assessment

Code	Code System	Print Name
LA18726-2	LOINC	Back-general
LA18727-0	LOINC	Cervical-left
LA18728-8	LOINC	Cervical-midline
LA18729-6	LOINC	Cervical-right
LA18730-4	LOINC	Lumbar-left
LA18731-2	LOINC	Lumbar-right
LA18732-0	LOINC	Sacral-right
LA18733-8	LOINC	Sacral-left

Code	Code System	Print Name
LA18734-6	LOINC	Sacral-midline
LA18735-3	LOINC	Lumbar-midline
LA18736-1	LOINC	Thoracic-midline
LA18737-9	LOINC	Thoracic-left
LA18738-7	LOINC	Thoracic-right

## Barrier To Care

Value Set	BarrierToCare - 2.16.840.1.113883.17.3.11.85
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Circumstances limiting one's ability to provide care to a patient

Code	Code System	Print Name
LA17306-4	LOINC	Cultural, custom, religious
LA17307-2	LOINC	Developmentally impaired
LA17308-0	LOINC	Hearing impaired
LA17309-8	LOINC	Language
LA17310-6	LOINC	Physical barrier (unable to access patient)
LA17311-4	LOINC	Physically impaired
LA17312-2	LOINC	Physically restrained
LA17313-0	LOINC	Psychologically impaired
LA17314-8	LOINC	Sight impaired
LA17315-5	LOINC	Speech impaired
LA17316-3	LOINC	Unattended or unsupervised (including minors)
LA17317-1	LOINC	Uncooperative
LA17318-9	LOINC	None noted
LA17711-5	LOINC	Unconscious
LA6301-1	LOINC	Obesity
LA23824-8	LOINC	State of Emotional Distress
NewLA-3101035	LOINC	Drug Use, Suspected
NewLA-3101033	LOINC	Alcohol Use, Suspected

## Blood Pressure Measurement Method

Value Set	BloodPressureMeasurementMethod - 2.16.840.1.113883.17.3.11.107
Definition	Technique for measuring blood pressure

Code	Code System	Print Name
LA24013-7		Cuff-automated
LA24012-9		Cuff-manual auscultated
LA25780-0		Arterial Line
LA25782-6		Cuff-Manual Palpated Only
LA19771-7		Doppler
LA25783-4		Venous Line

## Cardiac Arrest Cause

Value Set	CardiacArrestCause - 2.16.840.1.113883.17.3.11.10
Code System	LOINC - 2.16.840.1.113883.6.1
Version	2022
Definition	Etiology of a cardiac arrest

Code	Code System	Print Name
LA17056-5	LOINC	Cardiac (presumed)
LA17058-1	LOINC	Traumatic Cause
LA17059-9	LOINC	Other
LA17977-2	LOINC	Drowning/submersion
LA17978-0	LOINC	Drug overdose
LA17979-8	LOINC	Exsanguination-Medical (Non-Traumatic)
LA17980-6	LOINC	Respiratory/asphyxia
LA9539-3	LOINC	Electrocution

## Cardiac Arrest Outcome

Value Set	CardiacArrestOutcome - 2.16.840.1.113883.17.3.11.101
Definition	Outcome of an EMS cardiac arrest event

Code	Code System	Print Name
LA22792-8	MISSING	Expired in ED
LA22793-6		Expired in the field
LA22794-4		Ongoing resuscitation in the ED
LA22795-1		Return of spontaneous circulation in the field
LA22796-9		Return of spontaneous circulation in the ED
LA22797-7		Ongoing resuscitation by other EMS crew

## Cardiac Arrest Witness Role

Value Set	CardiacArrestWitnessRole - 2.16.840.1.113883.17.3.11.11
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of person who witnessed a cardiac arrest

Code	Code System	Print Name
LA18020-0	LOINC	Witnessed by family member
LA18021-8	LOINC	Witnessed by healthcare provider
LA18022-6	LOINC	Witnessed by Bystander
LA18023-4	LOINC	Not witnessed

## Cardiac Rhythm Reading

Value Set	CardiacRhythmReading - 2.16.840.1.113883.17.3.11.16
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of rhythm found in a cardiac arrest patient

Code	Code System	Print Name
LA12904-1	LOINC	Artifact
LA17059-9	LOINC	Other (not listed)
LA17068-0	LOINC	Asystole
LA17070-6	LOINC	PEA
LA17071-4	LOINC	Unknown AED non-shockable rhythm
LA17072-2	LOINC	Unknown AED shockable rhythm
LA17073-0	LOINC	Ventricular fibrillation
LA17074-8	LOINC	Ventricular tachycardia-pulseless
LA17083-9	LOINC	Agonal/idioventricular
LA17084-7	LOINC	Atrial fibrillation
LA17085-4	LOINC	Atrial flutter
LA17086-2	LOINC	AV block-1st degree
LA17087-0	LOINC	AV block-2nd degree-type 1
LA17088-8	LOINC	AV block-2nd degree-type 2
LA17089-6	LOINC	AV block-3rd degree
LA17090-4	LOINC	Junctional
LA17091-2	LOINC	Left bundle branch block
LA17093-8	LOINC	Paced rhythm

Code	Code System	Print Name
LA17094-6	LOINC	Premature atrial contractions
LA17095-3	LOINC	Premature ventricular contractions
LA17096-1	LOINC	Right bundle branch block
LA17097-9	LOINC	Sinus arrhythmia
LA17394-0	LOINC	Bradycardia
LA17099-5	LOINC	Sinus tachycardia
LA17100-1	LOINC	Supraventricular tachycardia
LA17101-9	LOINC	Torsades de points
LA17703-2	LOINC	STEMI-anterior ischemia
LA17704-0	LOINC	STEMI-inferior ischemia
LA17705-7	LOINC	STEMI-lateral ischemia
LA17706-5	LOINC	STEMI-posterior ischemia
LA17708-1	LOINC	Ventricular tachycardia with pulse
LA17718-0	LOINC	Sinus rhythm
LA18205-7	LOINC	Non-STEMI anterior ischemia
LA18206-5	LOINC	Non-STEMI inferior ischemia
LA18207-3	LOINC	Non-STEMI lateral ischemia
LA18208-1	LOINC	Non-STEMI posterior ischemia
NewLA-9901030	LOINC	Non-STEMI Septal Ischemia
NewLA-9901058	LOINC	STEMI Septal Ischemia

## Cardiopulmonary Resuscitation Type

Value Set	CardiopulmonaryResuscitationType - 2.16.840.1.113883.17.3.11.57
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of procedure used for cardiopulmonary resuscitation

Code	Code System	Print Name
LA17749-5	LOINC	Compressions-Manual
LA17750-3	LOINC	Compressions-external band type device
LA17751-1	LOINC	Compressions-external plunger type device
LA17752-9	LOINC	Compressions-external thumper type device
LA17753-7	LOINC	Compressions-intermittent with ventilation
LA17754-5	LOINC	Compressions-other device
LA17755-2	LOINC	Ventilation-bag valve mask



Code	Code System	Print Name
LA17756-0	LOINC	Ventilation-impedance threshold device
LA17757-8	LOINC	Ventilation-mouth to mouth
LA17758-6	LOINC	Ventilation-pocket mask
NewLA-3009023	LOINC	Ventilation-with OPA/NPA
NewLA-3009025	LOINC	Ventilation-Advanced Airway Device
NewLA-3009027	LOINC	Ventilation-Passive Ventilation with Oxygen
NewLA-3009021	LOINC	Compressions-Hands Only CPR

## Change In Patient Status

Value Set	ChangeInPatientStatus - 2.16.840.1.113883.17.3.11.78
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient condition indicating urgency of treatment

Code	Code System	Print Name
LA65-8	LOINC	Improved
LA17181-1	LOINC	Unchanged
LA11011-6	LOINC	Worse

## Chest Finding

Value Set	ChestFinding - 2.16.840.1.113883.17.3.11.118
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA3525007	LOINC	Bleeding Controlled
newLA3525025	LOINC	Implanted Device
newLA3525027	LOINC	Laceration
newLA3525029	LOINC	Normal
newLA3525047	LOINC	Contusion
newLA3525021	LOINC	Deformity
newLA3525049	LOINC	Tenderness-General
newLA3525019	LOINC	Crush Injury
newLA3525017	LOINC	Burn-White/Waxy
newLA3525015	LOINC	Burn-Redness
newLA3525013	LOINC	Burn-Charring

Code	Code System	Print Name
newLA3525023	LOINC	Flail Segment
newLA3525009	LOINC	Bleeding Uncontrolled
newLA3525005	LOINC	Accessory Muscles Used with Breathing
newLA3525003	LOINC	Avulsion
newLA3525001	LOINC	Abrasion
newLA3525033	LOINC	Pain
newLA3525035	LOINC	Pain with Inspiration/Expiration
newLA3525037	LOINC	Puncture/Stab Wound
newLA3525039	LOINC	Retraction
newLA3525041	LOINC	Tenderness
newLA3525043	LOINC	Gunshot Wound
newLA3525045	LOINC	Swelling
newLA3525011	LOINC	Burn-Blistering

## Chest Finding Location

Value Set	ChestFindingLocation - 2.16.840.1.113883.17.3.11.119
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA3524011	LOINC	General - Posterior
newLA3524001	LOINC	Left - Anterior
newLA3524003	LOINC	Left - Posterior
newLA3524005	LOINC	Right - Anterior
newLA3524009	LOINC	General - Anterior
newLA3524013	LOINC	Left - Side
newLA3524015	LOINC	Right - Side
newLA3524007	LOINC	Right - Posterior

## Complaint Type

Value Set	Complaint Type - 2.16.840.1.113883.17.3.11.94
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Relative primacy of complaint

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA18923-5	LOINC	Chief - primary
LA18924-3	LOINC	Secondary

## Confidentiality

Value Set	Confidentiality - 2.16.840.1.113883.1.11.10228
Code System	HL7 Confidentiality - 2.16.840.1.113883.5.25
Definition	Appropriateness for disclosure of information

## Crew Disposition

Value Set	CrewDisposition - 2.16.840.1.113883.17.3.11.120
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA4229013	LOINC	Back in Service, Care/Support Services Refused
newLA4229011	LOINC	Back in Service, No Care/Support Services Required
newLA4229009	LOINC	Incident Support Services Provided (Including Standby)
newLA4229007	LOINC	Assumed Primary Care from Another EMS Crew
newLA4229005	LOINC	Provided Care Supporting Primary EMS Crew
newLA4229003	LOINC	Initiated Primary Care and Transferred to Another EMS Crew
newLA4229001	LOINC	Initiated and Continued Primary Care

## Crew Role Level

Value Set	CrewRoleLevel - 2.16.840.1.113883.17.3.11.81
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Class of person providing care to an EMS patient, excluding the patient

Code	Code System	Print Name
LA15276-1	LOINC	Student
LA18695-9	LOINC	Critical care paramedic
LA18696-7	LOINC	Advanced emergency medical technician (AEMT)
LA18697-5	LOINC	Emergency medical responder (EMR)

Code	Code System	Print Name
LA18698-3	LOINC	Emergency medical technician (EMT)
LA18699-1	LOINC	Paramedic
LA18704-9	LOINC	Other healthcare professional
LA18705-6	LOINC	Other non-healthcare professional
LA18706-4	LOINC	Community paramedicine
LA4687-5	LOINC	Physician
LA9297-8	LOINC	Respiratory therapist
LA9292-9	LOINC	Nurse Practitioner
LA9296-0	LOINC	Physician Assistant
LA24387-5	LOINC	Licensed Practical Nurse (LPN)
LA9291-1	LOINC	Registered Nurse
NewLA-9925002	LOINC	Emergency Medical Technician - Intermediate

## Destination Choice Reason

Value Set	DestinationChoiceReason - 2.16.840.1.113883.17.3.11.68
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of rationale for selecting a patient destination

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17182-9	LOINC	Closest facility
LA17184-5	LOINC	Family choice
LA17185-2	LOINC	Insurance status/requirement
LA17186-0	LOINC	Law enforcement choice
LA17187-8	LOINC	On-line medical direction
LA17188-6	LOINC	Patient's choice
LA17189-4	LOINC	Patient's physician's choice
LA17190-2	LOINC	Protocol
LA17191-0	LOINC	Regional specialty center
LA18301-4	LOINC	Diversion

## Destination Prearrival Activation

Value Set	DestinationPrearrivalActivation - 2.16.840.1.113883.17.3.11.87
Code System	LOINC - 2.16.840.1.113883.6.1

Definition	Kind of preparation requested at destination prior to patient arrival	
Code	Code System	Print Name
LA18117-4	LOINC	Yes, adult trauma
LA18118-2	LOINC	Yes, cardiac arrest
LA18119-0	LOINC	Yes, obstetrics
LA18120-8	LOINC	Yes, other
LA18121-6	LOINC	Yes, pediatric trauma
LA18122-4	LOINC	Yes, STEMI
LA18123-2	LOINC	Yes, stroke
LA32-8	LOINC	No
NewLA-4224019NewCode	LOINC	Yes-Sepsis

## Destination Type

Value Set	DestinationType - 2.16.840.1.113883.17.3.11.69	
Code System	LOINC - 2.16.840.1.113883.6.1	
Definition	Kind of facility	
Code	Code System	Print Name
LA11504-0	LOINC	Hospital emergency department
LA14084-0	LOINC	Home
LA18686-8	LOINC	Hospital non-emergency department bed
LA18687-6	LOINC	Clinic
LA18688-4	LOINC	Morgue/mortuary
LA18690-0	LOINC	Other destination
LA18691-8	LOINC	Other EMS responder (air)
LA18692-6	LOINC	Other EMS responder (ground)
LA18693-4	LOINC	Police/jail
LA24393-3	LOINC	Freestanding Emergency Department
LA24392-5	LOINC	Urgent Care
NewLA-4221031	LOINC	Mental Health Facility
NewLA-4221027	LOINC	Diagnostic Services
NewLA-4221029	LOINC	Assisted Living Facility
NewLA-4221025	LOINC	Dialysis Center
NewLA-4221039	LOINC	Drug and/or Alcohol Rehabilitation Facility
NewLA-4221041	LOINC	Skilled Nursing Facility

Code	Code System	Print Name
NewLA-4221037	LOINC	Physical Rehabilitation Facility
NewLA-4221035	LOINC	Other Recurring Care Center
NewLA-4221033	LOINC	Nursing Home

## Destination Ward Kind

Value Set	DestinationWardKind - 2.16.840.1.113883.17.3.11.103
Definition	The location within the hospital that the patient was taken directly by EMS

Code	Code System	Print Name
LA22808-2		Hospital-burn
LA22809-0		Hospital-cath lab
LA22810-8		Hospital-CCU
LA22824-9		Hospital-orthopedic
LA22811-6		Hospital-endoscopy
LA22812-4		Hospital-hospice
LA22813-2		Hospital-hyperbaric oxygen treatment
LA22814-0		Hospital-ICU
LA22815-7		Hospital-labor and delivery
LA22816-5		Hospital-medical/surgery
LA22817-3		Hospital-mental health
LA22818-1		Hospital-MICU
LA22819-9		Hospital-NICU
LA22820-7		Hospital-nursery
LA22821-5		Hospital-peds (general)
LA22822-3		Hospital-peds ICU
LA22823-1		Hospital-OR
LA22825-6		Hospital-other
LA22826-4		Hospital-outpatient bed
LA22827-2		Hospital-radiology services - MRI
LA22828-0		Hospital-radiology services - CT/PET
LA22829-8		Hospital-radiology services - x-ray
LA22830-6		Hospital-radiation
LA22831-4		Hospital-rehabilitation
LA22832-2		Hospital-SICU

Code	Code System	Print Name
LA24394-1		Hospital-Oncology
LA24395-8		Hospital-Outpatient Surgery

## Disaster Type

Value Set	DisasterType - 2.16.840.1.113883.17.3.11.9
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of incident resulting in or likely to result in injuries or clinically adverse events

Code	Code System	Print Name
LA17594-5	LOINC	Weather (Other)
LA18089-5	LOINC	Biologic agent
LA18090-3	LOINC	Building failure
LA18091-1	LOINC	Chemical agent
LA18092-9	LOINC	Explosive device
LA18093-7	LOINC	Fire
LA18094-5	LOINC	Hostage event
LA18095-2	LOINC	Mass gathering
LA18096-0	LOINC	Mass illness
LA18097-8	LOINC	Nuclear agent
LA18098-6	LOINC	Radioactive device
LA18099-4	LOINC	Secondary destructive device
LA18100-0	LOINC	Shooting/sniper
LA18101-8	LOINC	Vehicular
NewLA-4507031	LOINC	Flood
NewLA-4507033	LOINC	Land Slide
NewLA-4507035	LOINC	Winter Storm
NewLA-4507037	LOINC	Tornado
NewLA-4507039	LOINC	Hurricane
NewLA-4507029	LOINC	Earthquake

## Dispatch Delay Type

Value Set	DispatchDelayType - 2.16.840.1.113883.17.3.11.50
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying an EMS dispatch

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17183-7	LOINC	Diversion/failure (of previous unit)
LA17579-6	LOINC	Caller (uncooperative)
LA17580-4	LOINC	High call volume
LA17581-2	LOINC	Incomplete Address Information Provided
LA17582-0	LOINC	No EMS vehicles (units) available
LA17584-6	LOINC	Technical failure (computer, phone etc.)
LA18081-2	LOINC	None/no delay
LA7540-3	LOINC	Language barrier
NewLA-2208019	LOINC	Communication Specialist-Assignment Error
NewLA-2208021	LOINC	No Receiving MD, Bed, Hospital
NewLA-2208023	LOINC	Specialty Team Delay

## Dispatch Reason

Value Set	Dispatch Reason - 2.16.840.1.113883.17.3.11.49
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of medical problem or incident reported

Code	Code System	Print Name
LA23843-8	LOINC	Abdominal pain/problems
LA15903-0	LOINC	Headache
LA17117-5	LOINC	Allergic reaction/stings
LA17118-3	LOINC	Animal bite
LA17119-1	LOINC	Assault
LA17120-9	LOINC	Automated crash notification
LA17121-7	LOINC	Back pain (non-traumatic)
LA17122-5	LOINC	Breathing problems
LA17123-3	LOINC	Burns/explosion
LA17124-1	LOINC	Carbon monoxide poisoning/hazmat/inhalation/ chemical/biological/radiological/nuclear
LA17125-8	LOINC	Cardiac arrest/death
LA17126-6	LOINC	Chest pain (non-traumatic)
LA17127-4	LOINC	Choking
LA17128-2	LOINC	Convulsions/seizure
LA17129-0	LOINC	Diabetic problem



Code	Code System	Print Name
LA17131-6	LOINC	Electrocution/lightning
LA17132-4	LOINC	Eye problem/injury
LA17133-2	LOINC	Falls
LA17134-0	LOINC	Healthcare professional/admission
LA17135-7	LOINC	Heart problems/AICD
LA17136-5	LOINC	Heat/cold exposure
LA17137-3	LOINC	Hemorrhage/lacerations
LA17138-1	LOINC	Industrial accident/inaccessible incident/other entrapments (non-vehicle)
LA17140-7	LOINC	Overdose/poisoning/ingestion
LA17141-5	LOINC	Pandemic/epidemic/outbreak
LA17142-3	LOINC	Pregnancy/childbirth/miscarriage
LA17143-1	LOINC	Psychiatric problem/abnormal behavior/suicide attempt
LA17144-9	LOINC	Sick person
LA17145-6	LOINC	Stab/gunshot wound/penetrating trauma
LA17146-4	LOINC	Traffic/transportation incident
LA17147-2	LOINC	Transfer/interfacility/palliative Care
LA17148-0	LOINC	Unconscious/fainting/near-fainting
LA17149-8	LOINC	Unknown problem person down
LA17150-6	LOINC	Standby
LA18093-7	LOINC	Fire
LA18209-9	LOINC	No other appropriate choice
LA18210-7	LOINC	Medical alarm
LA18211-5	LOINC	Well person check
LA9553-4	LOINC	Stroke/CVA
LA9555-9	LOINC	Traumatic injury
LA17130-8	LOINC	Drowning/Diving/SCUBA Accident
LA23800-8	LOINC	Air medical Transport
NewLA- NewLA-2301085	LOINC	Altered Mental Status
NewLA-2301087	LOINC	Intercept
NewLA-2301089	LOINC	Nausea
NewLA-2301091	LOINC	Vomiting

## ECG Type

Value Set	ECGType - 2.16.840.1.113883.17.3.11.19
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of electrocardiogram equipment

Code	Code System	Print Name
LA18664-5	LOINC	3 lead
LA18665-2	LOINC	4 lead
LA18666-0	LOINC	5 lead
LA18667-8	LOINC	12 lead-left sided (normal)
LA18668-6	LOINC	12 lead-right sided
LA18669-4	LOINC	15 lead
LA18670-2	LOINC	18 lead
LA18671-0	LOINC	Other
NewLA-3304000	LOINC	2 Lead ECG (pads or paddles)

## EMD Performed

Value Set	EMDPerformed - 2.16.840.1.113883.17.3.11.48
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Manner of performing emergency medical dispatch

Code	Code System	Print Name
LA17151-4	LOINC	Yes, with pre-arrival instructions
LA17152-2	LOINC	Yes, without pre-arrival instructions
LA17153-0	LOINC	Yes, unknown if pre-arrival instructions given
LA32-8	LOINC	No

## EMS Level Of Service

Value Set	EMSLevelOfService - 2.16.840.1.113883.17.3.11.70
Definition	Level of service provided for an encounter (as defined by CMS)

Code	Code System	Print Name
LA18102-6		ALS, level 1
LA18103-4		ALS, level 1 emergency
LA18104-2		ALS, level 2

Code	Code System	Print Name
LA18105-9		BLS
LA18106-7		BLS, emergency
LA18107-5		Fixed wing (airplane)
LA18108-3		Paramedic intercept
LA18109-1		Specialty care transport
LA18110-9		Rotary wing (helicopter)

## EMS Medication Administration Device

Value Set	EMSMedicationAdministrationDevice - 2.16.840.1.113883.17.3.11.108
Definition	Kind of device used to administer a substance to a patient

Code	Code System	Print Name
39849001	MISSING	Nasal Oxygen Cannula
427591007	MISSING	Non-Rebreather Oxygen Mask
425926003	MISSING	Partial Rebreather Oxygen Mask
428285009	MISSING	Venturi Mask
398013009		Subcutaneous port
425478008		Blow by oxygen mask

## EMS Transport Disposition

Value Set	EMSTransportDisposition - 2.16.840.1.113883.17.3.11.115
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Code	Code System	Print Name
newLA4230007		Transport by Another EMS Unit, with a Member of This Crew
newLA4230005		Transport by Another EMS Unit
newLA4230011		Non-Patient Transport (Not Otherwise Listed)
newLA4230003		Transport by This EMS Unit, with a Member of Another Crew
newLA4230009		Patient Refused Transport
newLA4230013		No Transport
newLA4230001		Transport by This EMS Unit (This Crew Only)

## EMS Unit Disposition

Value Set	EMSUnitDisposition - 2.16.840.1.113883.17.3.11.112
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA4227003	LOINC	Cancelled on Scene
newLA4227005	LOINC	Cancelled Prior to Arrival at Scene
newLA4227007	LOINC	No Patient Contact
newLA4227009	LOINC	No Patient Found
newLA4227011	LOINC	Non-Patient Incident (Not Otherwise Listed)
newLA4227001	LOINC	Patient Contact Made

## Entity Name Use

Value Set	EntityNameUse - 2.16.840.1.113883.1.11.15913
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Code	Code System	Print Name
A		Artist/Stage
ABC		Alphabetic
ASGN		Assigned
C		License
I		Indigenous/Tribal
IDE		Ideographic
L		Legal
P		Pseudonym
PHON		Phonetic
R		Religious
SNDX		Soundex
SRCH		Search
SYL		Syllabic

## Ethnicity

Value Set	Ethnicity - 2.16.840.1.113883.1.11.15836
Definition	Person's ethnic background

## Ethnicity Group

Value Set	Ethnicity Group - 2.16.840.1.114222.4.11.837
Code System	Race and Ethnicity - CDC - 2.16.840.1.113883.6.238
Definition	Abbreviated set of ethnic backgrounds

Code	Code System	Print Name
2135-2	Race and Ethnicity - CDC	Hispanic or Latino
2186-5	Race and Ethnicity - CDC	Not Hispanic or Latino

## Ethnicity Value Set

Value Set	Ethnicity Value Set - 2.16.840.1.114222.4.11.837
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Code	Code System	Print Name
2135-2		Hispanic or Latino
2186-5		Not Hispanic or Latino

## Existence Of Contraindications To Thrombolytic Use

Value Set	ExistenceOfContraindicationsToThrombolyticUse - 2.16.840.1.113883.17.3.11.41
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Confidence that contraindication to thrombolytic use exist

Code	Code System	Print Name
LA17114-2	LOINC	Definite contraindications to thrombolytic use
LA17115-9	LOINC	Possible contraindications to thrombolytic Use
LA17116-7	LOINC	No contraindications to thrombolytic Use

## Extremities Assessment Finding

Value Set	ExtremitiesAssessmentFinding - 2.16.840.1.113883.17.3.11.36
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS extremity assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17214-0	LOINC	Puncture/stab wound

Code	Code System	Print Name
LA17229-8	LOINC	Crush injury
LA17260-3	LOINC	Amputation-acute
LA17261-1	LOINC	Amputation-previous
LA17262-9	LOINC	Dislocation
LA17263-7	LOINC	Edema
LA17264-5	LOINC	Fracture-closed
LA17265-2	LOINC	Fracture-open
LA17266-0	LOINC	Motor function-abnormal/weakness
LA17267-8	LOINC	Motor function-absent
LA17268-6	LOINC	Motor function-normal
LA17269-4	LOINC	Pulse-abnormal
LA17270-2	LOINC	Pulse-absent
LA17271-0	LOINC	Pulse-normal
LA17272-8	LOINC	Sensation-abnormal
LA17273-6	LOINC	Sensation-absent
LA17274-4	LOINC	Sensation-normal
LA17344-5	LOINC	Paralysis
LA17709-9	LOINC	Tenderness
LA18220-6	LOINC	Avulsion
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA18249-5	LOINC	Clubbing of fingers
LA6626-1	LOINC	Normal
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain
LA18221-4	LOINC	Burn-Blistering
LA23816-4	LOINC	Arm Drift
LA7423-2	LOINC	Contusion
LA17212-4	LOINC	Gunshot wound
LA22440-4	LOINC	Swelling

## Extremity Finding Location

Value Set	ExtremityFindingLocation - 2.16.840.1.113883.17.3.11.37
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Location of finding resulting from EMS extremity assessment

Code	Code System	Print Name
LA18739-5	LOINC	Ankle-left
LA18740-3	LOINC	Ankle-right
LA18741-1	LOINC	Arm-upper-left
LA18742-9	LOINC	Arm-upper-right
LA18743-7	LOINC	Elbow-left
LA18744-5	LOINC	Elbow-right
LA18745-2	LOINC	Finger-2nd (index)-left
LA18746-0	LOINC	Finger-2nd (index)-right
LA18747-8	LOINC	Finger-3rd (middle)-left
LA18748-6	LOINC	Finger-3rd (middle)-right
LA18749-4	LOINC	Finger-4th (ring)-left
LA18750-2	LOINC	Finger-4th (ring)-right
LA18751-0	LOINC	Finger-5th (smallest)-left
LA18752-8	LOINC	Finger-5th (smallest)-right
LA18753-6	LOINC	Foot-dorsal-left
LA18754-4	LOINC	Foot-dorsal-right
LA18755-1	LOINC	Foot-plantar-right
LA18756-9	LOINC	Foot-plantar-left
LA18757-7	LOINC	Arm-Lower-Left
LA18758-5	LOINC	Arm-Lower-Right
LA18759-3	LOINC	Hand-dorsal-left
LA18760-1	LOINC	Hand-dorsal-right
LA18761-9	LOINC	Hand-palm-right
LA18762-7	LOINC	Hand-palm-left
LA18763-5	LOINC	Hip-left
LA18764-3	LOINC	Hip-right
LA18765-0	LOINC	Wrist-right
LA18766-8	LOINC	Wrist-left
LA18767-6	LOINC	Knee-left

Code	Code System	Print Name
LA18768-4	LOINC	Knee-right
LA18769-2	LOINC	Leg-lower-left
LA18770-0	LOINC	Leg-lower-right
LA18771-8	LOINC	Leg-upper-right
LA18772-6	LOINC	Leg-upper-left
LA18773-4	LOINC	Shoulder-left
LA18774-2	LOINC	Shoulder-right
LA18775-9	LOINC	Thumb-left
LA18776-7	LOINC	Thumb-right
LA18777-5	LOINC	Toe-1st (big)-left
LA18778-3	LOINC	Toe-1st (big)-right
LA18779-1	LOINC	Toe-2nd-left
LA18780-9	LOINC	Toe-2nd-right
LA18781-7	LOINC	Toe-3rd-left
LA18782-5	LOINC	Toe-3rd-right
LA18783-3	LOINC	Toe-4th-left
LA18784-1	LOINC	Toe-4th-right
LA18785-8	LOINC	Toe-5th (smallest)-left
LA18786-6	LOINC	Toe-5th (smallest)-right
NewLA-3515111	LOINC	Foot-Whole Foot-Right
NewLA-3515101	LOINC	Hand-Whole Hand-Left
NewLA-3515097	LOINC	Arm-Whole Arm and Hand-Left
NewLA-3515099	LOINC	Arm-Whole Arm and Hand-Right
NewLA-3515109	LOINC	Foot-Whole Foot-Left
NewLA-3515107	LOINC	Leg-Whole Leg-Right
NewLA-3515105	LOINC	Leg-Whole Leg-Left
NewLA-3515103	LOINC	Hand-Whole Hand-Right

## Eye Assessment Finding

Value Set	EyeAssessmentFinding - 2.16.840.1.113883.17.3.11.38
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS eye assessment



Code	Code System	Print Name
LA14698-7	LOINC	Missing
LA15255-5	LOINC	Reactive
LA15256-3	LOINC	Nonreactive
LA17275-1	LOINC	1 mm
LA17276-9	LOINC	2 mm
LA17277-7	LOINC	3 mm
LA17278-5	LOINC	4 mm
LA17279-3	LOINC	5 mm
LA17280-1	LOINC	6 mm
LA17281-9	LOINC	7 mm
LA17282-7	LOINC	Clouded
LA17283-5	LOINC	Hyphema
LA17284-3	LOINC	Open globe
LA17285-0	LOINC	Pupil-irregular/teardrop
LA17710-7	LOINC	Blind
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA18250-3	LOINC	Cataract present
LA18251-1	LOINC	Dysconjugate gaze
LA18253-7	LOINC	Jaundiced sclera
LA18254-5	LOINC	Nonreactive prosthetic
LA18255-2	LOINC	Nystagmus noted
LA18256-0	LOINC	PERRL
LA18257-8	LOINC	Sluggish
LA18258-6	LOINC	8 mm or >
LA7423-2	LOINC	Contusion
LA18252-9	LOINC	Glaucoma Present
LA17283-5	LOINC	Hyphema
LA17214-0	LOINC	Puncture/Stab Wound
LA22440-4	LOINC	Swelling
NewLA-3518061	LOINC	Dilated
NewLA-3518063	LOINC	Pin Point

## Eye Finding Location

Value Set	EyeFindingLocation - 2.16.840.1.113883.17.3.11.39
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Location of finding resulting from EMS eye assessment

Code	Code System	Print Name
LA18787-4	LOINC	Eyes-bilateral
LA18788-2	LOINC	Eye-left
LA18789-0	LOINC	Eye-right

## FDA Route of Administration

Value Set	FDA Route of Administration
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## Face Assessment Finding

Value Set	FaceAssessmentFinding - 2.16.840.1.113883.17.3.11.27
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS face assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17211-6	LOINC	Drainage
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17216-5	LOINC	Asymmetric smile or droop
LA17212-4	LOINC	Gunshot Wound
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal

Code	Code System	Print Name
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain
LA7423-2	LOINC	Contusion
LA17229-8	LOINC	Crush Injury
LA22440-4	LOINC	Swelling
LA17709-9	LOINC	Tenderness

## Final Patient Condition

Value Set	FinalPatientCondition - 2.16.840.1.113883.17.3.11.111
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Code	Code System	Print Name
LA17696-8		Critical (Red)
LA17695-0		Emergent (Yellow)
LA17694-3		Lower Acuity (Green)
LA17697-6		Dead without Resuscitation Efforts (Black)
NewLA-4219011		Non-Acute/Routine
NewLA-4219009		Dead with Resuscitation Efforts (Black)

## First Monitored Rhythm

Value Set	FirstMonitoredRhythm - 2.16.840.1.113883.17.3.11.14
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of rhythm found in a cardiac arrest patient on initial field examination

Code	Code System	Print Name
LA17068-0	LOINC	Asystole
LA17070-6	LOINC	PEA
LA17071-4	LOINC	Unknown AED non-shockable rhythm
LA17072-2	LOINC	Unknown AED shockable rhythm
LA17073-0	LOINC	Ventricular fibrillation
LA17074-8	LOINC	Ventricular tachycardia-pulseless

## Glasgow Coma Score Special Circumstances

Value Set	GlasgowComaScoreSpecialCircumstances - 2.16.840.1.113883.17.3.11.89
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Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Circumstance confounding the assessment of one or more Glasgow Coma Scale observations

Code	Code System	Print Name
LA17102-7	LOINC	Initial GCS has legitimate values without interventions such as intubation and sedation
LA17103-5	LOINC	Eye obstruction prevents eye assessment
LA17104-3	LOINC	Patient chemically sedated
LA17105-0	LOINC	Patient chemically paralyzed
LA17106-8	LOINC	Patient intubated

## HL7 BasicConfidentialityKind

Value Set	HL7 BasicConfidentialityKind - 2.16.840.1.113883.1.11.16926
Version	2010-04-21
Source	HL7

Code	Code System	Print Name
N		Normal
R		Restricted
V		Very Restricted

## HL7 Confidentiality

Value Set	HL7 Confidentiality
Description	Types of privacy metadata classifying an IT resource (data, information object, service, or system capability) according to its level of sensitivity, which is based on an analysis of applicable privacy policies and the risk of financial, reputational, or other harm to an individual or entity that could result if made available or disclosed to unauthorized individuals, entities, or processes.

## HL7 Human Language

Value Set	HL7 Human Language
Description	Codes for the Representation of Names of Languages

## HL7 LanguageAbilityMode

Value Set	HL7 LanguageAbilityMode - 2.16.840.1.113883.1.11.12249
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Version	1
Definition	This identifies the language ability of the individual. A value representing the method of expression of the language.

Code	Code System	Print Name
ESGN		Expressed signed
ESP		Expressed spoken
EWR		Expressed written
RSGN		Received signed
RSP		Received spoken
RWR		Received written

## HL7 Marital Status

Value Set	HL7 Marital Status - 2.16.840.1.113883.1.11.12212
Version	1
Definition	Marital Status is the domestic partnership status of a person.

Code	Code System	Print Name
A		Annulled
D		Divorced
I		Interlocutory
L		Legally Separated
M		Married
P		Polygamous
S		Never Married
T		Domestic partner
W		Widowed

## HL7 Religious Affiliation

Value Set	HL7 Religious Affiliation - 2.16.840.1.113883.1.11.19185
Version	1
Definition	This reflects the spiritual faith affiliation

## Head Assessment Finding

Value Set	HeadAssessmentFinding - 2.16.840.1.113883.17.3.11.26
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Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS head assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17210-8	LOINC	Decapitation
LA17211-6	LOINC	Drainage
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17212-4	LOINC	Gunshot Wound
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain
LA7423-2	LOINC	Contusion
LA17229-8	LOINC	Crush Injury
LA22440-4	LOINC	Swelling
LA17709-9	LOINC	Tenderness

## Healthcare Provider Taxonomy (HIPAA)

Value Set	Healthcare Provider Taxonomy (HIPAA) - 2.16.840.1.114222.4.11.1066
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## Heart Assessment Finding

Value Set	HeartAssessmentFinding - 2.16.840.1.113883.17.3.11.30
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS heart assessment

Code	Code System	Print Name
LA17239-7	LOINC	Heart sounds decreased
LA17240-5	LOINC	Murmur-diastolic
LA17241-3	LOINC	Murmur-systolic
LA18241-2	LOINC	Clicks
LA18242-0	LOINC	S1
LA18243-8	LOINC	S2
LA18244-6	LOINC	S3
LA18245-3	LOINC	S4
LA18246-1	LOINC	Rubs
LA6626-1	LOINC	Normal

## Hospital Capability

Value Set	HospitalCapability - 2.16.840.1.113883.17.3.11.104
Definition	Characteristic hospital capabilities that might be germane to an EMS destination selection

Code	Code System	Print Name
LA22833-0		Behavioral health
LA22834-8		Burn center
LA22835-5		Critical access hospital
LA22836-3		Hospital - general
LA22837-1		Neonatal center
LA22838-9		Pediatric center
LA22842-1		Rehabilitation center
LA22843-9		Trauma center level 1
LA22844-7		Trauma center level 2
LA22845-4		Trauma center level 3
LA22846-2		Trauma center level 4
LA22847-0		Trauma center level 5
LA22848-8		Cardiac-STEMI/PCI Capable
LA22849-6		Cardiac-STEMI/PCI Capable (24/7)
LA22850-4		Cardiac-STEMI/Non-PCI Capable
NewLA-9908037		Stroke-Acute Stroke Ready Hospital (ASRH)
NewLA-9908039		Stroke-Primary Stroke Center (PSC)
NewLA-9908041		Stroke-Thrombectomy-Capable Stroke Center (TSC)

Code	Code System	Print Name
NewLA-9908043		Stroke-Comprehensive Stroke Center (CSC)
NewLA-9908045		Cancer Center
NewLA-9908047		Labor and Delivery

## Human language

Value Set	Human language - 2.16.840.1.113883.1.11.11526
Code System	HL7 Human Language - 2.16.840.1.113883.6.121
Definition	Codes for the Representation of Names of Languages

## IC D-10

Value Set	ICD-10
Description	Classifications for diseases, signs and symptoms, abnormal findings, complaints, social circumstances, and external causes of injury or diseases

## ICD-10 CM

Value Set	ICD-10 CM
Description	International Classification of Diseases, 10th Revision, Clinical Modification

## ICD-10 CM AND PCS

Value Set	ICD-10 CM AND PCS - 2.16.840.1.113883.17.3.11.121
Description	ICD-10-CM diagnosis and ICD-10-PCS procedure values, for use in medical/surgical history.

## ICD-10 PCS

Value Set	ICD-10 PCS
Description	ICD-10 Procedure Coding System

## Infusion Site

Value Set	Infusion Site - 2.16.840.1.113883.17.3.11.56
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Anatomical location of administered infusion, typically intravenous



Code	Code System	Print Name
LA18757-7	LOINC	Forearm-left
LA18758-5	LOINC	Forearm-right
LA18790-8	LOINC	Antecubital-left
LA18791-6	LOINC	Antecubital-right
LA18792-4	LOINC	External jugular-left
LA18793-2	LOINC	External jugular-right
LA18794-0	LOINC	Femoral vein-left
LA18795-7	LOINC	Femoral vein-right
LA18796-5	LOINC	Foot-left
LA18797-3	LOINC	Foot-right
LA18798-1	LOINC	Hand-right
LA18799-9	LOINC	Hand-left
LA18800-5	LOINC	Internal jugular-left
LA18801-3	LOINC	Internal jugular-right
LA18802-1	LOINC	IO-femur-left distal
LA18803-9	LOINC	IO-femur-right distal
LA18804-7	LOINC	IO-humerus-left
LA18805-4	LOINC	IO-humerus-right
LA18806-2	LOINC	IO-iliac crest-left
LA18807-0	LOINC	IO-iliac crest-right
LA18808-8	LOINC	IO-sternum
LA18809-6	LOINC	IO-tibia-left distal
LA18810-4	LOINC	IO-tibia-right distal
LA18811-2	LOINC	IO-tibia-left proximal
LA18812-0	LOINC	IO-tibia-right proximal
LA18813-8	LOINC	Other central access (PICC, portacath, etc.)
LA18814-6	LOINC	Other peripheral access
LA18815-3	LOINC	Scalp
LA18816-1	LOINC	Subclavian-left
LA18817-9	LOINC	Subclavian-right
LA18818-7	LOINC	Umbilical
LA18112-5	LOINC	Extremity-lower
LA18113-3	LOINC	Extremity-upper
LA24415-4	LOINC	Radial-Left

Code	Code System	Print Name
LA24416-2	LOINC	Radial-Right
LA24417-0	LOINC	Upper Arm-Left
LA24418-8	LOINC	Upper Arm-Right
LA24419-6	LOINC	Venous Cutdown-Left Lower Extremity
LA24420-4	LOINC	Venous Cutdown-Right Lower Extremity
NewLA-3913081	LOINC	Wrist-Right
NewLA-3913079	LOINC	Wrist-Left

## Initial Patient Condition

Value Set	InitialPatientCondition - 2.16.840.1.113883.17.3.11.59
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Change in acuity of patient condition

Code	Code System	Print Name
LA17696-8	LOINC	Critical (Red)
LA17695-0	LOINC	Emergent (Yellow)
LA17694-3	LOINC	Lower Acuity (Green)
LA17697-6	LOINC	Dead without Resuscitation Efforts (Black)
NewLA-4219011	LOINC	Non-Acute/Routine

## Injury Risk Factor

Value Set	InjuryRiskFactor - 2.16.840.1.113883.17.3.11.4
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Circumstance affecting likelihood of injury

Code	Code System	Print Name
LA17348-6	LOINC	Fall adults: > 20 ft. (one story is equal to 10 ft.)
LA17349-4	LOINC	Fall children: > 10 ft. or 2-3 times the height of the child
LA17350-2	LOINC	Motorcycle crash > 20 mph
LA17352-8	LOINC	Crash death in same passenger compartment
LA17353-6	LOINC	Crash ejection (partial or complete) from vehicle
LA17357-7	LOINC	Crash intrusion: > 12 in. occupant site; > 18 in. any site

Code	Code System	Print Name
LA17360-1	LOINC	Auto v. pedestrian/bicyclist thrown, run over, or > 20 MPH impact
LA18124-0	LOINC	Crash vehicle telemetry data (AACN) consistent with high risk of injury

## LOINC

Value Set	LOINC
Description	Logical Observation Identifiers Names and Codes

## Language

Value Set	Language - 2.16.840.1.113883.1.11.11526
Source	Internet RFC 4646
Source URL	<a href="http://www.loc.gov/standards/iso639-2/php/code_list.php">http://www.loc.gov/standards/iso639-2/php/code_list.php</a>
Definition	A value set of codes defined by Internet RFC 4646 (replacing RFC 3066). Please see ISO 639 language code set maintained by Library of Congress for enumeration of language codes.

## Language Ability Proficiency

Value Set	LanguageAbilityProficiency - 2.16.840.1.113883.1.11.12199	
Code	Code System	Print Name
E		Excellent
F		Fair
G		Good
P		Poor

## Length Based Weight Class

Value Set	LengthBasedWeightClass - 2.16.840.1.113883.17.3.11.24	
Code System	LOINC - 2.16.840.1.113883.6.1	
Definition	Weight category estimated by length	
Code	Code System	Print Name
LA15553-3	LOINC	Blue
LA15554-1	LOINC	Grey
LA15555-8	LOINC	Green

Code	Code System	Print Name
LA17192-8	LOINC	Pink
LA17193-6	LOINC	Red
LA17194-4	LOINC	Purple
LA17195-1	LOINC	Yellow
LA17196-9	LOINC	Orange
LA4457-3	LOINC	White

## Level Of Responsiveness

Value Set	LevelOfResponsiveness - 2.16.840.1.113883.17.3.11.21
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of stimulation necessary to elicit a patient reaction

Code	Code System	Print Name
LA17107-6	LOINC	Painful
LA17108-4	LOINC	Verbal
LA9340-6	LOINC	Alert
LA9343-0	LOINC	Unresponsive

## Lung Finding

Value Set	LungFinding - 2.16.840.1.113883.17.3.11.116
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA3523001	LOINC	Breath Sounds-Absent
newLA3523003	LOINC	Breath Sounds-Decreased
newLA3523013	LOINC	Normal
newLA3523005	LOINC	Breath Sounds-Equal
newLA3523007	LOINC	Breath Sounds-Normal
newLA3523011	LOINC	Increased Respiratory Effort
newLA3523031	LOINC	Wheezing-Inspiratory
newLA3523009	LOINC	Foreign Body
newLA3523017	LOINC	Pain
newLA3523019	LOINC	Pain with Inspiraton/Expiration
newLA3523021	LOINC	Rales

Code	Code System	Print Name
newLA3523023	LOINC	Rhonchi
newLA3523027	LOINC	Stridor
newLA3523029	LOINC	Wheezing-Expiratory
newLA3523025	LOINC	Rhonchi/Wheezing

## Lung Finding Location

Value Set	LungFindingLocation - 2.16.840.1.113883.17.3.11.117
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA3522003	LOINC	Right
newLA3522001	LOINC	Left
newLA3522005	LOINC	Bilateral

## Mechanism Of Injury

Value Set	MechanismOfInjury - 2.16.840.1.113883.17.3.11.1
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of physical phenomenon causing an injury

Code	Code System	Print Name
LA17335-3	LOINC	Blunt
LA17336-1	LOINC	Penetrating
LA46-8	LOINC	Other
LA7318-4	LOINC	Burn

## Medication Administration Route

Value Set	MedicationAdministrationRoute - 2.16.840.1.113883.17.3.11.43
Code System	FDA Route of Administration - 2.16.840.1.113883.3.26.1.1.1
Definition	Physical route for introducing medications into a patient
Description	Subset of FDA routes of administration. Mappings to NEMESIS route codes, including modeling of orthogonal concepts (e.g., devices), is included in implementation guide text appendix.

Code	Code System	Print Name
C38208	FDA Route of Administration	Endotracheal
C38246	FDA Route of Administration	Intragastric
C38216	FDA Route of Administration	Respiratory (Inhalation)
C38222	FDA Route of Administration	Intra-Arterial
C38284	FDA Route of Administration	Nasal
C28161	FDA Route of Administration	Intramuscular
C38255	FDA Route of Administration	Intraocular
C38276	FDA Route of Administration	Intravenous
C38285	FDA Route of Administration	Nasogastric
C38287	FDA Route of Administration	Ophthalmic
C38288	FDA Route of Administration	Oral
C38290	FDA Route of Administration	Other
C38192	FDA Route of Administration	Auricular (Otic)
C38295	FDA Route of Administration	Rectal
C38299	FDA Route of Administration	Subcutaneous
C38300	FDA Route of Administration	Sublingual
C38304	FDA Route of Administration	Topical
C38305	FDA Route of Administration	Transdermal
C38271	FDA Route of Administration	Urethral
C38193	FDA Route of Administration	Buccal
C38238	FDA Route of Administration	Intradermal

Code	Code System	Print Name
C64987	FDA Route of Administration	Intraosseous
C38250	FDA Route of Administration	Intralesional
C38676	FDA Route of Administration	Percutaneous

## Medication Administration Site

Value Set	MedicationAdministrationSite - 2.16.840.1.113883.17.3.11.109
Definition	Specifications for site of substance administration when Route is insufficiently specific

Code	Code System	Print Name
280361007		Tracheostomy stoma
15562006		Structure of respiratory region of nose

## Medication Authorization Type

Value Set	MedicationAuthorizationType - 2.16.840.1.113883.17.3.11.47
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Channel or mode by which a medication administration is authorized by a licensed clinician

Code	Code System	Print Name
LA17187-8	LOINC	On-line medical direction
LA18654-6	LOINC	On-scene
LA18655-3	LOINC	Protocol (standing order)
LA18656-1	LOINC	Written orders (patient specific)

## Medication Complication

Value Set	MedicationComplication - 2.16.840.1.113883.17.3.11.45
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of abnormal effect associated with the administration of a medication

Code	Code System	Print Name
LA137-2	LOINC	None
LA15098-9	LOINC	Nausea
LA15099-7	LOINC	Vomiting

Code	Code System	Print Name
LA15424-7	LOINC	Diarrhea
LA17059-9	LOINC	Other (not listed)
LA17392-4	LOINC	Altered mental status
LA17393-2	LOINC	Apnea
LA17394-0	LOINC	Bradycardia
LA17396-5	LOINC	Hypoxia
LA20641-9	LOINC	Itching
LA17713-1	LOINC	Injury
LA17714-9	LOINC	Tachycardia
LA18266-9	LOINC	Bradypnea
LA18267-7	LOINC	Tachypnea
LA7418-2	LOINC	Bleeding
LA7434-9	LOINC	Extravasation
LA7443-0	LOINC	Hypotension
LA7444-8	LOINC	Hypertension
LA9540-1	LOINC	Hyperthermia
LA9541-9	LOINC	Hypothermia
LA9548-4	LOINC	Respiratory distress
LA20642-7	LOINC	Urticaria

## Medication Not Given Reason

Value Set	MedicationNotGivenReason - 2.16.840.1.113883.17.3.11.92
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Rationale for not administering an otherwise indicated medication

Code	Code System	Print Name
LA15185-4	LOINC	Unable to complete
LA18921-9	LOINC	Medication already taken
LA18922-7	LOINC	Medication allergy
LA18925-0	LOINC	Denied by order
LA4216-3	LOINC	Contraindicated
LA4389-8	LOINC	Refused



## Mental Status Finding

Value Set	MentalStatusFinding - 2.16.840.1.113883.17.3.11.84
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS mental assessment

Code	Code System	Print Name
LA17286-8	LOINC	Normal baseline for patient
LA17287-6	LOINC	Combative
LA17288-4	LOINC	Oriented-person
LA17289-2	LOINC	Oriented-place
LA17290-0	LOINC	Oriented-time
LA18259-4	LOINC	Oriented-event
LA6560-2	LOINC	Confused
LA7438-0	LOINC	Hallucinations
LA9343-0	LOINC	Unresponsive
LA6150-2	LOINC	Agitation
LA23818-0	LOINC	Somnolent
LA17666-1	LOINC	Stupor
NewLA-3519039	LOINC	Psychologically Impaired
NewLA-3519037	LOINC	Pharmacologically Sedated
NewLA-3519043	LOINC	State of emotional shock and stress, unspecified
NewLA-3519029	LOINC	Altered mental status, unspecified
NewLA-3519031	LOINC	Developmentally Impaired
NewLA-3519035	LOINC	Pharmacologically Paralyzed
NewLA-3519041	LOINC	Slowness and poor responsiveness
NewLA-3519045	LOINC	Strange and inexplicable behavior
NewLA-3519047	LOINC	Uncooperative
NewLA-3519049	LOINC	Unspecified coma
NewLA-3519033	LOINC	Disorientation, unspecified

## Method Of ECG Interpretation

Value Set	MethodOfECGInterpretation - 2.16.840.1.113883.17.3.11.20
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Method for transforming ECG data into a clinical finding

Code	Code System	Print Name
LA18682-7	LOINC	Computer interpretation
LA18683-5	LOINC	Manual interpretation
LA18684-3	LOINC	Transmission with no interpretation
LA18685-0	LOINC	Transmission with remote interpretation

## NEMESIS

Value Set	NEMESIS
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## Neck Assessment Finding

Value Set	NeckAssessmentFinding - 2.16.840.1.113883.17.3.11.28
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS neck assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17210-8	LOINC	Decapitation
LA17214-0	LOINC	Puncture/stab wound
LA17217-3	LOINC	Jugular vein distention - JVD
LA17219-9	LOINC	Subcutaneous air
LA17212-4	LOINC	Gunshot wound
LA17612-5	LOINC	Stridor
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18226-3	LOINC	Foreign body
LA18227-1	LOINC	Tracheal deviation-right
LA18228-9	LOINC	Tracheal deviation-left
LA6626-1	LOINC	Normal
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

Code	Code System	Print Name
LA17229-8	LOINC	Crush Injury
LA22440-4	LOINC	Swelling
LA7423-2	LOINC	Contusion
LA17709-9	LOINC	Tenderness
LA18225-5	LOINC	Deformity

## Neurological Assessment Finding

Value Set	NeurologicalAssessmentFinding - 2.16.840.1.113883.17.3.11.40
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS neurological assessment

Code	Code System	Print Name
LA17286-8	LOINC	Normal baseline for patient
LA17291-8	LOINC	Cerebellar function-abnormal
LA17292-6	LOINC	Cerebellar function-normal
LA17293-4	LOINC	Gait-abnormal
LA17294-2	LOINC	Gait-normal
LA17295-9	LOINC	Hemiplegia-left
LA17296-7	LOINC	Hemiplegia-right
LA17297-5	LOINC	Speech-normal
LA17298-3	LOINC	Speech-slurring
LA17299-1	LOINC	Strength-normal
LA17300-7	LOINC	Strength-symmetric
LA17301-5	LOINC	Tremors
LA17302-3	LOINC	Weakness-facial droop-left
LA17303-1	LOINC	Weakness-facial droop-right
LA17304-9	LOINC	Weakness-left sided
LA17305-6	LOINC	Weakness-right sided
LA18261-0	LOINC	Aphagia
LA18262-8	LOINC	Aphasia
LA18263-6	LOINC	Decerebrate posturing
LA18264-4	LOINC	Decorticate posturing
LA18265-1	LOINC	Strength-asymmetric
LA23822-2	LOINC	Arm Drift-Left

Code	Code System	Print Name
LA23823-0	LOINC	Arm Drift-Right
NewLA-3520026	LOINC	Status Seizure
NewLA-3520055	LOINC	Other Seizures

## Non Drug Allergy Type

Value Set	NonDrugAllergyType - 2.16.840.1.113883.17.3.11.83
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kinds of environmental allergens
Description	Valid values are SNOMED CT descendants of 419199007 Allergy to Substance or 258155009 photosensitization due to sun. Reference the NEMESIS Suggested Lists at <a href="https://nemsis.org/technical-resources/version-3/version-3-resources/">https://nemsis.org/technical-resources/version-3/version-3-resources/</a> .

## Organ System

Value Set	OrganSystem - 2.16.840.1.113883.17.3.11.77
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Biological systems for the classification of disorders

Code	Code System	Print Name
LA16968-2	LOINC	Gastrointestinal
LA18114-1	LOINC	General/global
LA18277-6	LOINC	Cardiovascular
LA18278-4	LOINC	CNS/neuro
LA18279-2	LOINC	Endocrine/metabolic
LA18281-8	LOINC	Lymphatic/immune
LA18282-6	LOINC	Musculoskeletal/skin
LA18283-4	LOINC	Pulmonary
LA18284-2	LOINC	Renal
LA18285-9	LOINC	Reproductive
LA9534-4	LOINC	Behavioral / psychiatric disorder

## Patient Engagement

Value Set	PatientEngagement - 2.16.840.1.113883.17.3.11.113
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA4228005	LOINC	Patient Evaluated, No Care Required
newLA4228007	LOINC	Patient Refused Evaluation/Care
newLA4228003	LOINC	Patient Evaluated and Refused Care
newLA4228001	LOINC	Patient Evaluated and Care Provided
newLA4228009	LOINC	Patient Support Services Provided

## Pelvis Genitourinary Assessment

Value Set	PelvisGenitourinaryAssessment - 2.16.840.1.113883.17.3.11.33
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS pelvic and genitourinary assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17212-4	LOINC	Gunshot wound
LA17248-8	LOINC	Bleeding-rectal
LA17249-6	LOINC	Bleeding-urethral
LA17250-4	LOINC	Bleeding-vaginal
LA17251-2	LOINC	Genital injury
LA17252-0	LOINC	Pelvic fracture
LA17253-8	LOINC	Pelvic instability
LA17254-6	LOINC	Penile priapism/erection
LA17255-3	LOINC	Pregnant-crowning
LA17709-9	LOINC	Tenderness
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal

Code	Code System	Print Name
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain
LA17229-8	LOINC	Crush Injury
LA7423-2	LOINC	Contusion
LA14123-6	LOINC	Unstable

## Postal Address Use

Value Set	PostalAddressUse - 2.16.840.1.113883.1.11.10637
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Code	Code System	Print Name
BAD		bad address
DIR		direct
H		home address
HP		primary home
HV		vacation home
PHYS		physical visit address
PST		postal address
PUB		public
TMP		temporary
WP		work place

## Pregnancy

Value Set	Pregnancy - 2.16.840.1.113883.17.3.11.42
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Estimation of patient's pregnant status and maturity

Code	Code System	Print Name
LA17329-6	LOINC	Yes, confirmed less than 12 weeks
LA17330-4	LOINC	Yes, confirmed 12 to 20 weeks
LA17331-2	LOINC	Yes, confirmed greater than 20 weeks
LA17332-0	LOINC	Possible, unconfirmed
LA32-8	LOINC	No
LA24406-3	LOINC	Yes, Weeks Unknown

## Procedure Complication Type

Value Set	ProcedureComplicationType - 2.16.840.1.113883.17.3.11.58
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of abnormal effect associated with the performance of a procedure

Code	Code System	Print Name
LA137-2	LOINC	None
LA15098-9	LOINC	Nausea
LA15099-7	LOINC	Vomiting
LA15424-7	LOINC	Diarrhea
LA17059-9	LOINC	Other (not listed)
LA17392-4	LOINC	Altered mental status
LA17393-2	LOINC	Apnea
LA17394-0	LOINC	Bradycardia
LA17396-5	LOINC	Hypoxia
LA20641-9	LOINC	Itching
LA17489-8	LOINC	Esophageal intubation-immediately
LA17490-6	LOINC	Esophageal intubation-other
LA17713-1	LOINC	Injury
LA17714-9	LOINC	Tachycardia
LA18267-7	LOINC	Tachypnea
LA7418-2	LOINC	Bleeding
LA7434-9	LOINC	Extravasation
LA7443-0	LOINC	Hypotension
LA7444-8	LOINC	Hypertension
LA9540-1	LOINC	Hyperthermia
LA9541-9	LOINC	Hypothermia
LA9548-4	LOINC	Respiratory distress
LA20642-7	LOINC	Urticaria
LA18266-9	LOINC	Bradypnea

## Protocol

Value Set	Protocol - 2.16.840.1.113883.17.3.11.73
Code System	LOINC - 2.16.840.1.113883.6.1

Definition	Clinical category of formal guideline used to direct care	
Code	Code System	Print Name
LA17398-1	LOINC	Airway
LA17491-4	LOINC	Airway-failed
LA17492-2	LOINC	Airway-obstruction/foreign body
LA17494-8	LOINC	Airway-Rapid Sequence Induction (RSI-Paralytic)
LA17495-5	LOINC	Airway-sedation assisted (nonparalytic)
LA17496-3	LOINC	Cardiac arrest- asystole
LA17497-1	LOINC	Cardiac arrest- pulseless electrical activity
LA17498-9	LOINC	Cardiac arrest- ventricular fibrillation/pulseless ventricular tachycardia
LA17499-7	LOINC	Cardiac arrest-hypothermia-therapeutic
LA17500-2	LOINC	Cardiac arrest-post resuscitation care
LA17501-0	LOINC	Environmental-altitude sickness
LA17502-8	LOINC	Environmental-cold exposure
LA17503-6	LOINC	Environmental-frostbite/cold Injury
LA17504-4	LOINC	Environmental-heat exposure/exhaustion
LA17505-1	LOINC	Environmental-heat stroke/hyperthermia
LA17506-9	LOINC	Environmental-hypothermia
LA17507-7	LOINC	Exposure-airway/inhalation irritants
LA17508-5	LOINC	Exposure-biological/infectious
LA17509-3	LOINC	Exposure-blistering agents
LA24135-8	LOINC	Exposure-carbon monoxide
LA17511-9	LOINC	Exposure-chemicals to eye
LA17512-7	LOINC	Exposure-cyanide
LA17513-5	LOINC	Exposure-explosive/blast injury
LA17514-3	LOINC	Exposure-nerve agents
LA17515-0	LOINC	Exposure-radiologic agents
LA17516-8	LOINC	General-back pain
LA17517-6	LOINC	General-behavioral/patient restraint
LA17518-4	LOINC	General-dental problems
LA17519-2	LOINC	General-epistaxis
LA17520-0	LOINC	General-fever
LA17521-8	LOINC	General-individualized patient protocol
LA17522-6	LOINC	General-indwelling medical devices/equipment



Code	Code System	Print Name
LA17523-4	LOINC	General-IV access
LA17524-2	LOINC	General-medical device malfunction
LA17525-9	LOINC	General-pain control
LA17526-7	LOINC	General-spinal immobilization/clearance
LA17527-5	LOINC	General-universal patient care/initial patient contact
LA17528-3	LOINC	Injury-amputation
LA17529-1	LOINC	Injury-bites and envenomations-land
LA17530-9	LOINC	Injury-bites and envenomations-marine
LA17531-7	LOINC	Injury-bleeding/hemorrhage control
LA17532-5	LOINC	Injury-burns-thermal
LA17533-3	LOINC	Injury-cardiac arrest
LA17534-1	LOINC	Injury-crush syndrome
LA17535-8	LOINC	Injury-diving emergencies
LA17536-6	LOINC	Injury-drowning/near drowning
LA17537-4	LOINC	Injury-electrical injuries
LA17538-2	LOINC	Injury-extremity
LA17539-0	LOINC	Injury-eye
LA17540-8	LOINC	Injury-head
LA17541-6	LOINC	Injury-impaled object
LA17542-4	LOINC	Injury-multisystem
LA17543-2	LOINC	Injury-spinal cord
LA17544-0	LOINC	Medical-abdominal pain
LA17545-7	LOINC	Medical-allergic reaction/anaphylaxis
LA17546-5	LOINC	Medical-altered mental status
LA17547-3	LOINC	Medical-bradycardia
LA17548-1	LOINC	Medical-cardiac chest pain
LA17549-9	LOINC	Medical-diarrhea
LA17550-7	LOINC	Medical-hyperglycemia
LA17551-5	LOINC	Medical-hypertension
LA17552-3	LOINC	Medical-hypoglycemia/diabetic emergency
LA17553-1	LOINC	Medical-hypotension/shock (non-trauma)
LA17554-9	LOINC	Medical-influenza-like illness/ upper respiratory infection
LA17555-6	LOINC	Medical-nausea/vomiting
LA17556-4	LOINC	Medical-newborn/ neonatal resuscitation

Code	Code System	Print Name
LA23845-3	LOINC	General-overdose/poisoning/toxic ingestion
LA17558-0	LOINC	Medical-pulmonary edema/CHF
LA17559-8	LOINC	Medical-respiratory distress/asthma/COPD/reactive airway disease
LA17560-6	LOINC	Medical-seizure
LA17561-4	LOINC	Medical-ST-elevation myocardial infarction (STEMI)
LA17562-2	LOINC	Medical-stroke/TIA
LA17563-0	LOINC	Medical-supraventricular tachycardia (including atrial fibrillation)
LA17564-8	LOINC	Medical-syncope
LA17565-5	LOINC	Medical-ventricular tachycardia (with pulse)
LA17566-3	LOINC	OB/GYN-childbirth/labor/delivery
LA17567-1	LOINC	OB/GYN-eclampsia
LA17568-9	LOINC	OB/GYN-gynecologic emergencies
LA17569-7	LOINC	OB/GYN-pregnancy related emergencies
LA17570-5	LOINC	OB/GYN-post-partum hemorrhage
LA18269-3	LOINC	General-cardiac arrest
LA46-8	LOINC	Other
LA23828-9	LOINC	Injury-Conducted Electrical Weapon (e.g., Taser)
LA23829-7	LOINC	Injury-Facial Trauma
LA23830-5	LOINC	Injury-General Trauma Management
LA23831-3	LOINC	Injury-Lightning/Lightning Strike
LA23832-1	LOINC	Injury-SCUBA Injury/Accidents
LA23833-9	LOINC	Injury-Topical Chemical Burn
LA23834-7	LOINC	Medical-Beta Blocker Poisoning/Overdose
LA23835-4	LOINC	Medical-Calcium Channel Blocker Poisoning/Overdose
LA23836-2	LOINC	Medical-Opioid Poisoning/Overdose
LA23837-0	LOINC	Medical-Respiratory Distress-Bronchiolitis
LA23838-8	LOINC	Medical-Respiratory Distress-Croup
LA23839-6	LOINC	Medical-Stimulant Poisoning/Overdose
LA24136-6	LOINC	Cardiac Arrest-Do Not Resuscitate
LA24137-4	LOINC	Cardiac Arrest-Special Resuscitate Orders
LA24139-0	LOINC	General-Community Paramedicine / Mobile Integrated Healthcare
LA24140-8	LOINC	General-Exception Protocol

Code	Code System	Print Name
LA24141-6	LOINC	General-Extended Care Guidelines
LA24142-4	LOINC	General-Interfacility Transfers
LA24143-2	LOINC	General-Law Enforcement - Blood for Legal Purposes
LA24144-0	LOINC	General-Law Enforcement - Assist with Law Enforcement Activity
LA24145-7	LOINC	General-Neglect or Abuse Suspected
LA24146-5	LOINC	General-Refusal of Care
LA24147-3	LOINC	Injury-Mass/Multiple Casualties
LA24148-1	LOINC	Injury-Thoracic
LA24149-9	LOINC	Medical-Adrenal Insufficiency
LA24150-7	LOINC	Medical-Apparent Life Threatening Event (ALTE)
LA24151-5	LOINC	Medical-Tachycardia
LA23827-1	LOINC	Cardiac Arrest-Determination of Death / Withholding Resuscitative Efforts
LA24138-2	LOINC	Exposure-Smoke Inhalation

## Protocol Age Category

Value Set	ProtocolAgeCategory - 2.16.840.1.113883.17.3.11.86
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Group of patient ages

Code	Code System	Print Name
LA17571-3	LOINC	General
LA17572-1	LOINC	Adult only
LA17573-9	LOINC	Pediatric only

## Provider Adverse Event Type

Value Set	ProviderAdverseEventType - 2.16.840.1.113883.17.3.11.72
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of adverse event affecting a care provider

Code	Code System	Print Name
LA137-2	LOINC	None
LA17059-9	LOINC	Other (not listed)

Code	Code System	Print Name
LA17402-1	LOINC	Death-cardiac arrest
LA17403-9	LOINC	Death-injury related
LA17404-7	LOINC	Death-other (not listed)
LA17405-4	LOINC	Exposure-airborne respiratory/biological/aerosolized secretions
LA17406-2	LOINC	Exposure-body fluid contact to broken skin
LA17407-0	LOINC	Exposure-body fluid contact with eye
LA17408-8	LOINC	Exposure-body fluid contact with intact skin
LA17409-6	LOINC	Exposure-body fluid contact with mucosal surface
LA17410-4	LOINC	Exposure-needle stick with body fluid injection
LA17411-2	LOINC	Exposure-needle stick without body fluid injection
LA17412-0	LOINC	Exposure-toxin/chemical/hazmat
LA17413-8	LOINC	Injury-lifting/back/musculoskeletal
LA17414-6	LOINC	Injury-other (not listed)

## Provider Category

Value Set	ProviderCategory - 2.16.840.1.113883.17.3.11.110
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Classification of person, EMS or otherwise, providing care

Code	Code System	Print Name
NewLA-3006001	LOINC	Family Member
NewLA-3006003	LOINC	First Responder (Fire, Law, EMS)
NewLA-3006005	LOINC	Healthcare Professional (Non-EMS)
NewLA-3006007	LOINC	Lay Person (Non-Family)
NewLA-3006009	LOINC	Other EMS Professional (not part of dispatched response)

## Provider Response Role

Value Set	ProviderResponseRole - 2.16.840.1.113883.17.3.11.80
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Role filled by an EMS professional

Code	Code System	Print Name
LA18707-2	LOINC	Driver/pilot-response

Code	Code System	Print Name
LA18708-0	LOINC	Driver/pilot-transport
LA18709-8	LOINC	Other crew member response role
LA18710-6	LOINC	Other patient caregiver-at scene
LA18711-4	LOINC	Other patient caregiver-transport
LA18712-2	LOINC	Primary patient caregiver-at scene
LA18713-0	LOINC	Primary patient caregiver-transport

## Provider Role

Value Set	ProviderRole - 2.16.840.1.113883.17.3.11.46
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Class of person providing care to an EMS patient, including the patient

Code	Code System	Print Name
LA15276-1	LOINC	Student
LA18695-9	LOINC	Critical care paramedic
LA18696-7	LOINC	Advanced emergency medical technician (AEMT)
LA18697-5	LOINC	Emergency medical responder (EMR)
LA18698-3	LOINC	Emergency medical technician (EMT)
LA18699-1	LOINC	Paramedic
LA18704-9	LOINC	Other healthcare professional
LA18705-6	LOINC	Other non-healthcare professional
LA18706-4	LOINC	Community paramedicine
LA4687-5	LOINC	Physician
LA9297-8	LOINC	Respiratory therapist
LA24387-5	LOINC	Licensed Practical Nurse (LPN)
LA9292-9	LOINC	Nurse Practitioner
LA9296-0	LOINC	Physician Assistant
LA9291-1	LOINC	Registered Nurse
NewLA-9905051	LOINC	Fire Personnel (non EMS)
NewLA-9905049	LOINC	Family Member
NewLA-9905047	LOINC	Law Enforcement
NewLA-9905045	LOINC	Lay Person
NewLA-9905043	LOINC	Patient
NewLA-9905002	LOINC	Emergency Medical Technician - Intermediate

## Race

Value Set	Race - 2.16.840.1.113883.1.11.14914
Version	1
Definition	A Value Set of codes for Classifying data based upon race. Race is always reported at the discretion of the person for whom this attribute is reported, and reporting must be completed according to Federal guidelines for race reporting. Any code descending from the Race concept (1000-9) in that terminology may be used in the exchange.

## Race and Ethnicity - CDC

Value Set	Race and Ethnicity - CDC
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## Race Category

Value Set	RaceCategory - 2.16.840.1.114222.4.11.836
Code System	Race and Ethnicity - CDC - 2.16.840.1.113883.6.238
Source URL	<a href="https://phinivads.cdc.gov/vads/ViewValueSet.action?id=67D34BBC-617F-DD11-B38D-00188B398520">https://phinivads.cdc.gov/vads/ViewValueSet.action?id=67D34BBC-617F-DD11-B38D-00188B398520</a>

Code	Code System	Print Name
1002-5	MISSING	American Indian or Alaska Native
2028-9	MISSING	Asian
2054-5	MISSING	Black or African American
2076-8	MISSING	Native Hawaiian or Other Pacific Islander
2131-1	MISSING	Other Race
2106-3	MISSING	White

## Reason Procedure not Performed

Value Set	Reason Procedure not Performed - 2.16.840.1.113883.17.3.11.95
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Rationale for not completing an otherwise indicated procedure

Code	Code System	Print Name
LA15185-4	LOINC	Unable to complete
LA18925-0	LOINC	Denied by order
LA4216-3	LOINC	Contraindicated
LA4389-8	LOINC	Refused

## Reason Procedure not Performed Superset

Value Set	Reason Procedure not Performed Superset - 2.16.840.1.113883.17.3.11.100
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Rationale for not completing an otherwise indicated procedure, including CPR

Code	Code System	Print Name
LA15185-4	LOINC	Unable to complete
LA18925-0	LOINC	Denied by order
LA4216-3	LOINC	Contraindicated
LA4389-8	LOINC	Refused
LA17063-1	LOINC	Considered futile
LA17064-9	LOINC	DNR orders
LA17065-6	LOINC	Signs of circulation

## Reason Resuscitation Not Attempted

Value Set	ReasonResuscitationNotAttempted - 2.16.840.1.113883.17.3.11.90
Definition	Rationale for not attempting to resuscitate a patient

Code	Code System	Print Name
LA17063-1		Considered futile
LA17064-9		DNR orders
LA17065-6		Signs of circulation

## Registry Type

Value Set	RegistryType - 2.16.840.1.113883.17.3.11.74
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of research repository in which a patient record might be included

Code	Code System	Print Name
LA17057-3	LOINC	Drowning
LA17058-1	LOINC	Trauma
LA17059-9	LOINC	Other (not listed)
LA17398-1	LOINC	Airway
LA17399-9	LOINC	Spinal cord injury
LA17400-5	LOINC	STEMI/acute cardiac

Code	Code System	Print Name
LA17401-3	LOINC	Traumatic brain injury
LA7318-4	LOINC	Burn
LA9535-1	LOINC	Cardiac/MI
LA9553-4	LOINC	Stroke/CVA

## Response Delay Type

Value Set	ResponseDelayType - 2.16.840.1.113883.17.3.11.51
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying an EMS response

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17583-8	LOINC	Scene safety (not secure for EMS)
LA17585-3	LOINC	Crowd
LA17586-1	LOINC	Directions/unable to locate
LA17587-9	LOINC	Distance
LA17588-7	LOINC	HazMat
LA17590-3	LOINC	Staff delay
LA17591-1	LOINC	Traffic
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA18081-2	LOINC	None/no delay
LA18270-1	LOINC	Rendezvous transport unavailable
LA18271-9	LOINC	Route obstruction (e.g., train)
LA18301-4	LOINC	Diversion
LA24422-0	LOINC	Flight Planning
LA24421-2	LOINC	Mechanical Issue-Unit, Equipment, etc.

## Response Mode Qualifier

Value Set	ResponseModeQualifier - 2.16.840.1.113883.17.3.11.106
Definition	Additional tactics or approaches used to support emergent response mode



Code	Code System	Print Name
LA22798-5		Intersection Navigation-Against Normal Light Patterns
LA22799-3		Intersection Navigation-With Automated Light Changing Technology
LA22800-9		Intersection Navigation-With Normal Light Patterns
LA22801-7		Speed-Enhanced per Local Policy
LA22802-5		Speed-Normal Traffic
LA22803-3		Lights and Sirens
LA22804-1		Lights and No Sirens
LA22805-8		No Lights or Sirens
LA22806-6		Initial No Lights or Sirens, Upgraded to Lights and Sirens
LA22807-4		Initial Lights and Sirens, Downgraded to No Lights or Sirens
LA22869-4		Unscheduled
LA22866-0		Scheduled

## Resuscitation Discontinue Reason

Value Set	ResuscitationDiscontinueReason - 2.16.840.1.113883.17.3.11.62
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Rationale for aborting attempt to resuscitate a patient

Code	Code System	Print Name
LA17078-9	LOINC	DNR
LA17079-7	LOINC	Medical control order
LA17080-5	LOINC	Obvious signs of death
LA17081-3	LOINC	Protocol/policy requirements completed
LA17082-1	LOINC	Return of spontaneous circulation (pulse or BP noted)
LA18204-0	LOINC	Physically unable to perform

## Return Of Spontaneous Circulation

Value Set	ReturnOfSpontaneousCirculation - 2.16.840.1.113883.17.3.11.15
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Timeframe for return of circulation to a patient

Code	Code System	Print Name
LA17075-5	LOINC	Yes, prior to arrival at the ED
LA17076-3	LOINC	Yes, at arrival at the ED
LA17077-1	LOINC	Yes, sustained for 20 consecutive minutes
LA32-8	LOINC	No

## Rx Norm

Value Set	RxNorm
Description	Normalized names for clinical drugs

## SNOMED CT

Value Set	SNOMED CT
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## Safety Equipment Type

Value Set	SafetyEquipmentType - 2.16.840.1.113883.17.3.11.7
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of safety equipment

Code	Code System	Print Name
LA137-2	LOINC	None
LA17375-9	LOINC	Child booster seat
LA17376-7	LOINC	Helmet worn
LA17377-5	LOINC	Infant car seat forward facing
LA17378-3	LOINC	Infant car seat rear facing
LA17379-1	LOINC	Lap belt with shoulder belt
LA17380-9	LOINC	Lap belt without shoulder belt
LA17382-5	LOINC	Protective non-clothing gear
LA46-8	LOINC	Other
LA9381-0	LOINC	Shoulder belt
LA9391-9	LOINC	Eye protection
LA9392-7	LOINC	Protective clothing
LA9393-5	LOINC	Personal flotation device
NewLA-2907033	LOINC	Unable to Determine

## Scene Delay Type

Value Set	SceneDelayType - 2.16.840.1.113883.17.3.11.52
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying EMS operations on scene

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17585-3	LOINC	Crowd
LA17586-1	LOINC	Directions/unable to locate
LA17587-9	LOINC	Distance
LA17588-7	LOINC	HazMat
LA17590-3	LOINC	Staff delay
LA17591-1	LOINC	Traffic
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA17595-2	LOINC	Extrication
LA17596-0	LOINC	Safety-crew/staging
LA17597-8	LOINC	Safety-patient
LA18081-2	LOINC	None/no delay
LA18272-7	LOINC	Awaiting air unit
LA18273-5	LOINC	Awaiting ground unit
LA18275-0	LOINC	Patient access
LA18276-8	LOINC	Triage/multiple patients
LA7540-3	LOINC	Language barrier
LA24421-2	LOINC	Mechanical Issue-Unit, Equipment, etc.

## Service Type

Value Set	ServiceType - 2.16.840.1.113883.17.3.11.79
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Category of service requested of an EMS agency

Code	Code System	Print Name
LA17150-6	LOINC	Standby
LA18715-5	LOINC	Emergency Response (Primary Response Area)

Code	Code System	Print Name
LA18716-3	LOINC	Emergency Response (Intercept)
LA18717-1	LOINC	Hospital-to-Hospital Transfer
LA18719-7	LOINC	Mutual aid
LA18720-5	LOINC	Public assistance
NewLA-2205021	LOINC	Support Services
NewLA-2205009	LOINC	Emergency Response (Mutual Aid)
NewLA-2205015	LOINC	Hospital to Non-Hospital Facility Transfer
NewLA-2205017	LOINC	Non-Hospital Facility to Non-Hospital Facility Transfer
NewLA-2205019	LOINC	Non-Hospital Facility to Hospital Transfer
NewLA-2205007	LOINC	Other Routine Medical Transport
NewLA-2205023	LOINC	Non-Patient Care Rescue/Extrication
NewLA-2205025	LOINC	Crew Transport Only
NewLA-2205027	LOINC	Transport of Organs or Body Parts
NewLA-2205029	LOINC	Mortuary Services
NewLA-2205031	LOINC	Mobile Integrated Health Care Encounter
NewLA-2205033	LOINC	Evaluation for Special Referral/Intake Programs
NewLA-2205035	LOINC	Administrative Operations

## Skin Assessment

Value Set	SkinAssessment - 2.16.840.1.113883.17.3.11.25
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS skin assessment

Code	Code System	Print Name
LA15475-9	LOINC	Cold
LA17197-7	LOINC	Clammy
LA17198-5	LOINC	Cyanotic
LA17199-3	LOINC	Dry
LA17200-9	LOINC	Red (erythematous)
LA17201-7	LOINC	Flushed
LA17202-5	LOINC	Hot
LA17203-3	LOINC	Jaundiced
LA17204-1	LOINC	Lividity
LA17205-8	LOINC	Mottled

Code	Code System	Print Name
LA17206-6	LOINC	Pale
LA17207-4	LOINC	Warm
LA18217-2	LOINC	Diaphoretic
LA18218-0	LOINC	Poor turgor
LA18219-8	LOINC	Tenting
LA6626-1	LOINC	Normal
LA23806-5	LOINC	Capillary Nail Bed Refill less than 2 seconds
LA23807-3	LOINC	Capillary Nail Bed Refill 2-4 seconds
LA23808-1	LOINC	Capillary Nail Bed Refill more than 4 seconds

## Stroke Scale

Value Set	StrokeScale - 2.16.840.1.113883.17.3.11.88
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Type of instrument used to evaluate for stroke

Code	Code System	Print Name
LA17110-0	LOINC	Cincinnati Prehospital Stroke Scale (CPSS)
LA17112-6	LOINC	Miami Emergency Neurologic Deficit Exam (MEND)
LA17113-4	LOINC	NIH Stroke Scale (NIHSS)
LA18300-6	LOINC	Other stroke scale type
LA3774-2	LOINC	Massachusetts Stroke Scale (MSS)
LA24430-3	LOINC	FAST-ED
NewLA-3330023	LOINC	Los Angeles Motor Score (LAMS)
NewLA-3330021	LOINC	Rapid Arterial occlusion Evaluation (RACE)
NewLA-3330019	LOINC	Melbourne Ambulance Stroke Screen (MASS)
NewLA-3330017	LOINC	Ontario Prehospital Stroke Scale (OPSS)
NewLA-3330015	LOINC	Boston Stroke Scale (BOSS)
NewLA-3330004	LOINC	Los Angeles Prehospital Stroke Screen (LAPSS)

## Stroke Scale Interpretation

Value Set	Stroke Scale Interpretation - 2.16.840.1.113883.17.3.11.93
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding based on a stroke scale instrument

Code	Code System	Print Name
LA17109-2	LOINC	Non-conclusive
LA6576-8	LOINC	Positive
LA6577-6	LOINC	Negative

## Transport Delay Type

Value Set	TransportDelayType - 2.16.840.1.113883.17.3.11.53
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying EMS transport

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17585-3	LOINC	Crowd
LA17586-1	LOINC	Directions/unable to locate
LA17587-9	LOINC	Distance
LA17588-7	LOINC	HazMat
LA17589-5	LOINC	Safety
LA17590-3	LOINC	Staff delay
LA17591-1	LOINC	Traffic
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA18081-2	LOINC	None/no delay
LA18270-1	LOINC	Rendezvous transport unavailable
LA18271-9	LOINC	Route obstruction (e.g., train)
LA18301-4	LOINC	Diversion
LA24424-6	LOINC	Patient Condition Change (e.g., Unit Stopped)

## Transport Disposition

Value Set	TransportDisposition - 2.16.840.1.113883.17.3.11.115
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA4230013	LOINC	No Transport
newLA4230011	LOINC	Non-Patient Transport (Not Otherwise Listed)

Code	Code System	Print Name
newLA4230009	LOINC	Patient Refused Transport
newLA4230007	LOINC	Transport by Another EMS Unit, with a Member of This Crew
newLA4230005	LOINC	Transport by Another EMS Unit
newLA4230003	LOINC	Transport by This EMS Unit, with a Member of Another Crew
newLA4230001	LOINC	Transport by This EMS Unit (This Crew Only)

## Transport Method

Value Set	TransportMethod - 2.16.840.1.113883.17.3.11.65
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Physical mode of patient transport

Code	Code System	Print Name
LA17168-8	LOINC	Ground-ambulance
LA17169-6	LOINC	Air medical-fixed wing
LA17170-4	LOINC	Air medical-rotor craft
LA17171-2	LOINC	Ground-ATV or rescue vehicle
LA17172-0	LOINC	Ground-bariatric
LA17173-8	LOINC	Ground-mass casualty bus/vehicle
LA17174-6	LOINC	Ground-wheelchair van
LA17175-3	LOINC	Ground-other not listed
LA17176-1	LOINC	Water-boat

## Transport Mode Qualifier

Value Set	TransportModeQualifier - 2.16.840.1.113883.17.3.11.102
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Techniques for managing transport speed

Code	Code System	Print Name
LA22798-5	LOINC	Intersection Navigation-Against Normal Light Patterns
LA22799-3	LOINC	Intersection Navigation-With Automated Light Changing Technology
LA22800-9	LOINC	Intersection Navigation-With Normal Light Patterns
LA22801-7	LOINC	Speed-Enhanced per Local Policy

Code	Code System	Print Name
LA22802-5	LOINC	Speed-Normal Traffic
LA22803-3	LOINC	Lights and Sirens
LA22804-1	LOINC	Lights and No Sirens
LA22805-8	LOINC	No Lights or Sirens
LA22807-4	LOINC	Initial Lights and Sirens, Downgraded to No Lights or Sirens
LA22806-6	LOINC	Initial No Lights or Sirens, Upgraded to Lights and Sirens

## Transportation Mode

Value Set	TransportationMode - 2.16.840.1.113883.17.3.11.66
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Urgency of transport

Code	Code System	Print Name
LA17177-9	LOINC	Emergent (immediate response)
LA17178-7	LOINC	Emergent downgraded to non-emergent
LA17179-5	LOINC	Non-emergent upgraded to emergent
LA17180-3	LOINC	Non-emergent

## Trauma Center Criteria

Value Set	TraumaCenterCriteria - 2.16.840.1.113883.17.3.11.3
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient findings used to determine appropriate destination

Code	Code System	Print Name
LA23844-6	LOINC	Glasgow Coma Score less than or equal to 13
LA17338-7	LOINC	Respiratory rate < 10 or >29 or (<20 in infant < one year)
LA17339-5	LOINC	Systolic blood pressure less than 90
LA17340-3	LOINC	Amputation proximal to wrist and ankle
LA17341-1	LOINC	Crushed, degloved, or mangled extremity
LA17342-9	LOINC	Flail chest
LA17343-7	LOINC	Open or depressed skull fracture
LA17344-5	LOINC	Paralysis



Code	Code System	Print Name
LA17345-2	LOINC	Pelvic fracture(s)
LA17346-0	LOINC	Penetrating injury to head, neck, torso, and extremities proximal to elbow and knee
LA17347-8	LOINC	Two or more proximal long-bone fractures

## Turn Around Delay Type

Value Set	TurnAroundDelayType - 2.16.840.1.113883.17.3.11.54
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying EMS readiness after an incident

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17587-9	LOINC	Distance
LA17590-3	LOINC	Staff delay
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA17598-6	LOINC	Clean-up
LA17599-4	LOINC	Decontamination
LA17600-0	LOINC	Documentation
LA17601-8	LOINC	ED overcrowding/transfer of care
LA17602-6	LOINC	Equipment/supply replenishment
LA18081-2	LOINC	None/no delay
LA18270-1	LOINC	Rendezvous transport unavailable
LA18271-9	LOINC	Route obstruction (e.g., train)
LA7497-6	LOINC	Equipment failure
LA24425-3	LOINC	EMS Crew Accompanies Patient for Facility Procedure

## Unit Disposition

Value Set	Unit Disposition - 2.16.840.1.113883.17.3.11.112
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
newLA4227003	LOINC	Cancelled on Scene

Code	Code System	Print Name
newLA4227005	LOINC	Cancelled Prior to Arrival at Scene
newLA4227007	LOINC	No Patient Contact
newLA4227009NewCode	LOINC	No Patient Found
newLA4227011	LOINC	Non-Patient Incident (Not Otherwise Listed)
newLA4227001	LOINC	Patient Contact Made

## Unit Equipment Capability

Value Set	UnitEquipmentCapability - 2.16.840.1.113883.17.3.11.82
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Role unit plays in response to an incident

Code	Code System	Print Name
LA23840-4	LOINC	Air Transport-Helicopter
LA23841-2	LOINC	Air Transport-Fixed Wing
NewLA-2207017	LOINC	Ground Transport (BLS Equipped)
NewLA-2207019	LOINC	Ground Transport (Critical Care Equipped)
NewLA-2207021	LOINC	Non-Transport-Medical Treatment (ALS Equipped)
NewLA-2207023	LOINC	Non-Transport-Medical Treatment (BLS Equipped)
NewLA-2207025	LOINC	Wheel Chair Van/Ambulette
NewLA-2207027	LOINC	Non-Transport-No Medical Equipment
NewLA-2207015	LOINC	Ground Transport (ALS Equipped)

## Vehicle Impact Area

Value Set	VehicleImpactArea - 2.16.840.1.113883.17.3.11.5
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Direction from which a vehicle is struck, expressed in terms of an analog clock face

Code	Code System	Print Name
LA10137-0	LOINC	5
LA10138-8	LOINC	6
LA10139-6	LOINC	7
LA10140-4	LOINC	8
LA10141-2	LOINC	9
LA13942-0	LOINC	10

Code	Code System	Print Name
LA14557-5	LOINC	11
LA14558-3	LOINC	12
LA6112-2	LOINC	1
LA6113-0	LOINC	2
LA6114-8	LOINC	3
LA6115-5	LOINC	4

## Vehicle Passenger Location

Value Set	VehiclePassengerLocation - 2.16.840.1.113883.17.3.11.6
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Location of a passenger within a vehicle

Code	Code System	Print Name
LA17361-9	LOINC	Front seat-left side (or motorcycle driver)
LA17362-7	LOINC	Front seat-right side
LA17363-5	LOINC	Front seat-middle
LA17364-3	LOINC	Second seat-left side (or motorcycle passenger)
LA17365-0	LOINC	Second seat-middle
LA17366-8	LOINC	Second seat-right side
LA17367-6	LOINC	Third row-left side (or motorcycle passenger)
LA17368-4	LOINC	Third row-right side
LA17369-2	LOINC	Third row-middle
LA17370-0	LOINC	Sleeper section of cab (truck)
LA17371-8	LOINC	Passenger in other enclosed passenger or cargo area (non-trailing unit such as a bus, etc.)
LA17372-6	LOINC	Passenger in unenclosed passenger or cargo area (non-trailing unit such as a pickup, etc.)
LA17373-4	LOINC	Trailing unit
LA17374-2	LOINC	Riding on vehicle exterior (non-trailing unit)
LA4489-6	LOINC	Unknown



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## Chapter

# 6

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## Appendices

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### Topics:

- *Object Identifiers for US State Departments of Motor Vehicles*
- *Nulls and Negative Action Values*
- *UCUM Unit Mapping*
- *Gender*
- *NEMSIS Routes Mapped to FDA Routes of Administration*

## Object Identifiers for US State Departments of Motor Vehicles

These OIDs have been assigned to US state DMVs by HL7 for the purpose of providing namespaces for driver's license numbers.

<b>OID</b>	<b>State Administrator</b>
2.16.840.1.113883.4.3.1	Alabama Motor Vehicle Bureau
2.16.840.1.113883.4.3.2	Alaska Motor Vehicle Bureau
2.16.840.1.113883.4.3.4	Arizona Motor Vehicle Bureau
2.16.840.1.113883.4.3.5	Arkansas Motor Vehicle Bureau
2.16.840.1.113883.4.3.6	California Motor Vehicle Bureau
2.16.840.1.113883.4.3.8	Colorado Motor Vehicle Bureau
2.16.840.1.113883.4.3.9	Connecticut Motor Vehicle Bureau
2.16.840.1.113883.4.3.10	Delaware Motor Vehicle Bureau
2.16.840.1.113883.4.3.11	District of Columbia Motor Vehicle Bureau
2.16.840.1.113883.4.3.12	Florida Motor Vehicle Bureau
2.16.840.1.113883.4.3.13	Georgia Motor Vehicle Bureau
2.16.840.1.113883.4.3.15	Hawaii Motor Vehicle Bureau
2.16.840.1.113883.4.3.16	Idaho Motor Vehicle Bureau
2.16.840.1.113883.4.3.17	Illinois Motor Vehicle Bureau
2.16.840.1.113883.4.3.18	Indiana Bureau for Motor Vehicles (BMV)
2.16.840.1.113883.4.3.19	Iowa Motor Vehicle Bureau
2.16.840.1.113883.4.3.20	Kansas Motor Vehicle Bureau
2.16.840.1.113883.4.3.21	Kentucky Motor Vehicle Bureau
2.16.840.1.113883.4.3.22	Louisiana Motor Vehicle Bureau
2.16.840.1.113883.4.3.23	Maine Motor Vehicle Bureau
2.16.840.1.113883.4.3.24	Maryland Motor Vehicle Bureau
2.16.840.1.113883.4.3.25	Massachusetts Motor Vehicle Bureau
2.16.840.1.113883.4.3.26	Michigan Motor Vehicle Bureau
2.16.840.1.113883.4.3.27	Minnesota Motor Vehicle Bureau
2.16.840.1.113883.4.3.28	Mississippi Motor Vehicle Bureau
2.16.840.1.113883.4.3.29	Missouri Motor Vehicle Bureau
2.16.840.1.113883.4.3.30	Montana Motor Vehicle Bureau
2.16.840.1.113883.4.3.31	Nebraska Motor Vehicle Bureau
2.16.840.1.113883.4.3.32	Nevada Motor Vehicle Bureau
2.16.840.1.113883.4.3.33	New Hampshire Motor Vehicle Bureau
2.16.840.1.113883.4.3.34	New Jersey Motor Vehicle Bureau
2.16.840.1.113883.4.3.35	New Mexico Motor Vehicle Bureau
2.16.840.1.113883.4.3.36	New York Motor Vehicle Bureau

2.16.840.1.113883.4.3.37	North Carolina Motor Vehicle Bureau
2.16.840.1.113883.4.3.38	North Dakota Motor Vehicle Bureau
2.16.840.1.113883.4.3.39	Ohio Motor Vehicle Bureau
2.16.840.1.113883.4.3.40	Oklahoma Motor Vehicle Bureau
2.16.840.1.113883.4.3.41	Oregon Motor Vehicle Bureau
2.16.840.1.113883.4.3.42	Pennsylvania Motor Vehicle Bureau
2.16.840.1.113883.4.3.44	Rhode Island Motor Vehicle Bureau
2.16.840.1.113883.4.3.45	South Carolina Motor Vehicle Bureau
2.16.840.1.113883.4.3.46	South Dakota Motor Vehicle Bureau
2.16.840.1.113883.4.3.47	Tennessee Motor Vehicle Bureau
2.16.840.1.113883.4.3.48	Texas Motor Vehicle Bureau
2.16.840.1.113883.4.3.49	Utah Motor Vehicle Bureau
2.16.840.1.113883.4.3.50	Vermont Motor Vehicle Bureau
2.16.840.1.113883.4.3.51	Virginia Motor Vehicle Bureau
2.16.840.1.113883.4.3.53	Washington Motor Vehicle Bureau
2.16.840.1.113883.4.3.54	West Virginia Motor Vehicle Bureau
2.16.840.1.113883.4.3.55	Wisconsin Motor Vehicle Bureau
2.16.840.1.113883.4.3.56	Wyoming Motor Vehicle Bureau

## Nulls and Negative Action Values

This table maps NEMESIS null and negative action values to the appropriate values and structures in the HL7 CDA specification.

NEMESIS Negative Action Values	Type	Case	Solution
Unable to Complete	null	observation	Observation.value = null (NI); obs.text = "unable to complete"
Unable to Complete	neg	medication	Negate specific medication; put "unable to complete" value in Medication Not Administered Reason Observation
Unable to Complete	neg	procedure	Negate specific procedure; put "Physically unable to perform" value in Abandoned Procedure Reason Observation
Refused	null	observation (including history)	Observation.value = null (ASKU)
Refused	neg	medication given	negate specific medication; put "refused" value in MedicationNotAdministeredReason observation
Refused	neg	procedure performed	negate specific procedure; put "refused" value in ReasonProcedureNotAttempted observation

Exam finding not present (measurement)	null	observation	Observation.value = null (NAV)
Exam finding not present (presence)	neg	observation	negate specific observation value
No known drug allergies	neg	observation: negation value	Use Boolean observation ExistenceOfDrugAllergy
None reported	neg	observation: alcohol	Use Boolean observation ExistenceOfDrugUseIndication
Contraindication noted	neg	medication, procedure	negate specific procedure or medication; use related reason observation to record reason
Denied by order	neg	medication, procedure	negate specific procedure or medication; use related reason observation to record reason
Medication allergy	neg	medication	negate specific procedure or medication; use related reason observation to record reason
Medication already taken	neg	medication	negate specific procedure or medication; use related reason observation to record reason
<b>Null Values</b>			
Not Applicable	null		null: NA
Not Recorded	null		null: NI; add detail to obs.text or proc.text
Not Reporting	null		null: NI; add detail to obs.text or proc.text
<b>Proper Values</b>			
Not done	null	observation	Observation.value = null (NASK)

## UCUM Unit Mapping

This appendix provides UCUM codes for units provided by NEMSIS specifications. Note that "liters" is always uppercase "L": the character "l" signifies the numeral "one."

NEMSIS Question	Description	PQ QTY	PQ Units (UCUM)	Supporting values
eMedications.06	Grams	Yes	g	
eMedications.06	Milligrams per Hour (mg/hr)	Yes	mg/h	
eMedications.06	Units	Yes	{unit}	
eMedications.06	Units per Kilogram per Hour (units/kg/hr)	Yes	/kg/h	
eMedications.06	Centimeters (cm)	Yes	cm	
eMedications.06	Units per Kilogram (units/kg)	Yes	{unit}/kg	



eMedications.06	Micrograms per Kilogram (mcg/kg)	Yes	ug/kg	
eMedications.06	Units per Hour (units/hr)	Yes	{unit}/h	
eMedications.06	Puffs	Yes	1	substanceAdministration.administrationUnitCode = PUFF; codeSystem = 2.16.840.1.113883.1.11.14570
eMedications.06	Milligrams per Minute (mg/min)	Yes	mg/min	
eMedications.06	Milligrams per Kilogram (mg/kg)	Yes	mg/kg	
eMedications.06	Micrograms per Minute (mcg/min)	Yes	ug/min	
eMedications.06	Liters Per Minute (LPM [gas])	Yes	L/min	
eMedications.06	Drops (gtts)	Yes	[drp]	
eMedications.06	Inches	Yes	[in_i]	
eMedications.06	International Units	Yes	[iU]	
eMedications.06	Keep Vein Open (To Keep Open)	No		substanceAdministration.value.nullFlavor = QS (sufficient quantity); codeSystem = 2.16.840.1.113883.5.1008
eMedications.06	Liters Per Minute	Yes	L/min	
eMedications.06	MDI Puffs	Yes	1	substanceAdministration.administrationUnitCode = PUFF; codeSystem = 2.16.840.1.113883.1.11.14570; originalText="MDI Puffs"
eMedications.06	Micrograms	Yes	ug	
eMedications.06	Micrograms per Kilogram per Minute	Yes	ug/kg/min	
eMedications.06	Milliequivalents	Yes	meq	
eMedications.06	Milligrams	Yes	mg	
eMedications.06	Milligrams Per Kilogram Per Minute	Yes	mg/kg/min	
eMedications.06	Milliliters	Yes	mL	
eMedications.06	Milliliters Per Hour	Yes	mL/h	
eMedications.06	Other	Yes	1	substanceAdministration.value.units = OTH; codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	cm	Yes	cm	
ehistory.14	gms	Yes	g	

ehistory.14	gtts (drops)	Yes	1	substanceAdministration.administrationUnitCode = DROP; codeSystem = 2.16.840.1.113883.1.11.14420
ehistory.14	inches	Yes	[in_i]	
ehistory.14	iu	Yes	[iU]	
ehistory.14	kvo (keep vein open)	No		substanceAdministration.value.nullFlavor = QS (sufficient quantity); codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	l/min (fluid administration)	Yes	L/min	
ehistory.14	liters	Yes	L	
ehistory.14	LPM (gas administration)	Yes	L/min	
ehistory.14	mcg	Yes	ug	
ehistory.14	mcg/kg/min	Yes	ug/kg/min	
ehistory.14	mcg/min	Yes	ug/min	
ehistory.14	meq	Yes	meq	
ehistory.14	metered dose	Yes	1	substanceAdministration.value.units = OTH; codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	mg	Yes	mg	
ehistory.14	mg/kg	Yes	mg/kg	
ehistory.14	mg/kg/min	Yes	mg/kg/min	
ehistory.14	mg/min	Yes	mg/min	
ehistory.14	ml	Yes	mL	
ehistory.14	ml/hr	Yes	mL/h	
ehistory.14	other (Not Listed)	Yes	1	substanceAdministration.value.units = OTH; codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	puffs	Yes	1	substanceAdministration.administrationUnitCode = PUFF; codeSystem = 2.16.840.1.113883.1.11.14570
ehistory.14	units/hr	Yes	1/h	
epatient.16	Days	Yes	d	
epatient.16	Hours	Yes	h	
epatient.16	Minutes	Yes	min	
epatient.16	Months	Yes	mo	
epatient.16	Years	Yes	a	
esituation.06	Seconds	Yes	s	
esituation.06	Minutes	Yes	min	
esituation.06	Hours	Yes	h	
esituation.06	Days	Yes	d	

esituation.06	Weeks	Yes	wk
esituation.06	Months	Yes	mo
esituation.06	Years	Yes	a

## Gender

NEMSIS gender codes can be represented as follows.

NEMSIS code	NEMSIS term	CDACDA code	CDACDA Term	CDA System	Other Parameters
9906001	Female	F	Female	2.16.840.1.113883.5.1	
9906003	Male	M	Male	2.16.840.1.113883.5.1	
9906007	Female-to-Male, Transgender Male	M	Male	2.16.840.1.113883.5.1	translation code ="9906007" displayName="Female-to-Male, Transgender Male" codeSystem="2.16.840.1.113883.17.3.12">
9906009	Male-to-Female, Transgender Female	F	Female	2.16.840.1.113883.5.1	translation code ="9906007" displayName="Male-to-Female, Transgender Female" codeSystem="2.16.840.1.113883.17.3.12">
9906011	Other, neither exclusively male or female				NullFlavor="OTH"
9906005	Unknown (Unable to Determine)				NullFlavor="UNK"

## NEMSIS Routes Mapped to FDA Routes of Administration

This appendix maps NEMSIS routes of administration to FDA routes. It also specifies how information implicit in NEMSIS values but not specific to routes may be modeled in the CDA structure.

Note that all codes are drawn from code system FDA Route of Administration (2.16.840.1.113883.3.26.1.1.1).

NEMSIS value	Standard Code	Standard Text	Other Parameters
Auto Injector	C38676	Percutaneous	SubstanceAdministration/Participant/ typeCode="DEV" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode="MANU" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/Device/ code  @ originalText = "Auto Injector"

NEMSIS value	Standard Code	Standard Text	Other Parameters
BVM	C38216	Respiratory (Inhalation)	SubstanceAdministration/Participant/ typeCode="DEV" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode="MANU" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/Device/ code  @ originalText = "BVM"
CPAP	C38216	Respiratory (Inhalation)	SubstanceAdministration/Participant/ typeCode="DEV" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode="MANU" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/Device/ code  @ originalText = "CPAP"
Endotracheal tube	C38208	ENDOTRACHEAL	
Gastrostomy/ Feeding Tube	C38246	INTRAGASTRIC	
Gastrostomy tube	C38246	INTRAGASTRIC	
Inhalation	C38216	RESPIRATORY (INHALATION)	
Intraarterial	C38222	INTRA-ARTERIAL	
Intranasal	C38284	NASAL	
Intramuscular	C28161	INTRAMUSCULAR	
Intraocular	C38255	INTRAOCULAR	
Intraosseous	C38253	INTRAMEDULLARY	
Intravenous	C38276	INTRAVENOUS	
IV Pump	C38276	Intravenous	SubstanceAdministration/Participant/ typeCode="DEV" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode="MANU" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/Device/ code  @ originalText = "IV Pump"

NEMESIS value	Standard Code	Standard Text	Other Parameters
Nasal Cannula	C38216	RESPIRATORY (INHALATION)	SubstanceAdministration/Participant/ typeCode=""DEV"" (device) SubstanceAdministration/Participant/ParticipantRole/ classCode=""MANU"" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = ""39849001"" @codeSystem = ""2.16.840.1.113883.6.96"" @displayName=""nasal oxygen cannula""
Nasal	C38284	NASAL	
Nasal prongs	C38216	RESPIRATORY (INHALATION)	Alternate SCT format for above explicitly modeled concept (same content): 405815000  procedure device (attribute)  = 39849001  nasal oxygen cannula (Type:= physical object)
Nasogastric	C38285	NASOGASTRIC	
Nasotracheal Tube	C38208	ENDOTRACHEAL	ApproachSiteCode @value = ""15562006"" @codeSystem = ""2.16.840.1.113883.6.96"" @displayName=""structure of respiratory region of nose""
Nebulizer	C38216	Respiratory (Inhalation)	SubstanceAdministration/Participant/ typeCode=""DEV"" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode=""MANU"" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = ""334947002"" @codeSystem = ""2.16.840.1.113883.6.96"" @displayName=""Nebulizer""
Non-Rebreather Mask	C38216	RESPIRATORY (INHALATION)	SubstanceAdministration/Participant/ typeCode=""DEV"" (device) SubstanceAdministration/Participant/ParticipantRole/ classCode=""MANU"" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = ""427591007"" @codeSystem = ""2.16.840.1.113883.6.96"" @displayName=""nonrebreather oxygen mask""
Ophthalmic	C38287	OPHTHALMIC	
Oral	C38288	ORAL	
Other/ miscellaneous	C38290	OTHER	
Otic	C38192	AURICULAR (OTIC)	
Re-breather mask	C38216	RESPIRATORY (INHALATION)	SubstanceAdministration/Participant/ typeCode=""DEV"" (device) SubstanceAdministration/Participant/ParticipantRole/ classCode=""MANU"" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = ""425926003"" @codeSystem = ""2.16.840.1.113883.6.96"" @displayName=""partial rebreather oxygen mask""
Rectal	C38295	RECTAL	

NEMSIS value	Standard Code	Standard Text	Other Parameters
Subcutaneous	C38299	SUBCUTANEOUS	
Sublingual	C38300	SUBLINGUAL	
Topical	C38304	TOPICAL	
Tracheostomy	C38308	TRANSTRACHEAL	
Transdermal	C38305	TRANSDERMAL	
Umbilical Artery Catheter	C38222	Intra-Arterial	SubstanceAdministration/Participant/ typeCode="DEV" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode="MANU" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = "258623008" @codeSystem = "2.16.840.1.113883.6.96" @displayName="Vascular catheter"  approachSiteCode @value = "50536004" @codeSystem = "2.16.840.1.113883.6.96" @displayName="Structure of umbilical artery"
Umbilical Venous Catheter	C38276	Intravenous	SubstanceAdministration/Participant/ typeCode="DEV" (device) SubstanceAdministration/ Participant/ParticipantRole/ classCode="MANU" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = "258623008" @codeSystem = "2.16.840.1.113883.6.96" @displayName="Vascular catheter"  approachSiteCode @value = "367567000" @codeSystem = "2.16.840.1.113883.6.96" @displayName="Structure of umbilical vein"
Urethral	C38271	URETHRAL	
Ventimask	C38216	RESPIRATORY (INHALATION)	SubstanceAdministration/Participant/ typeCode=""DEV"" (device) SubstanceAdministration/Participant/ParticipantRole/ classCode=""MANU"" (manufactured product) SubstanceAdministration/Participant/ParticipantRole/ Device/code @ value = ""428285009"" @codeSystem = ""2.16.840.1.113883.6.96"" @displayName=""Venturi mask""
Wound	C38250	INTRALESIONAL	

# SAMPLE

In this example, the agency is represented with the root OID "2.16.840.1.113883.19.1." This OID represents a node (".1") under the HL7 Example domain ("2.16.840.1.113883.19"). This hypothetical organization has assigned identifiers under six nodes: 1 for documents, 2 for patients, 3 for events, 4 for document artifacts (sections, organizers, statements), 5 for facilities, and 6 for devices (including the software that generated the report). These OIDs are used in the Instance Identifier data type in the "root" attribute. Providers are identified using a National Provider Identifier (root = "2.16.840.1.113883.4.6"), but the NPI has no "example" namespace for fictitious providers. Actual NPI identifiers are numbers; we have used strings that do not fit the NPI pattern to avoid inadvertently identifying an actual provider. This example report does not demonstrate every statement specified in the guide, but it does cover every pattern required to construct a valid document.

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="CDA.xsl"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-org:v3" xmlns:sdtc="urn:hl7-org:sdtc" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="DOCCLIN" moodCode="EVN">
  <!-- This example is based on ALS test case #1 from the Minnesota EMS Regulatory Board, available at http://www.emsrb.state.mn.us. Example and guide developed by the National EMS Information System and OcKham Information Services LLC under the auspices of Health Level 7, with support from the US National Highway Traffic Safety Administration, the Centers for Disease Control, and the Health Resources and Services Administration, as well as dozens of other government agencies, universities, and professional organizations. Example prepared for 2014 publication of normative implementation guide.-->
  <realmCode code="US"/>
  <typeId extension="POCD_HD000040" root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.17.3.10.2"/>
  <templateId root="2.16.840.1.113883.10.20.22.1.1"/>
  <id root="2.16.840.1.113883.19.1" extension="2086823449"/>
  <!-- The EMS PCR specification template identifier -->
  <!-- We inherit constraints from the Consolidated General Header -->
  <!-- See notes for OID descriptions. 2.16.840.1.113883.19 is the example domain. -->
  <code code="67796-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="EMS Patient Care Report"/>
  <title>EMS Patient Care Report</title>
  <effectiveTime value="201201011650+0600"/>
  <confidentialityCode codeSystem="2.16.840.1.113883.5.25" codeSystemName="ConfidentialityCode" code="N"/>
  <versionNumber value="1"/>
  <recordTarget>
    <patientRole>
      <id root="2.16.840.1.113883.19.2" extension="1968859720"/>
      <addr>
        <streetAddressLine>20190 Holyoak Avenue</streetAddressLine>
        <city>Two Harbors</city>
        <state>MN</state>
        <country>US</country>
      </addr>
      <telecom value="tel: (218) 555-1212"/>
      <patient>
        <name>
          <given>Paul</given>
          <family>Bearer</family>
        </name>
        <administrativeGenderCode code="M" codeSystem="2.16.840.1.113883.5.1" codeSystemName="AdministrativeGenderCode"/>
        <birthTime value="19830115"/>
        <raceCode code="2106-3" displayName="White" codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race and Ethnicity - CDC"/>
        <ethnicGroupCode code="2186-5" displayName="Not Hispanic or Latino" codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race and Ethnicity - CDC"/>
      </patient>
    </patientRole>
  </recordTarget>
  <author>
    <time value="201201011650+0600"/>
    <assignedAuthor>
      <id root="2.16.840.1.113883.4.6" extension="hijklm"/>
      <addr>
        <streetAddressLine>1000 Provider Lane</streetAddressLine>
        <city>Duluth</city>
        <state>MN</state>
        <postalCode>55802</postalCode>
        <country>US</country>
      </addr>
      <telecom value="tel: (218) 555-1212"/>
      <assignedPerson>
        <name>
          <given>Paul</given>
          <family>Paramedic</family>
        </name>
      </assignedPerson>
    </assignedAuthor>
  </author>
  <author>
    <time value="201201011650+0600"/>
    <assignedAuthor>
      <id root="2.16.840.1.113883.19.6" extension="1401065661"/>
      <addr nullFlavor="NI"/>
      <telecom nullFlavor="NI"/>
      <assignedAuthoringDevice>
        <manufacturerModelName>ACME EMT Device</manufacturerModelName>
        <softwareName>ACME EMT System 3.1</softwareName>
      </assignedAuthoringDevice>
    </assignedAuthor>
  </author>
  <custodian>
    <assignedCustodian>
      <representedCustodianOrganization>
        <id root="2.16.840.1.113883.19" extension="765588601"/>
        <name>Acme EMT Services</name>
        <telecom value="tel: (218) 555-1212"/>
      </representedCustodianOrganization>
    </assignedCustodian>
  </custodian>
  <participant typeCode="DST">
```

```

<associatedEntity classCode="SDLOC">
  <code code="IA11504-0" displayName="Hospital emergency department" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <addr>
    <streetAddressLine>2000 Facility Road</streetAddressLine>
    <city>Duluth</city>
    <state>MN</state>
    <postalCode>55804</postalCode>
    <country>US</country>
  </addr>
  <telecom value="tel:(218) 555-1212"/>
  <scopingOrganization>
    <name>General Hospital</name>
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          <state>MN</state>
          <postalCode>55803</postalCode>
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        </addr>
        <telecom value="tel:(218) 555-1212"/>
        <assignedPerson>
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            <given>Renee</given>
            <family>Responder</family>
          </name>
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            </thead>
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              <tr>
                <td>Billing Condition</td>
                <td>Puncture wound with foreign body of left front wall of thorax with penetration into thoracic cavity</td>
                <td></td>
              </tr>
              <tr>
                <td>EMS level of service</td>
                <td>ALS, level 1</td>
                <td></td>
              </tr>
            </tbody>
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        </thead>
        <tbody>
          <tr>
            <td>Currently on medication</td>
            <td>No information</td>
            <td></td>
          </tr>
        </tbody>
      </table>
    </text>
  </section>

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        <tr>
            <td>Patient on anticoagulants</td>
            <td>No information</td>
        </tr>
    </tbody>
</table>
</text>
<entry>
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        <text>
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                <thead>
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                </thead>
                <tbody>
                    <tr>
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                        <td>No information</td>
                    </tr>
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            </table>
        </text>
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        <text>
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                </thead>
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                        <td>true</td>
                    </tr>
                    <tr>
                        <td>Alcohol - drug use</td>
                        <td>Smell of alcohol on breath</td>
                    </tr>
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                </tbody>
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        </text>

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            <th>medication</th>
            <th>route</th>
            <th>site</th>
            <th>dose</th>
            <th>device</th>
            <th>performer</th>
            <th>response</th>
          </tr>
        </thead>
        <tbody>
          <tr>
            <td>2012 01 01 1604</td>
            <td>Oxygen</td>
            <td>Respiratory</td>
            <td>structure of respiratory region of nose</td>
            <td>15 L/min</td>
            <td>partial rebreather mask</td>
            <td>EMT-paramedic: 908786906</td>
            <td>Unchanged</td>
          </tr>
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        </performer>
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tr>
    </thead>
    <tbody>
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        <td>2012 01 01 1602</td>
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        <td>true</td>
        <td>true</td>
        <td>None</td>
        <td>Law enforcement</td>
        <td>Improved</td>
        <td>Airway confirmation: No information</td>
      </tr>
      <tr>
        <td>2012 01 01 1602</td>
        <td>Cervical collar placement</td>
        <td>true</td>
        <td>true</td>
        <td>None</td>
        <td>Law enforcement</td>
        <td>Improved</td>
        <td></td>
      </tr>
      <tr>
        <td>2012 01 01 1604</td>
        <td>Long spine board</td>
        <td>false</td>
        <td>true</td>
        <td>None</td>
        <td>EMT-basic: 42742618</td>
        <td>Unchanged</td>
        <td></td>
      </tr>
      <tr>
        <td>2012 01 01 1604</td>
        <td>Needle chest decompression</td>
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        <td>None</td>
        <td>EMT-paramedic: 42742618</td>
        <td>Improved</td>
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Airway/ No qualifier" codeSystem="2.16.840.1.113883.6.4" codeSystemName="ICD-10 PCS"/>
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        <value xsi:type="BL" value="true"/>
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      <paragraph><content styleCode="Bold">S </content>Called for motor vehicle crash</paragraph>
      <paragraph><content styleCode="Bold">O </content>Restrained make patient found in driver's seat of 4-door sedan. Pt unresponsive. Law
enforcement holding c-spine and placed nasal airway for snoring respirations. Bystanders state vehicle swerved off road and came to stop. Exam showed Pt
suffered a gun shot wound to L side at 5th intercostal space. </paragraph>

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<paragraph><content styleCode="Bold">A </content>Patent with nasal airway</paragraph>
<paragraph><content styleCode="Bold">B </content>Labored at 22 with decreased lung sounds</paragraph>
<paragraph><content styleCode="Bold">C </content>Sinus tach rapid, regular 108-142</paragraph>
<paragraph><content styleCode="Bold">D </content>Decreased level of consciousness with GCS = 9, AVPU = P</paragraph>
<paragraph><content styleCode="Bold">E </content>HEENT: intact, no trauma noted. Neck: supple, no JVD; Trachea midline. Chest: GSW as noted;
decreased LS to left side. ABD: soft nontender. Pelvis: intact. GI: intact. Ext: moves all extremities with pupose upon painful stimulation, no trauma
noted. </paragraph>
<paragraph><content styleCode="Bold">PLAN </content>C collar, nasal airway with O2 @ 15 LPM via NRB, LSB, monitor. Sinus tach, no ectopy,
occlusive dressing. Reassess: O2 sats decreased, labored breathing. Treatment: needle chest decompression L side. Transport lights and siren. Enroute
two IVs established. Diverted to XXX hospital. Breathing improved. Care and report to ED staff.</paragraph>
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            <td></td>
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          <tr>
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            <td>-92.098194 deg</td>
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  </section>
</component>

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</tr>
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<td></td>
</tr>
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  <tr>
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      <paragraph>Injury Mechanism: Penetrating</paragraph>
      <paragraph>Location of patient in vehicle: Front seat-left side (or motorcycle driver)</paragraph>
      <paragraph>Safety equipment: Lap belt without shoulder belt</paragraph>
      <paragraph>Airbag deployment: No airbag deployed</paragraph>
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# REFERENCES

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- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A, (Editors). HL7 Clinical Document Architecture, Release 2.0. ANSI-approved HL7 Standard; May 2005. Ann Arbor, Mich.: Health Level Seven, Inc. Available through [HL7](#) or if an HL7 member with the following link: [CDA Release 2 Normative Web Edition](#).
- [LOINC®](#) : Logical Observation Identifiers Names and Codes, Regenstrief Institute.
- [SNOMED CT®](#) : SNOMED Clinical Terms SNOMED International Organization.
- Extensible Markup Language, [www.w3.org/XML](http://www.w3.org/XML) .
- National Emergency Medical Services Information System (NEMSIS) Data Dictionary, version 3.5. Available at [NEMSIS.org](http://NEMSIS.org)
- HL7 EMS Domain Analysis Model, available from HL7 at [HL7.org](http://HL7.org).

