

**Emergency Medical
Services Patient Care Report**



Acknowledgments

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Chapter 1

INTRODUCTION

Topics:

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- [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.

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 NEMSIS data dictionary is available at www.nemsis.org.

Overview

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

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 54 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

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. Interface values that are not actual physical units are handled differently: see appendix *UCUM Unit Mapping*.

Pertinent Negatives

For some items in this guide, negated entries have clear boundaries. A negated procedure in the Procedures Performed section clearly refers to the scope of the encounter, whereas a similar negation in the History section implies it's never been done. In other cases it can be difficult to distinguish a record that suggests absence by not recording presence from a null value.

We follow CDA guidance in using RIM attributes for observations of absence, but we also record explicit observations of presence or absence in four cases where this confusion seems likely:

- Existence Of Drug Use Indication
- Existence Of History Of Condition Or Surgery
- Existence Of Known Drug Allergy
- Existence Of Known Non Drug Allergy
- Currently On Medication

Several items also include reason observations for negatives, especially for interventions. A map of NEMESIS pertinent negatives to CDA designs can be found in the appendix *Nulls and Negative Action Values*.

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 *Nulls and Negative Action Values*.

Cardinality

CDA provides several patterns for supporting cardinality. If a report is allowed to have many values for an element, that can be represented in CDA by the cardinality of the Observation.value, the Component.Observation, the Organizer.Component, the Section.Organizer, or the StructuredBody.section. We have chosen to support cardinality at the lowest level appropriate. I.e., unconstrained multiplicity will be supported at the Observation.value level. If the value is specific, e.g., to a body site, then we also support multiple Observations in the component. In this case the Component may have multiple Observations for different sites, each Observation having potentially multiple values. If there are groups of different Observations taken at different times, this would be supported with multiple Components.

Components and Observations should not be instantiated without content. I.e., a Component will always contain at least one Observation or other clinical statement, and an Observation will always contain a value (unless there is a reason for an explanatory null flavor value).

Examples

A simple multiple valued element in an organizer or section (e.g., Skin Assessment)

- [Organizer] MAY contain zero or one [0..1] component such that it
- SHALL contain exactly one [1..1] observation such that it
- SHALL contain at least one [1..*] value

A site-specific multiple Observation (e.g., Chest Assessment)

- [Organizer] MAY contain zero or one [0..1] component such that it
- SHALL contain at least one [1..*] observation such that it
- SHALL contain at least one [1..*] value

A time-specific group (e.g., Vitals)

- [Organizer] MAY contain one or more [0..*] component such that it
- SHALL contain (1..1 or 1..*, as appropriate) observation such that it
- SHALL contain at least one [1..*] value

Organization of This Guide

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).

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.

For properties bound to large value systems (e.g., ICD-10 PCS), NEMSIS provides suggested subsets at NEMSIS.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

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

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

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

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 2.16.840.1.1133883.17.3.10.1.12]

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**="2.16.840.1.1133883.17.3.10.1.12"
 - 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..1] **entry** such that it (CONF:10946)
 - a. Conforms to [Advance Directive Observation](#) (templateId: 2.16.840.1.1133883.17.3.10.1.98:2022-01-01)

EMS Advance Directives Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.12"
  extension="2022-01-01"/>
  <code code="67840-9" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Advance Directives Narrative NEMESIS"/>
  <title>EMS Advance Directive Section</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
</section>
```

EMS Allergies And Adverse Reactions Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.13]

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**="2.16.840.1.1133883.17.3.10.1.13"
 - 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: 2.16.840.1.1133883.17.3.10.1.49:2022-01-01)
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"/>
  <title>Allergies and adverse reactions</title>
  <text/>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      . . .
    </organizer>
  </entry>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      . . .
    </organizer>
  </entry>
</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>EMS Billing Narrative</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
```

```

        . . .
    </observation>
</entry>
</section>

```

EMS Cardiac Arrest Event Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.14]

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**="2.16.840.1.1133883.17.3.10.1.14"
 - 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: 2.16.840.1.1133883.17.3.10.1.27:2022-01-01)

EMS Cardiac Arrest Event Section example

```

<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.14"
    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/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
</section>

```

EMS Current Medication Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.15]

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**="2.16.840.1.1133883.17.3.10.1.15"
 - 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: 2.16.840.1.1133883.17.3.10.1.75:2022-01-01)
- 6. If section/@nullFlavor is not present, **MAY** contain [0..*] **entry** such that it (CONF:10962)
 - a. Conforms to *Current Medication* (templateId: 2.16.840.1.1133883.17.3.10.1.77:2022-01-01)

EMS Current Medication Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.15"
    extension="2022-01-01"/>
  <code code="67844-1" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    current Medications Narrative NEMESIS"/>
  <title>EMS Current Medications Narrative</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
  <entry>
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      . . .
    </substanceAdministration>
  </entry>
</section>
```

EMS Dispatch Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.2]

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**="2.16.840.1.1133883.17.3.10.1.2"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.73:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10993)
 - a. Conforms to *Dispatch Reason* (templateId: 2.16.840.1.1133883.17.3.10.1.74:2022-01-01)

EMS Dispatch Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.2"
    extension="2022-01-01"/>
  <code code="67660-1" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Dispatch Narrative NEMESIS"/>
  <title>EMS Dispatch Narrative </title>
```

```

<text/>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    .
    .
    .
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    .
    .
    .
  </observation>
</entry>
</section>

```

EMS Disposition Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.4]

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**="2.16.840.1.1133883.17.3.10.1.4"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.31:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11007)
 - a. Conforms to *Transport Mode Observation* (templateId: 2.16.840.1.1133883.17.3.10.1.33:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11009)
 - a. Conforms to *Transport Method Observation* (templateId: 2.16.840.1.1133883.17.3.10.1.34:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.35:2022-01-01)
9. If section/@nullFlavor is not present, **SHALL** contain [1..*] **entry** such that it (CONF:11013)
 - a. Conforms to *Prearrival Activation Observation* (templateId: 2.16.840.1.1133883.17.3.10.1.36:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.37:2022-01-01)
11. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11330)
 - a. Conforms to *Destination Hospital Capability* (templateId: 2.16.840.1.1133883.17.3.10.1.104:2022-01-01)
12. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11331)
 - a. Conforms to *Destination Ward* (templateId: 2.16.840.1.1133883.17.3.10.1.186:2022-01-01)

13. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11409)
 - a. Conforms to *Unit Disposition* (templateId: 2.16.840.1.1133883.17.3.10.1.196:2022-01-01)
14. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11410)
 - a. Conforms to *Patient Engagement* (templateId: 2.16.840.1.1133883.17.3.10.1.197:2022-01-01)
15. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11411)
 - a. Conforms to *Crew Disposition* (templateId: 2.16.840.1.1133883.17.3.10.1.198:2022-01-01)
16. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11412)
 - a. Conforms to *Transport Disposition* (templateId: 2.16.840.1.1133883.17.3.10.1.199:2022-01-01)

EMS Disposition Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.4"
  extension="2022-01-01"/>
  <code code="67661-9" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
  Disposition Narrative NEMESIS"/>
  <title>EMS Disposition Narrative</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      .
      .
      .
    </observation>
  </entry>
  .
  .
  .
</section>
```

EMS Injury Incident Description Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.17]

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**="2.16.840.1.1133883.17.3.10.1.17"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.50:2022-01-01)
6. If section/@nullFlavor is not present, **SHOULD** contain [0..1] **entry** such that it (CONF:10919)
 - a. Conforms to *Injury Mechanism* (templateId: 2.16.840.1.1133883.17.3.10.1.51:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10921)
 - a. Conforms to *Trauma Triage Criteria Steps 1 and 2* (templateId: 2.16.840.1.1133883.17.3.10.1.52:2022-01-01)
8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10923)

- a. Conforms to *Trauma Triage Criteria Steps 3 and 4* (templateId: 2.16.840.1.1133883.17.3.10.1.53:2022-01-01)
9. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10925)
 - a. Conforms to *Vehicle Impact Area* (templateId: 2.16.840.1.1133883.17.3.10.1.54:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.55:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.56:2022-01-01)
12. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10931)
 - a. Conforms to *Airbag Deployment Status* (templateId: 2.16.840.1.1133883.17.3.10.1.57:2022-01-01)
13. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10933)
 - a. Conforms to *Height Of Fall* (templateId: 2.16.840.1.1133883.17.3.10.1.58:2022-01-01)
14. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10935)
 - a. Conforms to *Disaster Type* (templateId: 2.16.840.1.1133883.17.3.10.1.59:2022-01-01)

EMS Injury Incident Description Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.17"
  extension="2022-01-01"/>
  <code code="67800-3" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Injury Incident Description Narrative NEMESIS"/>
  <title>EMS Injury Incident Description Narrative </title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      .
      .
      .
    </observation>
  </entry>
  .
  .
  .
</section>
```

EMS Medications Administered Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.18]

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**="2.16.840.1.1133883.17.3.10.1.18"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.72:2022-01-01)

EMS Medications Administered Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.18"
  extension="2022-01-01"/>
  <code code="67849-0" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Medications Administered Narrative NEMESIS"/>
  <title>EMS Medications Administered Narrative</title>
  <text/>
  <entry>
    <substanceAdministration classCode="SBADM" moodCode="EVN">
      . . .
    </substanceAdministration>
  </entry>
  . . .
</section>
```

EMS Past Medical History Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.19]

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**="2.16.840.1.1133883.17.3.10.1.19"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.60:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:10905)
 - a. Conforms to [Medical/Surgical History](#) (templateId: 2.16.840.1.1133883.17.3.10.1.61:2022-01-01)

EMS Past Medical History Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.19"
  extension="2022-01-01"/>
  <code code="67842-5" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Past Medical History Narrative NEMESIS"/>
  <title>EMS Past Medical History Narrative</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
```



```
</section>
```

EMS Patient Care Narrative Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.1]

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**="2.16.840.1.1133883.17.3.10.1.1"
 - 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)
NEMSIS Trace: eNarrative.01

EMS Patient Care Narrative Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.1"
    extension="2022-01-01"/>
  <code code="67781-5" codeSystem="2.16.840.1.113883.6.1"
    displayName="Summarization of Encounter Note Narrative"/>
  <title>Summarization of Encounter Note Narrative</title>
  <text>
    . . .
  </text>
</section>
```

EMS Personnel Adverse Event Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.6]

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**="2.16.840.1.1133883.17.3.10.1.6"
 - 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**="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: 2.16.840.1.1133883.17.3.10.1.89:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:11019)

- a. Conforms to [Adverse Event Type Observation](#) (templateId: 2.16.840.1.1133883.17.3.10.1.90:2022-01-01)

EMS Personnel Adverse Event Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.6"
  extension="2022-01-01"/>
  <code code="67658-5" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Exposures or Injuries of EMS Personnel Provider Narrative NEMSIS"/>
  <title>Exposures or Injuries of EMS Personnel Provider Narrative</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
  . . .
</section>
```

EMS Physical Assessment Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.20]

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**="2.16.840.1.1133883.17.3.10.1.20"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.78:2022-01-01)
6. If section/**@nullFlavor** is not present, **MAY** contain [0..1] **entry** such that it (CONF:10977)
 - a. Conforms to [Patient Pregnancy](#) (templateId: 2.16.840.1.1133883.17.3.10.1.79:2022-01-01)
7. If section/**@nullFlavor** is not present, **MAY** contain [0..1] **entry** such that it (CONF:10979)
 - a. Conforms to [Last Oral Intake](#) (templateId: 2.16.840.1.1133883.17.3.10.1.80:2022-01-01)
8. If section/**@nullFlavor** is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10981)
 - a. Conforms to [Patient Age](#) (templateId: 2.16.840.1.1133883.17.3.10.1.81:2022-01-01)
9. If section/**@nullFlavor** is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10983)
 - a. Conforms to [Thrombolytic Contraindications](#) (templateId: 2.16.840.1.1133883.17.3.10.1.82:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.83:2022-01-01)
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="2.16.840.1.1133883.17.3.10.1.20"
    extension="2022-01-01"/>
  <code code="29545-1" codeSystem="2.16.840.1.1133883.6.1"
    displayName="Physical findings Narrative"/>
  <title>Physical findings Narrative</title>
  <text/>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      . . .
    </organizer>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
  . . .
</section>
```

EMS Procedures Performed Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.21]

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**="2.16.840.1.1133883.17.3.10.1.21"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.181:2022-01-01)

EMS Procedures Performed Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.21"
    extension="2022-01-01"/>
  <code code="29554-3" codeSystem="2.16.840.1.1133883.6.1"
    displayName="Procedure Narrative"/>
  <title>Procedure Narrative</title>
  <text/>
  <entry>
    <procedure classCode="PROC" moodCode="EVN">
      . . .
    </procedure>
  </entry>
  . . .
</section>
```

```
</entry>
. . .
</section>
```

EMS Protocol Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.7]

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**="2.16.840.1.1133883.17.3.10.1.7"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.93:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.94:2022-01-01)

EMS Protocol Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.7"
    extension="2022-01-01"/>
  <code code="67663-5" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Protocol Narrative NEMESIS"/>
  <title>EMS Protocol Narrative</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
. . .
</section>
```

EMS Response Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.3]

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**="2.16.840.1.1133883.17.3.10.1.3"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.95:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:10997)
 - a. Conforms to *Dispatch Location Organizer* (templateId: 2.16.840.1.1133883.17.3.10.1.96:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.97:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.182:2022-01-01)

EMS Response Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.3"
  extension="2022-01-01"/>
  <code code="67664-3" codeSystem="2.16.840.1.113883.6.1" displayName="EMS
  Response Narrative NEMESIS"/>
  <title>EMS Response Narrative </title>
  <text/>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      .
      .
      .
    </organizer>
  </entry>
  .
  .
  .
</section>
```

EMS Scene Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.8]

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**="2.16.840.1.1133883.17.3.10.1.8"
 - 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" (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: 2.16.840.1.1133883.17.3.10.1.84:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11032)
 - a. Conforms to *Scene Patient Count* (templateId: 2.16.840.1.1133883.17.3.10.1.86:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11034)

- a. Conforms to *Mass Casualty Indicator* (templateId: 2.16.840.1.1133883.17.3.10.1.87:2022-01-01)
- 8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11036)
 - a. Conforms to *Location Type Observation* (templateId: 2.16.840.1.1133883.17.3.10.1.88:2022-01-01)

EMS Scene Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.8"
  extension="2022-01-01"/>
  <code code="67665-0" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Scene Narrative NEMESIS"/>
  <title>EMS Scene Narrative </title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      .
      .
      .
    </observation>
  </entry>
  .
  .
  .
</section>
```

EMS Situation Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.9]

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**="2.16.840.1.1133883.17.3.10.1.9"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.63:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11041)
 - a. Conforms to *Possible Injury* (templateId: 2.16.840.1.1133883.17.3.10.1.64:2022-01-01)
7. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11043)
 - a. Conforms to *Provider Primary Impression* (templateId: 2.16.840.1.1133883.17.3.10.1.65:2022-01-01)
8. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11045)
 - a. Conforms to *Primary Symptom* (templateId: 2.16.840.1.1133883.17.3.10.1.66:2022-01-01)
9. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11047)
 - a. Conforms to *Other Symptoms* (templateId: 2.16.840.1.1133883.17.3.10.1.67:2022-01-01)
10. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11049)
 - a. Conforms to *Provider Secondary Impressions* (templateId: 2.16.840.1.1133883.17.3.10.1.68:2022-01-01)

11. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11051)

- a. Conforms to *Initial Patient Acuity* (templateId:
2.16.840.1.1133883.17.3.10.1.69:2022-01-01)

EMS Situation Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.9"
    extension="2022-01-01"/>
  <code code="67666-8" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Situation Narrative NEMESIS"/>
  <title>EMS Situation Narrative </title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
  . . .
</section>
```

EMS Social History Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.22]

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**="2.16.840.1.1133883.17.3.10.1.22"
 - 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: 2.16.840.1.1133883.6.1 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:
2.16.840.1.1133883.17.3.10.1.70:2022-01-01)
6. If section/@nullFlavor is not present, **MAY** contain [1..1] **entry** such that it (CONF:10967)
 - a. Conforms to *Drug Use Indication* (templateId: 2.16.840.1.1133883.17.3.10.1.71:2022-01-01)

EMS Social History Section example

```
<section>
  <templateId root="2.16.840.1.1133883.17.3.10.1.22"
    extension="2022-01-01"/>
  <code code="67843-3" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS
    Social History Narrative NEMESIS"/>
  <title>EMS Social History Narrative </title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      . . .
    </observation>
  </entry>
```

```
. . .  
</section>
```

EMS Times Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.10]

Set of times for defined events in the EMS trip

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11417) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.10"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.38:2022-01-01)
6. If section/@nullFlavor is not present, **SHALL** contain [1..1] **entry** such that it (CONF:11055)
 - a. Conforms to *Unit Notified Time* (templateId: 2.16.840.1.1133883.17.3.10.1.39:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.40:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.41:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.42:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.43:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.44:2022-01-01)
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: 2.16.840.1.1133883.17.3.10.1.45:2022-01-01)
13. If section/@nullFlavor is not present, **MAY** contain [0..1] **entry** such that it (CONF:11069)
 - a. Conforms to *Dispatch Notified Time* (templateId: 2.16.840.1.1133883.17.3.10.1.46:2022-01-01)

EMS Times Section example

```
<section>  
  <templateId root="2.16.840.1.1133883.17.3.10.1.10"  
    extension="2022-01-01"/>  
  <code code="67667-6" codeSystem="2.16.840.1.1133883.6.1" displayName="EMS  
    Times Narrative NEMESIS"/>  
  <title>EMS Times History Narrative </title>  
  <text/>  
  <entry>
```



```

        <observation classCode="OBS" moodCode="EVN">
            . . .
        </observation>
    </entry>
    . . .
</section>

```

EMS Vital Signs Section

[Section: templateId 2.16.840.1.1133883.17.3.10.1.23]

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**="2.16.840.1.1133883.17.3.10.1.23"
 - 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: 2.16.840.1.1133883.6.1 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: 2.16.840.1.1133883.17.3.10.1.28:2022-01-01)

EMS Vital Signs Section example

```

<section>
    <templateId root="2.16.840.1.1133883.17.3.10.1.23"
    extension="2022-01-01"/>
    <code code="8716-3" codeSystem="2.16.840.1.1133883.6.1"
    displayName="Vital Signs"/>
    <title>Vital Signs</title>
    <text/>
    <entry>
        <organizer classCode="CLUSTER" moodCode="EVN">
            . . .
        </organizer>
    </entry>
    . . .
</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*
- *Medication Response 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*
- *Prearrival 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"
    extension="2022-01-01"/>
  <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)

Abdomen Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.117"
    extension="2022-01-01"/>
  <code code="67530-6" displayName="Physical findings of Abdomen NEMSIS"/>
  <value xsi:type="CD" code="LA6626-1" displayName="Normal"
    codeSystem="2.16.840.1.1133883.6.1"/>
  <targetSiteCode code="LA18721-3" displayName="Generalized"
    codeSystem="2.16.840.1.1133883.6.1"/>
</observation>
```

Additional Vital Signs Organizer

[Organizer: templateId 2.16.840.1.1133883.17.3.10.1.30]

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**="2.16.840.1.1133883.17.3.10.1.30"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11133)
 3. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11134)
- NEMSIS Trace: eVitals.01
4. **MAY** contain zero or one [0..1] **component** such that it (CONF:11689)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Stroke Score* (CONF:11695)
 5. **MAY** contain zero or one [0..1] **component** such that it (CONF:11690)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Pain Score* (CONF:11696)
 6. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11703)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Level Of Responsiveness* (CONF:11697)
 7. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11691)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Blood Glucose* (CONF:11698)
 8. **MAY** contain zero or one [0..1] **component** such that it (CONF:11692)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Carbon Monoxide* (CONF:11699)
 9. **SHALL** contain exactly one [1..1] **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 one [0..1] **component** such that it (CONF:11694)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Cardiac Rhythm* (CONF:11714)
 11. **SHALL** contain exactly one [1..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"
extension="2022-01-01"/>
        <id root="2.16.840.1.113883.19.4" extension="243346586"/>
        <statusCode code="completed"/>
        <effectiveTime value="201201011602+0600"/>
        <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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10194)
NEMESIS Trace: eHistory.05
4. **SHALL** contain at least one [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"
extension="2022-01-01"/>
            <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 NEMESIS"/>
            <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"
extension="2022-01-01"/>
  <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 at least one [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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.89"
extension="2022-01-01"/>
  <id root="2.16.840.1.113883.19.4" extension="1193614183"/>
  <code code="67555-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="related exposure, injury, or death
Provider NEMSIS type"/>
  <value xsi:type="CD" code="LA137-2"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
displayName="None"/>
</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)
NEMSIS Trace: eInjury.08

Airbag Deployment Status example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.57" extension="2022-01-01"/>
  <id root="2.16.840.1.113883.19.4" extension="236102004"/>
  <code code="67500-9" codeSystem="2.16.840.1.113883.6.1" displayName="Airbag deployment NEMSIS"/>
  <value xsi:type="CD" code="IA17387-4" displayName="No airbag deployed" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</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 NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10541)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10546)
NEMSIS 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)
NEMSIS 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)
NEMSIS Trace: eAirway.04

Airway Confirmation Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.175" extension="2022-01-01"/>
  <value xsi:type="BL" value="true" code="71576-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" display="Confirmed" />
</observation>
```

```
<id root="2.16.840.1.113883.19.4" extension="236102004"/>
<code code="71576-3" codeSystem="2.16.840.1.113883.6.1" displayName="Airway
device placement confirmation NEMESIS"/>
<value xsi:type="CD" code="LA18672-8" displayName="Auscultation"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.127"
    extension="2022-01-01"/>
  <code code="67512-4" displayName="First monitored rhythm NEMESIS"/>
  <value xsi:type="CD" code="LA17068-0" displayName="Asystole"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.119"
    extension="2022-01-01"/>
  <code code="67532-2" displayName="Physical findings of Back+Spine NEMESIS"/>
  <value xsi:type="CD" code="LA17256-1" displayName="Pain with range of
    motion" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.83" extension="2022-01-01"/>
  <code code="67515-7" displayName="Barriers to patient care NEMESIS"/>
  <value xsi:type="CD" code="LA17308-0" displayName="Hearing impaired"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.91" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67556-1" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Billing condition" />
<value xsi:type="CD" code="S21.342" codeSystem="2.16.840.1.113883.6.90"
  codeSystemName="ICD-10 CM" displayName="Puncture wound with foreign body of
  left front wall of thorax with penetration into thoracic cavity" />
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.166" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="2339-0" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Glucose [Mass/volume] in Blood" />
<value xsi:type="PQ" value="110" unit="mg/dL" />
</observation>
```

Body Temperature

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.176]

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**="2.16.840.1.1133883.17.3.10.1.176"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11278)
3. **SHALL** contain exactly one [1..1] **code/@code**="8310-5" *Body temperature* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.166" extension="2022-01-01" /
>
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
<code code="8310-5" codeSystem="2.16.840.1.1133883.6.1"
codeSystemName="LOINC" displayName="Body temperature" />
<value xsi:type="PQ" value="38" unit="Cel" />
</observation>
```

Call Time

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.38]

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**="2.16.840.1.1133883.17.3.10.1.38"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 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 NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10834)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10836)
NEMESIS Trace: eTimes.01

Call Time example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.38" extension="2022-01-01" />
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
```

```
<code code="69469-5" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="911 call to public safety answering
  point or other designated entity requesting EMS services [Date and time]
  Facility NEMSIS" />
<value xsi:type="TS" value="201201011545+0600" />
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.94" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67553-8" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="EMS candidate patient registry" />
<value xsi:type="CD" nullFlavor="NA" displayName="Not Applicable" /></
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)

NEMSIS Trace: eVitals.01

5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10295)

NEMSIS Trace: eVitals.16 UCUM units will typically be "%", "mmHg", or "kPa".

Carbon Dioxide example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.168" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="19889-5" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Carbon dioxide/Gas.total.at end
  expiration in Exhaled gas" />
<value xsi:type="PQ" value="5" unit="%" />
```

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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.167" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="20563-3" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Carboxyhemoglobin/Hemoglobin.total in
  Blood" />
<value xsi:type="PQ" value="0" unit="%" />
```

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 NEMSIS 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)
NEMSIS 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)
NEMSIS 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)
NEMSIS 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.27" extension="2022-01-01" />
```

```

<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="ASSERTION" codeSystem="(CodeSystem: 2.16.840.1.113883.5.4"
  CodeSystemName="ActCode" />
<value xsi:type="CD" code="410429000" codeSystem="2.16.840.1.113883.6.96"
  codeSystemName="SNOMED CT" displayName="cardiac arrest" />
<entryRelationship>
  .
  .
  .
</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 NEMESIS* (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)

NEMESIS Trace: eArrest.02

Cardiac Arrest Cause example

```

<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.124" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67503-3" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Cardiac arrest cause NEMESIS" />
<value xsi:type="CD" code="LA17058-1" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Traumatic Cause" />
</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

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:11720), 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.184" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="77152-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Cardiac arrest event outcome" />
<value xsi:type="CD" code="LA22797-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="LOINC Ongoing resuscitation by other
EMS crew" />
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.123" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67502-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Cardiac arrest timing" />
<value xsi:type="CD" code="LA17054-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Yes, Prior to Any EMS Arrival (includes
Transport EMS & Medical First Responders)" />
</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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10274)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11310)
NEMESIS 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)
NEMESIS 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)
NEMESIS 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)
NEMESIS 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.169" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67519-9" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Cardiac rhythm NEMESIS" />
<value xsi:type="CD" code="LA17068-0" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Asystole" />
<methodCode xsi:type="CD" code="LA18683-5"
  codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"
  displayName="Manual interpretation" />
<participant>
<participantRole>
<playingDevice classCode="DEV" determinerCode="INSTANCE">
<code code="LA18666-0" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="5 lead" />
</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.

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11609) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.195"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11597)/**@code**="11422-3" *Physical Findings of Chest Assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11596)
3. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:11718), which **SHALL** be selected from ValueSet *ChestFinding* 2.16.840.1.113883.17.3.11.118 **DYNAMIC** (CONF:11598)
NEMESIS Trace: eExam.25
4. **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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.195" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="11422-3" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Chest Assessment" />
<value xsi:type="CD" code="LA7452-1" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Laceration" />
</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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11456) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.63"
 - 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:11169)
3. **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)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11170)
effectiveTime.low = NEMESIS Trace: eSituation.01
5. **MAY** contain zero or one [0..1] **value** with **@xsi:type**="ST" (CONF:10770)
NEMESIS Trace: eSituation.04
6. **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"

7. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10771)
 - a. contain exactly one [1..1] **observation**, where its type is *Complaint Duration*
8. **MAY** contain zero or one [0..1] **entryRelationship** such that it (CONF:10772)
 - a. contains at least one [1..*] **observation**, where its type is *Complaint Type*
9. **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 complain"

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

Complaint example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.63" extension="2022-01-01" />
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
<code code="10154-3" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="Chief complaint Narrative - Reported" /
>
<effectiveTime value="201201011627+0600" />
<value xsi:type="ST" value="Laceration" />
<targetSiteCode code="LA18111-7" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="Chest" />
<entryRelationship>
. . .
</entryRelationship>
</observation>
```

Complaint Duration

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.139]

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**="2.16.840.1.1133883.17.3.10.1.139"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11268)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10779)/**@code**="67491-1" *Duration of chief complaint NEMSIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10780)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10781)

NEMSIS 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.139" extension="2022-01-01" /
>
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
<code code="67491-1" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="Duration of chief complaint NEMSIS" />
<value xsi:type="PQ" value="1" unit="h" />
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.140" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="69468-7" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Primary anatomic organ system of chief
  complaint NEMESIS" />
<value xsi:type="CD" code="LA18283-4" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Pulmonary" />
</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="OBS" moodCode="EVN">
```



```
<templateId root="2.16.840.1.113883.17.3.10.1.138" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="72114-2" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Complaint NEMESIS" />
<value xsi:type="CD" code="LA18923-5" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Chief - primary" />
</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.

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**="100039-7" *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 *CrewDisposition* 2.16.840.1.113883.17.3.11.120 **DYNAMIC** (CONF:11590)
- NEMESIS Trace: eDisposition.29

Crew Disposition example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.198" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="100039-7" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Crew Disposition" />
<value xsi:type="CD" code="LA33320-5" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Back in Service, Care/Support Services
  Refused" />
</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="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.77" extension="2022-01-01" />
<templateId root="2.16.840.1.113883.10.20.22.4.16" />
<effectiveTime value="201201011604+0600" />
<consumable>
<manufacturedProduct classCode="MANU">
<templateId root="2.16.840.1.113883.10.20.22.4.23" />
<manufacturedMaterial>
<code code="6809" displayName="metformin"
  codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
</manufacturedMaterial>
</manufacturedProduct>
</consumable>
```

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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.75" extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67791-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Does the patient take any medications
    NEMESIS" />
  <value xsi:type="BL" value="false" />
</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"/>
  <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

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="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.104" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="77155-0" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Hospital designation capability" />
<value xsi:type="CD" code="LA22835-5" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Critical access hospital" />
</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:11719), 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.129" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67519-9" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Cardiac rhythm NEMESIS" />
<value xsi:type="PQ" value="50" unit="/m" />
</observation>
```

Destination Ward

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.186]

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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11568) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.186"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.1133883.5.6 HL7ActClass) (CONF:11363)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11380)
4. **SHALL** contain exactly one [1..1] **code** (CONF:11364)/**@code**="77154-3" *Hospital inpatient destination* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:11365)
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11602), which **SHALL** be selected from ValueSet *DestinationWardKind* 2.16.840.1.1133883.17.3.11.103 **DYNAMIC** (CONF:11366)

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

Destination Ward example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.186" extension="2022-01-01" /
>
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
<code code="77154-3" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="Hospital inpatient destination" />
<value xsi:type="CD" code="LA22810-8" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="Hospital-CCU" />
</observation>
```

Diastolic Blood Pressure

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.144]

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**="2.16.840.1.1133883.17.3.10.1.144"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11272)
3. **SHALL** contain exactly one [1..1] **code**/ **@code**="8462-4" *Diastolic blood pressure* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.144" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="8462-4" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Diastolic blood pressure" />
<value xsi:type="PQ" value="60" unit="mm[Hg]" />
</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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10132)
4. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:11721), which **SHALL** be selected from ValueSet [DisasterType](#) 2.16.840.1.113883.17.3.11.9 **DYNAMIC** (CONF:10133)

NEMESIS Trace: eOther.07

Disaster Type example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.59" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="69463-8" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Suspected intentional or unintentional
  disaster NEMESIS" />
<value xsi:type="CD" code="LA18093-7" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Fire" />
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.153" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67480-4" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Dispatch delay NEMSIS" />
<value xsi:type="CD" code="LA17580-4" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="High call volume" />
</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)
- NEMSIS 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.151" extension="2022-01-01" /
>
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="69750-8" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="EMS unit GPS latitude Vehicle --at
  dispatch" />
<value xsi:type="PQ" value="46.786939" unit="deg" />
</observation>
```

Dispatch Location Longitude

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.152]

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**="2.16.840.1.1133883.17.3.10.1.152"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11285)
3. **SHALL** contain exactly one [1..1] **code/@code**="69465-3" *EMS unit GPS longitude Vehicle --at dispatch* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.152" extension="2022-01-01" /
>
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
<code code="69465-3" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="EMS unit GPS longitude Vehicle --at
  dispatch" />
<value xsi:type="PQ" value="-92.098194" unit="deg" />
</observation>
```

Dispatch Location Name

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.150]

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**="2.16.840.1.1133883.17.3.10.1.150"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11283)
3. **SHALL** contain exactly one [1..1] **code/@code**="69466-1" *Vehicle location Vehicle NEMESIS --at dispatch* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10617)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="ST" (CONF:10618)

NEMESIS Trace: eResponse.16

Dispatch Location Name example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.1133883.17.3.10.1.150" extension="2022-01-01" /
>
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
```



```
<code code="69466-1" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Vehicle location Vehicle NEMSIS --at
dispatch" />
<value xsi:type="ST">Acme EMT Services</value>
</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"/>
  <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)

Dispatch Notified Time example

```
<observation classCode="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.46" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="69470-3" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Dispatch was notified by the 911 call
  taker [Date and time] Facility NEMSIS" />
<value xsi:type="TS" value="201201011545+0600" />
</observation>
```

Dispatch Reason

[Observation: templateId 2.16.840.1.113883.17.3.10.1.74]

The complaint that dispatch reported to the responding unit

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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.74" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67570-2" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Chief complaint per dispatch" />
<value xsi:type="CD" code="LA17145-6" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Stab/gunshot wound/penetrating
  trauma" />
</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="OBS" moodCode="EVN">
<templateId root="2.16.840.1.113883.17.3.10.1.48" extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="ActCode" />
<value xsi:type="CD" code=""416098002" codeSystem="2.16.840.1.113883.6.96"
codeSystemName="SNOMED CT" displayName="Drug allergy" />
<participant>
<participantRole>
<playingEntity>
<code code="83367" codeSystem="2.16.840.1.113883.6.88"
codeSystemName="RxNORM" displayName="atorvastatin" />
</playingEntity>
</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.

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. **MAY** contain zero or more [0..*] **component** such that it (CONF:11687)
 - a. contain exactly one [1..1] **observation**, where its type is *Drug Allergy*
3. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11688)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Existence Of Known Drug Allergy Observation* (CONF:11713)

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 at least one [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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.71" extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67669-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Alcohol - drug use NEMESIS" />
  <value xsi:type="CD" code="LA17326-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Patient admits to drug use" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.73"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67488-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Emergency medical dispatch
    performed NEMESIS" />
  <value xsi:type="CD" code="LA17151-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Yes, with pre-arrival instructions" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.70"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69757-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Indications of drug or alcohol
    use by the patient NEMESIS" />
  <value xsi:type="BL" value="false" />
</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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11452) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.60"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 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: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.60"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67793-0" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Has the patient had any significant
    medical conditions NEMESIS" />
  <value xsi:type="BL" value="false" />
</observation>
```

Existence Of Known Drug Allergy Observation

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.102]

Indicator of whether patient has any allergies or sensitivities to drugs

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11498) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.102"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 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: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.102"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67794-8" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Does the patient have any medication
    allergies NEMESIS" />
  <value xsi:type="BL" value="false" />
</observation>
```

```
</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

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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.103"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69747-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Does the patient have any
    environmental allergies NEMESIS" />
  <value xsi:type="BL" value="false" />
</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)

Extremities Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.120"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67533-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Physical findings of Extremity
NEMSIS" />
  <value xsi:type="CD" code="LA17214-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Puncture/stab wound" />
  <value xsi:type="CD" code="LA17208-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Bleeding controlled" />
  <targetSiteCode code="LA18771-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Leg-upper-right" />
</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 NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10404)
 4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11243)
- NEMSIS 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)

NEMSIS 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)

NEMSIS Trace: eExam.17

Eye Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.121"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67534-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Physical findings of Eye NEMSIS" />
  <value xsi:type="CD" code="LA15255-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Reactive" />
</observation>
```



```
<targetSiteCode code="LA18787-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Eyes-bilateral" />
</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 NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10375)
 4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:11225)
- NEMSIS 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)

NEMSIS Trace: eExam.06

Face Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.112"
extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67526-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Physical findings of Face NEMSIS" />
  <value xsi:type="CD" code="LA6626-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Normal" />
</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 NEMSIS* (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)

NEMSIS Trace: eScene.01

First Unit Indicator example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.84"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67481-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="First EMS unit on scene NEMSIS" />
  <value xsi:type="BL" value="false" />
</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. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11677)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Glasgow Eye* (CONF:11682)
4. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11678)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Glasgow Motor* (CONF:11683)
5. **MAY** contain zero or more [0..*] **component** such that it (CONF:11679)
 - a. **SHALL** contain exactly one [1..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 exactly one [1..1] **observation**, where its type is *Glasgow Total* (CONF:11685)
7. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11681)
 - a. **SHALL** contain exactly one [1..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**="2.16.840.1.1133883.17.3.10.1.160"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11294)
 3. **SHALL** contain exactly one [1..1] **code** (CONF:10325)/**@code**="9267-6" *Glasgow coma score. eye opening* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.160"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="9267-6" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Glasgow coma score. eye opening" />
  <value xsi:type="INT" value="3" />
</observation>
```

Glasgow Motor

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.192]

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**="2.16.840.1.1133883.17.3.10.1.192"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11295)
 3. **SHALL** contain exactly one [1..1] **code** (CONF:10328)/**@code**="9268-4" *Glasgow coma score. motor* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.192"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="9268-4" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Glasgow coma score. motor" />
  <value xsi:type="INT" value="3" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.159"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="55285-1" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Glasgow coma score special
    circumstances" />
  <value xsi:type="CD" code="LA17102-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Initial GCS has legitimate values
    without interventions such as intubation and sedation" />
</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="OBS" moodCode="EVN">
```

```

    <templateId root="2.16.840.1.1133883.17.3.10.1.158"
    extension="2022-01-01" />
    <id root="2.16.840.1.1133883.19.4" extension="477978662" />
    <code code="9269-2" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Glasgow coma score.total" />
    <value xsi:type="INT" value="9" />
  </observation>

```

Glasgow Verbal

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.162]

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**="2.16.840.1.1133883.17.3.10.1.162"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11296)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10332)/**@code**="9270-0" *Glasgow coma score.verbal* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.162"
  extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="9270-0" codeSystem="2.16.840.1.1133883.6.1"
  codeSystemName="LOINC" displayName="Glasgow coma score.verbal" />
  <value xsi:type="INT" value="3" />
</observation>

```

Head Assessment

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.113]

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**="2.16.840.1.1133883.17.3.10.1.113"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
 2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11226)
 3. **SHALL** contain exactly one [1..1] **code** (CONF:10373)/**@code**="67525-6" *Physical findings of Head NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 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](#) 2.16.840.1.1133883.17.3.11.26 **DYNAMIC** (CONF:10374)

Head Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.113"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67525-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Physical findings of Head NEMESIS" />
  <value xsi:type="CD" code="LA17208-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Bleeding controlled" />
</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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10383)
 4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:11233)
- NEMESIS 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)

NEMESIS Trace: eExam.09

Heart Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.116"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67529-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Physical findings of Heart NEMESIS" />
  <value xsi:type="CD" code="LA17240-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Murmur-diastolic" />
</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**="2.16.840.1.1133883.17.3.10.1.145"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11274)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10285)/**@code**="8867-4" *Heart rate* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10284)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11275)
NEMESIS Trace: eVitals.01
5. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="PQ" (CONF:10286)
NEMESIS Trace: eVitals.10 UCUM units SHOULD be "/min".

Heart Rate example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.145"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="8867-4" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Heart rate" />
  <value xsi:type="PQ" value="57" unit="/min" />
</observation>
```

Height Of Fall

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.58]

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**="2.16.840.1.1133883.17.3.10.1.58"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11164)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11655)/**@code**="67501-7" *Height of fall NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.58"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67501-7" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Height of fall NEMESIS" />
  <value xsi:type="PQ" value="12.5" unit="ft_i" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.69"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67493-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Initial patient acuity NEMESIS" />
  <value xsi:type="CD" code="LA17695-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Emergent (Yellow)" />
</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="OBS" moodCode="EVN">
```



```

<templateId root="2.16.840.1.113883.17.3.10.1.50"
extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="69543-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Cause of injury NEMESIS" />
<value xsi:type="CD" code="V49.6" codeSystem="2.16.840.1.113883.6.90"
codeSystemName="ICD-10 CM" displayName="Collision with unspecified motor
vehicles, NOS" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.51"
extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67494-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="General mechanism of the forces which
caused the injury NEMESIS" />
  <value xsi:type="CD" code="LA17335-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Blunt" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.80"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67517-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Last oral intake [Date and time]
    NEMESIS" />
  <value xsi:type="TS" value="201201011450+0600" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.110"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67670-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Length-based tape measure category
    NEMESIS" />
  <value xsi:type="CD" code="LA15553-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Blue" />
</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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10302)
4. **MAY** contain zero or one [0..1] **effectiveTime** (CONF:11302)
NEMESIS 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)
NEMESIS Trace: eVitals.26

Level Of Responsiveness example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.165"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67775-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Level of responsiveness NEMESIS" />
  <value xsi:type="CD" code="LA9340-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Alert" />
</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 NEMESIS* (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)
NEMESIS Trace: ePayment.50

Level Of Service Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.92"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69464-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Centers for medicare - medicaid, CMS,
    service level NEMESIS" />
</observation>
```

```
<value xsi:type="CD" code="LA18102-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="ALS, level 1" />
</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:11717), 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.88"
extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="74496-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury location ICD code" />
  <value xsi:type="CD" code="Y92.413" codeSystem="2.16.840.1.113883.6.90"
codeSystemName="ICD-10 CM" displayName="State road as the place of
occurrence of the external cause" />
</observation>
```

Lung Assessment

[Observation: templateId 2.16.840.1.113883.17.3.10.1.194]

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**="32449-1" *Physical Findings of Lung Assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:11573)
3. **SHALL** contain at least one [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 one [0..1] **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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.194"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="32449-1" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Lung Assessment Finding" />
  <value xsi:type="CD" code="LA33354-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Breath Sounds-Decreased" />
  <targetSiteCode code="LA25377-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Bilateral" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.87"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67490-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Mass casualty incident NEMSIS" />
  <value xsi:type="BL" value="false" />
</observation>
```

Medical/Surgical History

[Observation: templateId 2.16.840.1.113883.17.3.10.1.61]

Medical conditions the patient has or has had

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 at least one [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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.61"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="68487-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Medical - surgical history - ICD-10
    codes" />
  <value xsi:type="CD" code="E10" codeSystem="2.16.840.1.113883.6.90"
    codeSystemName="ICD-10" displayName="Type 1 diabetes mellitus" />
</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 "NEMESIS Routes Mapped to FDA Routes of Administration" 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. **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:11723), which **SHALL** be selected from ValueSet [MedicationAdministrationSite](#) 2.16.840.1.113883.17.3.11.109 **DYNAMIC** (CONF:11629)

Two NEMSIS 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)

NEMSIS Trace: eMedications.03

Note: all of RxNorm is valid in this field, but NEMSIS provides a selected list at <https://nemsis.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)

NEMSIS 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)

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)

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:11716)

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

Medication Administered example

```
<substanceAdministration classCode="SBADM" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.72"
extension="2022-01-01" />
  <templateId root="2.16.840.1.113883.10.20.22.4.16" />
  <effectiveTime value="201201011604+0600" />
  <routeCode code="C38216" displayName="Respiratory"
codeSystem="2.16.840.1.113883.3.26.1.1.1" codeSystemName="FDA Route of
Administration" />
  <approachSiteCode code="15562006"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"
displayName="structure of respiratory region of nose" />
  <doseQuantity value="15" unit="L/min" />
  <consumable>
    <manufacturedProduct classCode="MANU">
      <templateId root="2.16.840.1.113883.10.20.22.4.23" />
      <manufacturedMaterial>
        <code code="7806" displayName="Oxygen"
codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxNorm" />
      </manufacturedMaterial>
    </manufacturedProduct>
  </consumable>
  <performer>
    <assignedEntity>
      <id root="2.16.840.1.113883.19.4" extension="908786906" />
      <code code="LA18703-1" displayName="EMT-paramedic"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
    </assignedEntity>
  </performer>
  <participant typeCode="DEV">
    <participantRole classCode="MANU">
```



```

        <playingDevice>
          <code code = "425926003"
codeSystem="2.16.840.1.113883.6.5" displayName="partial rebreather oxygen
mask" codeSystemName="SNOMED CT" />
        </playingDevice>
      </participantRole>
    </participant>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <code code="67540-5" displayName="Response to medication"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
        <value xsi:type="CD" code="LA17181-1"
displayName="Unchanged" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
      </observation>
    </entryRelationship>
    <entryRelationship typeCode="COMP">
      <observation classCode="OBS" moodCode="EVN">
        <code code="67539-7" displayName="Prior administration"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
        <value xsi:type="BL" value="false" />
      </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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.107"
extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67541-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Medication complication NEMESIS" />
  <value xsi:type="CD" code="LA15098-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Nausea" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.105"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
    codeSystemName="ActCode" displayName="Assertion" />
  <value xsi:type="CD" code="LA18921-9" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Medication already taken" />
</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 NEMESIS* (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)

NEMESIS Trace: eMedications.02

Medication Prior Administration Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.108"
    extension="2022-01-01" />
```

```

<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67539-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Medication administered prior to this
unit's EMS care NEMESIS" />
<value xsi:type="BL" value="false" />
</observation>

```

Medication Response Observation

[Observation: templateId 2.16.840.1.113883.17.3.10.1.106]

Whether the patients condition improved after medication administration

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11502) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.106"
 - 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:11217)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10469)/**@code**="67540-5" *Response to medication NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10470)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11384), which **SHALL** be selected from ValueSet [ChangeInPatientStatus](#) 2.16.840.1.113883.17.3.11.78 **DYNAMIC** (CONF:10471)

NEMESIS Trace: eMedications.07

Medication Response Observation example

```

<observation classCode="OBS" moodCode="EVN">
  <code code="67540-5" displayName="Response to medication"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <value xsi:type="CD" code="LA17181-1" displayName="Unchanged"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
</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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10411)
4. contain exactly one [1..1] **effectiveTime**

NEMESIS 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)

Mental Status Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.122"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67535-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Mental status assessment NEMSIS" />
  <value xsi:type="CD" code="LA17289-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Oriented-place" />
  <value xsi:type="CD" code="LA17290-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Oriented-time" />
</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 NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10379)
 4. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:11229)
- NEMSIS 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)

NEMSIS Trace: eExam.07

Neck Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.114"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67527-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Physical findings of Neck NEMSIS" />
  <value xsi:type="CD" code="LA18220-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Avulsion" />
</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**="2.16.840.1.1133883.17.3.10.1.141"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11270)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10414)/**@code**="67536-3" *Neurological assessment Nervous system NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10413)
4. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:10415), which **SHALL** be selected from ValueSet [NeurologicalAssessmentFinding](#) 2.16.840.1.1133883.17.3.11.40 **DYNAMIC** (CONF:10416)

NEMESIS Trace: eExam.20

Neurological Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.141"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67536-3" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Neurological assessment Nervous system
    NEMESIS" />
  <value xsi:type="CD" code="LA18262-8" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Aphasia" />
</observation>
```

Non Drug Allergy

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.104]

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**="2.16.840.1.1133883.17.3.10.1.104"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11215)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11665)/**@code**="79151-7" *Known allergies to food or environmental agents Narrative NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 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](#) 2.16.840.1.1133883.17.3.11.83 **DYNAMIC** (CONF:10217)

NEMESIS Trace: eHistory.07 - Environmental/Food Allergies

Non Drug Allergy example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.104"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
```

```

<code code="79151-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Known allergies to food or
environmental agents Narrative NEMESIS" />
<value xsi:type="CD" code="419474003"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"
displayName="Allergy to mold (finding)" />
</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)

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 [#] NEMESIS* (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)

NEMESIS Trace: eDisposition.11

Number Of Patients Transported Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.131"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67547-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Patients transported in EMS unit [#]
    NEMESIS" />
  <value xsi:type="INT" value="1" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.67"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67776-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Other symptoms NEMESIS" />
  <value xsi:type="CD" code="R11.0" codeSystem="2.16.840.1.113883.6.90"
    codeSystemName="ICD-10" displayName="Nausea" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.177"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="2708-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Oxygen saturation in Arterial blood" />
  <value xsi:type="PQ" value="92" unit="%" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.164"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="56840-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Pain severity verbal numeric scale" />
  <value xsi:type="INT" value="6" />
</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**="2.16.840.1.1133883.17.3.10.1.81"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11194)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10427)/**@code**="30525-0" *Age* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.81"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="30525-0" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Age" />
  <value xsi:type="PQ" value="32" unit="a" />
</observation>
```

Patient Arrived At Destination Time

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.44]

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**="2.16.840.1.1133883.17.3.10.1.44"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 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 NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10858)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="TS" (CONF:10860)
NEMESIS Trace: eTimes.11

Patient Arrived At Destination Time example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.44"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="69476-0" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Responding unit arrived with the
    patient at the destination or transfer point [Date and time] Vehicle
    NEMESIS" />
  <value xsi:type="TS" value="201201011450+0600" />
</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)
NEMESIS 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)
NEMESIS Trace: eExam.01 UCUM units should be 'kg'

Patient Body Weight example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.178"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="8335-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Body weight Estimated" />
  <value xsi:type="PQ" value="100" unit="kg" />
</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

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="OBS" moodCode="EVN">
```

```

<templateId root="2.16.840.1.1133883.17.3.10.1.37"
extension="2022-01-01" />
<id root="2.16.840.1.1133883.19.4" extension="477978662" />
<code code="77941-3" codeSystem="2.16.840.1.1133883.6.1"
codeSystemName="LOINC" displayName="Final patient acuity NEMESIS" />
<value xsi:type="CD" code="LA17695-0" codeSystem="2.16.840.1.1133883.6.1"
codeSystemName="LOINC" displayName="Emergent (Yellow)" />
</observation>

```

Patient Engagement

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.197]

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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11583) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.197"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11585)/**@code**="100038-9" *Patient evaluation disposition* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:11584)
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11587), which **SHALL** be selected from ValueSet *PatientEngagement* 2.16.840.1.1133883.17.3.11.113 **DYNAMIC** (CONF:11586)

NEMESIS Trace: eDisposition.28

Patient Engagement example

```

<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.197"
extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="100038-9" codeSystem="2.16.840.1.1133883.6.1"
codeSystemName="LOINC" displayName="Patient Engagement" />
  <value xsi:type="CD" code="LA33309-8" codeSystem="2.16.840.1.1133883.6.1"
codeSystemName="LOINC" displayName="Patient Evaluated and Care Provided" />
</observation>

```

Patient Location In Vehicle

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.55]

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**="2.16.840.1.1133883.17.3.10.1.55"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11160)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11653)/**@code**="67498-6" *Location of patient in vehicle NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.55"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67498-6" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Location of patient in vehicle
    NEMESIS" />
  <value xsi:type="CD" code="LA17362-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Front seat-right side" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.79"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67471-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Pregnancy" />
  <value xsi:type="CD" code="LA17330-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Yes, confirmed 12 to 20 weeks" />
</observation>
```

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**="2.16.840.1.1133883.17.3.10.1.118"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11236)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11669)/**@code**="67531-4" *Physical findings of Pelvis +Genitourinary NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 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* 2.16.840.1.1133883.17.3.11.33 **DYNAMIC** (CONF:10391)
NEMESIS Trace: eExam.12

Pelvic And Genitourinary Assessment example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.118"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67531-4" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Physical findings of Pelvis
+Genitourinary NEMESIS" />
  <value xsi:type="CD" code="LA17709-9" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Tenderness" />
</observation>
```

Physical Assessment Organizer

[Organizer: templateId 2.16.840.1.1133883.17.3.10.1.78]

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**="2.16.840.1.1133883.17.3.10.1.78"
 - 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. **SHALL** contain exactly one [1..1] **observation**, where its type is *Skin Assessment* (CONF:11712)
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 exactly one [1..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 exactly one [1..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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.64"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69467-9" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Possible injury NEMSIS" />
  <value xsi:type="BL" value="false" />
</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 NEMSIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10688)
4. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10691)
NEMSIS 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)

NEMSIS Trace: eDisposition.24

Prearrival Activation Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.36"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69462-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Activation of the destination
    healthcare facility team NEMSIS" />
  <value xsi:type="CD" code="LA18117-4" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Yes, adult trauma" />
</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

Prior Symptom example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.66"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67774-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Primary sign and symptom NEMSIS" />
  <value xsi:type="CD" code="S29.9" displayName="Unspecified injury of
    thorax" codeSystem="2.16.840.1.113883.6.90" codeSystemName="ICD-10 CM" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.29"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67774-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="67518-1" Obtained prior to units EMS
    care NEMSIS" />
  <value xsi:type="BL" value="false" />
</observation>
```


Procedure

[Procedure: templateId 2.16.840.1.1133883.17.3.10.1.181]

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**="2.16.840.1.1133883.17.3.10.1.181"
 - 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: 2.16.840.1.1133883.6.96 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 2.16.840.1.1133883.17.3.11.57). 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 (2.16.840.1.1133883.17.3.11.57); reader may infer from this value if necessary 3003003 Attempted Ventilation: use more detailed Cardiopulmonary Resuscitation Type (2.16.840.1.1133883.17.3.11.57); 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* 2.16.840.1.1133883.17.3.11.56 **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)

NEMSIS 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)

NEMSIS 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)

NEMSIS 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)

NEMSIS Trace: eAirway.03

Procedure example

```
<procedure classCode="PROC" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.181"
    extension="2022-01-01" />
  <templateId root="2.16.840.1.113883.10.20.22.4.14" />
  <code code="09HN7BZ" displayName="Medical and Surgical/ Ear, Nose, and
    Sinus/ Insertion/ Nasopharynx/ Via natural or artificial opening/ Airway/
    No qualifier" codeSystem="2.16.840.1.113883.6.4" codeSystemName="ICD-10
    PCS" />
  <effectiveTime value="201201011602+0600" />
  <performer>
    <assignedEntity>
```

```

        . . .
    </assignedEntity>
</performer>
<entryRelationship>
    . . .
</entryRelationship>
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.179"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67545-4" displayName="Procedure complication"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA137-2" displayName="None"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
</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)

Procedure Number Of Attempts Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.132"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67543-9" displayName="Procedure attempts [#] NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="INT" value="1" />
</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 NEMESIS* (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)

NEMESIS Trace: eProcedures.08

Procedure Patient Response Observation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.135"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67546-2" displayName="Response to procedure NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA65-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Improved" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.131"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67542-1" displayName="Procedure performed prior
    to this units EMS care NEMSIS" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <value xsi:type="BL" value="false" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.133"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67544-7" displayName="Procedure successful NEMSIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="BL" value="true" />
</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**="2.16.840.1.1133883.17.3.10.1.149"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11282)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10723)/**@code**="67538-9" *Protocol age category NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10724)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10725), which **SHALL** be selected from ValueSet *ProtocolAgeCategory* 2.16.840.1.1133883.17.3.11.86 **DYNAMIC** (CONF:10726)

NEMESIS Trace: eProtocols.02

Protocol Age Category example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.149"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67538-9" displayName="Protocol age category NEMESIS"
    codeSystem="2.16.840.1.1133883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17572-1" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Adult only" />
</observation>
```

Protocol Observation

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.93]

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**="2.16.840.1.1133883.17.3.10.1.93"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11209)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10719)/**@code**="67537-1" *Protocol used NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10718)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:10720), which **SHALL** be selected from ValueSet *Protocol* 2.16.840.1.1133883.17.3.11.73 **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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.93"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67537-1" displayName="Protocol used NEMESIS"
    codeSystem="2.16.840.1.1133883.6.1" codeSystemName="LOINC" />
  </observation>
```

```
<value xsi:type="CD" code="LA17500-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Cardiac arrest-post resuscitation
care" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.65"
extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67492-9" displayName="Primary problem NEMESIS"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="S29.9" displayName="Unspecified injury of
thorax" codeSystem="2.16.840.1.113883.6.90" codeSystemName="ICD-10 CM" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.68"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69542-9" displayName="Secondary problem NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="S29.9" displayName="Unspecified injury of
    thorax" codeSystem="2.16.840.1.113883.6.90" codeSystemName="ICD-10 CM" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.35"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67552-0" displayName="Reason for choosing destination
    NEMESIS" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17182-9" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Closest facility" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.137"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="72112-6" displayName="Reason resuscitation not attempted
NEMSIS" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA18925-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Denied by order" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.146"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="9279-1" displayName="Respiratory rate"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="PQ" value="12" unit="/min" />
</observation>
```

```
</observation>
```

Response Beginning Odometer Reading

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.171]

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**="2.16.840.1.1133883.17.3.10.1.171"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 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: 2.16.840.1.1133883.6.1 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.171"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67484-6" displayName="Counter or odometer reading
NEMSIS --beginning of call" codeSystem="2.16.840.1.1133883.6.1"
codeSystemName="LOINC" />
  <value xsi:type="PQ" value="12000" unit="mi_i" />
</observation>
```

Response Delay

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.154]

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**="2.16.840.1.1133883.17.3.10.1.154"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11287)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10595)/**@code**="67557-9" *Response delay NEMSIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10594)
4. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:10597), which **SHALL** be selected from ValueSet [ResponseDelayType](#) 2.16.840.1.1133883.17.3.11.51 **DYNAMIC** (CONF:10596)
NEMSIS Trace: eResponse.09

Response Delay example

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

```

<templateId root="2.16.840.1.1133883.17.3.10.1.154"
extension="2022-01-01" />
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="67557-9" displayName="Response delay NEMESIS"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
<value xsi:type="CD" code="LA18081-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="None/no delay" />
</observation>

```

Response Destination Odometer Reading

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.173]

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**="2.16.840.1.1133883.17.3.10.1.173"
 - 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.173"
extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67486-1" displayName="Counter or odometer reading
NEMESIS --patient destination" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" />
  <value xsi:type="PQ" value="12050" unit="mi_i" />
</observation>

```

Response Ending Odometer Reading

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.174]

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**="2.16.840.1.1133883.17.3.10.1.174"
 - 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.174"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67487-9" displayName="Counter or odometer reading NEMSIS --
end of call" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="PQ" value="12055" unit="mi_i" />
</observation>
```

Response Mode Qualifier

[Observation: templateId 2.16.840.1.113883.17.3.10.1.191]

Characteristics of the response mode

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:11715), which **SHALL** be selected from ValueSet [ResponseModeQualifier](#) 2.16.840.1.113883.17.3.11.106 **DYNAMIC** (CONF:11375)

NEMSIS 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" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="77157-6" displayName="Response mode descriptors"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA22801-7" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Speed-Enhanced per Local Policy" />
  <value xsi:type="CD" code="LA22803-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Lights and Sirens" />
</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 NEMSIS* (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)
- NEMSIS 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.182"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67482-0" displayName="Response mode to scene NEMSIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17179-5" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Non-emergent upgraded to emergent" />
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      .
      .
      .
    </observation>
  </entryRelationship>
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.172"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67485-3" displayName="Counter or odometer reading NEMSIS --
    patient arrival" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" /
  >
  <value xsi:type="PQ" value="12000" unit="mi_i" />
</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)

NEMESIS Trace: eArrest.12

Return Of Spontaneous Circulation example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.128"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="88670-5" displayName="Return of spontaneous circulation"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17076-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Yes, at arrival at the ED" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.155"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67558-7" displayName="Scene delay NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17591-1" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Traffic" />
  <value xsi:type="CD" code="LA17596-0" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Safety-crew/staging" />
</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**="CD" (CONF:10751), which **SHALL** be selected from ValueSet *PatientsAtScene* 2.16.840.1.113883.17.3.11.110 **DYNAMIC**
- NEMESIS Trace: eScene.06

Scene Patient Count example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.86"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67489-5" displayName="Total patients at the scene NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="ST" value="Single" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.180"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67524-9" displayName="Physical findings of Skin NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA6626-1" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Normal" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.163"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67520-7" displayName="Stroke scale overall interpretation
NEMESIS" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA6577-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Negative" />
  <methodCode code="LA3774-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Massachusetts Stroke Scale (MSS)" />
</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:11724)/**@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)
NEMESIS Trace: eVitals.01

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

NEMESIS 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)

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

Systolic Blood Pressure example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.23"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="8480-6" displayName="Systolic blood pressure"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="PQ" value="130" unit="mm[Hg]" />
</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 NEMESIS* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10432)
4. **SHALL** contain exactly one [1..1] **value** with **@xsi:type="CD"** (CONF:11722), which **SHALL** be selected from ValueSet [ExistenceOfContraindicationsToThrombolyticUse](#) 2.16.840.1.113883.17.3.11.41 **DYNAMIC** (CONF:10433)

NEMESIS Trace: eVitals.31

Thrombolytic Contraindications example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.82"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67523-1" displayName="Contraindication for thrombolytic use
    NEMESIS" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17114-2" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Definite contraindications to
    thrombolytic use" />
</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**="2.16.840.1.1133883.17.3.10.1.156"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11289)
3. **SHALL** contain exactly one [1..1] **code** (CONF:10605)/**@code**="67559-5" *Transport delay NEMSIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10604)
4. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:10607), which **SHALL** be selected from ValueSet *TransportDelayType* 2.16.840.1.1133883.17.3.11.53 **DYNAMIC** (CONF:10606)

NEMSIS Trace: eResponse.11

Transport Delay example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.156"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67559-5" displayName="Transport delay NEMSIS"
    codeSystem="2.16.840.1.1133883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17594-5" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Weather" />
</observation>
```

Transport Disposition

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.199]

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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11592) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.199"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **code** (CONF:11702)/**@code**="100040-5" *Transport Disposition* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:11593)
3. **SHALL** contain exactly one [1..1] **value** with **@xsi:type**="CD" (CONF:11595), which **SHALL** be selected from ValueSet *TransportDisposition* 2.16.840.1.1133883.17.3.11.115 **DYNAMIC** (CONF:11594)

NEMSIS Trace: eDisposition.30

Transport Disposition example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.199"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="100040-5" displayName="Transport Disposition"
    codeSystem="2.16.840.1.1133883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA29248-4" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Patient Refused Transport" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.34"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67549-6" displayName="Transport method NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17168-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Ground-ambulance" />
</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 NEMESIS* (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)
NEMESIS 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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.193"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67550-4" displayName="Transport mode from scene NEMSIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17177-9" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Emergent (immediate response)" />
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      .
      .
      .
    </observation>
  </entryRelationship>
</observation>
```

Transport Mode Qualifier

[Observation: templateId 2.16.840.1.113883.17.3.10.1.193]

Characteristics of the transport mode

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)

NEMSIS 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" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="77153-5" displayName="Transport Mode Descriptors"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA22803-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Lights and Sirens" />
</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

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11444) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.52"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11157)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11651)/**@code**="67495-2" *CDC field triage criteria NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10111)
4. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:11616), which **SHALL** be selected from ValueSet *TraumaCenterCriteria* 2.16.840.1.1133883.17.3.11.3 **DYNAMIC** (CONF:10112)

NEMESIS Trace: eInjury.03

Trauma Triage Criteria (Steps 1 and 2) example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.52"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67495-2" displayName="CDC field triage criteria NEMESIS"
    codeSystem="2.16.840.1.1133883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17343-7" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Open or depressed skull fracture" />
</observation>
```

Trauma Triage Criteria (Steps 3 and 4)

[Observation: templateId 2.16.840.1.1133883.17.3.10.1.53]

Factors predictive of need for trauma center care

1. **SHALL** contain exactly one [1..1] **templateId** (CONF:11445) such that it
 - a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.53"
 - b. **SHALL** contain exactly one [1..1] **@extension**="2022-01-01"
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.1133883.5.1001 HL7ActMood) (CONF:11158)
3. **SHALL** contain exactly one [1..1] **code** (CONF:11383)/**@code**="67496-0" *Other injury risk factors NEMESIS* (CodeSystem: 2.16.840.1.1133883.6.1 LOINC) (CONF:10114)
4. **SHALL** contain at least one [1..*] **value** with **@xsi:type**="CD" (CONF:11382), which **SHALL** be selected from ValueSet *InjuryRiskFactor* 2.16.840.1.1133883.17.3.11.4 **DYNAMIC** (CONF:10115)

NEMESIS Trace: eInjury.04

Trauma Triage Criteria (Steps 3 and 4) example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.53"
    extension="2022-01-01" />
  <id root="2.16.840.1.1133883.19.4" extension="477978662" />
  <code code="67496-0" displayName="Other injury risk factors NEMESIS"
    codeSystem="2.16.840.1.1133883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17350-2" codeSystem="2.16.840.1.1133883.6.1"
    codeSystemName="LOINC" displayName="Motorcycle crash > 20 mph" />
</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 NEMESIS* (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)

NEMESIS Trace: eResponse.12

Turnaround Delay example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.157"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67560-3" displayName="Turn-around delay NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17590-3" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Staff delay" />
</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 NEMESIS* (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)

NEMESIS Trace: eTimes.07

Unit At Patient Time example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.42"
    extension="2022-01-01" />
</observation>
```



```
<id root="2.16.840.1.113883.19.4" extension="477978662" />
<code code="69474-5" displayName="Responding unit arrived
at the patient's side [Date and time] Vehicle NEMSIS"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
<value xsi:type="TS" value="201201011450+0600" />
```

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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.45"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69477-8" displayName="Unit was back in service
and available for response [Date and time] Vehicle NEMSIS"
codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="TS" value="201201011450+0600" />
```

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.

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**="100037-1" *Patient contact 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)

NEMSIS trace: eDisposition.27

Unit Disposition example


```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.196"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="100037-1" displayName="Patient contact disposition"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA33303-1" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Patient Contact Made" />
</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 NEMSIS* (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)

NEMSIS Trace: eTimes.05

Unit En Route Time example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.40"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69472-9" displayName="Unit responded [Date and time] Vehicle
    NEMSIS" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="TS" value="201201011450+0600" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.43"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69475-2" displayName="Responding unit left the scene with a
    patient [Date and time] Vehicle NEMSIS" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <value xsi:type="TS" value="201201011450+0600" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.39"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69471-1" displayName="Responding unit was notified by
    dispatch [Date and time] Vehicle NEMSIS" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <value xsi:type="TS" value="201201011450+0600" />
</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)

NEMESIS Trace: eTimes.06

Unit On Scene Time example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.41"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="69473-7" displayName="Responding unit arrived on the
    scene [Date and time] Vehicle NEMESIS" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" />
  <value xsi:type="TS" value="201201011450+0600" />
</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 NEMESIS* (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)

NEMESIS Trace: eInjury.05

Vehicle Impact Area example

```
<observation classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.54"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67497-8" displayName="Location of impact on the vehicle
    NEMESIS" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA6114-8" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="3" />
</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="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.17.3.10.1.56"
    extension="2022-01-01" />
  <id root="2.16.840.1.113883.19.4" extension="477978662" />
  <code code="67499-4" displayName="Safety equipment NEMESIS"
    codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" />
  <value xsi:type="CD" code="LA17379-1" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="Lap belt with shoulder belt" />
</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. **MAY** contain zero or one [0..1] **component** such that it (CONF:11704)
 - a. **SHALL** contain exactly one [1..1] **observation**, where its type is *Diastolic Blood Pressure* (CONF:11642)
9. **SHALL** contain exactly one [1..1] **component** such that it (CONF:11705)
 - a. **SHALL** contain exactly one [1..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 exactly one [1..1] **organizer**, where its type is *Additional Vital Signs Organizer* (CONF:11707)

Vital Signs Organizer example

```
<organizer classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.1133883.17.3.10.1.28"/>
  <templateId root="2.16.840.1.1133883.10.20.22.4.26"/>
  <id root="2.16.840.1.1133883.19.4" extension="247546586"/>
  <code code="46680005" codeSystem="2.16.840.1.1133883.6.96"
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*
- *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 Timing*
- *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*
- *Ethnicity Group*
- *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 Human Language*
- *Head Assessment Finding*
- *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*
- *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*
- *Patients At Scene*
- *Pelvis Genitourinary Assessment*
- *Pregnancy*
- *Procedure Complication Type*
- *Protocol*
- *Protocol Age Category*
- *Provider Adverse Event Type*
- *Provider Response Role*
- *Provider Role*
- *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

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)

Code	Code System	Print Name
LA18680-1	LOINC	Visualization of vocal cords
LA18681-9	LOINC	Waveform ETCO2
LA18679-3	LOINC	Other airway device placement confirmation
LA32909-6	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	Endotracheal 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
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
LA32962-5	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
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

Code	Code System	Print Name
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
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
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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
LA32960-9	LOINC	Drug Use, Suspected
LA32961-7	LOINC	Alcohol Use, Suspected

Blood Pressure Measurement Method

Value Set	BloodPressureMeasurementMethod - 2.16.840.1.113883.17.3.11.107
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Technique for measuring blood pressure

Code	Code System	Print Name
LA24013-7	LOINC	Cuff-automated
LA24012-9	LOINC	Cuff-manual auscultated
LA25780-0	LOINC	Arterial Line
LA25782-6	LOINC	Cuff-Manual Palpated Only
LA19771-7	LOINC	Doppler
LA25783-4	LOINC	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
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Outcome of an EMS cardiac arrest event

Code	Code System	Print Name
LA22792-8	MISSING	Expired in ED
LA22793-6	LOINC	Expired in the field
LA22794-4	LOINC	Ongoing resuscitation in the ED
LA22795-1	LOINC	Return of spontaneous circulation in the field
LA22796-9	LOINC	Return of spontaneous circulation in the ED
LA22797-7	LOINC	Ongoing resuscitation by other EMS crew

Cardiac Arrest Timing

Value Set	CardiacArrestTiming - 2.16.840.1.113883.17.3.11.91
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Whether cardiac arrest occurred before or after arrival of emergency medical service team

Code	Code System	Print Name
LA17054-0	LOINC	Yes, Prior to Any EMS Arrival (includes Transport EMS and Medical First Responders)
LA17055-7	LOINC	Yes, After Any EMS Arrival (includes Transport EMS and Medical First Responders)

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

Code	Code System	Print Name
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
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
LA32915-3	LOINC	Non-STEMI Septal Ischemia
LA32916-1	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

Code	Code System	Print Name
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
LA17756-0	LOINC	Ventilation-impedance threshold device
LA17757-8	LOINC	Ventilation-mouth to mouth
LA17758-6	LOINC	Ventilation-pocket mask
LA32912-0	LOINC	Ventilation-with OPA/NPA
LA32913-8	LOINC	Ventilation-Advanced Airway Device
LA32914-6	LOINC	Ventilation-Passive Ventilation with Oxygen
LA32911-2	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
LA17208-2	LOINC	Bleeding Controlled
LA18236-2	LOINC	Implanted Device
LA7452-1	LOINC	Laceration
LA6626-1	LOINC	Normal
LA7423-2	LOINC	Contusion
LA18225-5	LOINC	Deformity

Code	Code System	Print Name
LA23810-7	LOINC	Tenderness-General
LA17229-8	LOINC	Crush Injury
LA33345-2	LOINC	Burn-White/Waxy
LA33353-6	LOINC	Burn-Redness
LA33346-0	LOINC	Burn-Charring
LA33342-9	LOINC	Flail Segment
LA17209-0	LOINC	Bleeding Uncontrolled
LA17222-3	LOINC	Accessory Muscles Used with Breathing
LA18220-6	LOINC	Avulsion
LA7410-9	LOINC	Abrasion
LA7460-4	LOINC	Pain
LA33332-0	LOINC	Pain with Inspiration/Expiration
LA17214-0	LOINC	Puncture/Stab Wound
LA18231-3	LOINC	Retraction
LA17709-9	LOINC	Tenderness
LA17212-4	LOINC	Gunshot Wound
LA22440-4	LOINC	Swelling
LA33338-7	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
LA33302-3	LOINC	General - Posterior
LA33301-5	LOINC	Left - Anterior
LA33300-7	LOINC	Left - Posterior
LA33299-1	LOINC	Right - Anterior
LA33297-5	LOINC	General - Anterior
LA33296-7	LOINC	Left - Side
LA33298-3	LOINC	Right - Side
LA33295-9	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
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
LA33320-5	LOINC	Back in Service, Care/Support Services Refused
LA33319-7	LOINC	Back in Service, No Care/Support Services Required
LA33318-9	LOINC	Incident Support Services Provided (Including Standby)
LA33317-1	LOINC	Assumed Primary Care from Another EMS Crew
LA33316-3	LOINC	Provided Care Supporting Primary EMS Crew
LA33315-5	LOINC	Initiated Primary Care and Transferred to Another EMS Crew
LA33314-8	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)
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
LA32922-9	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
LA32937-7	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
LA32923-7	LOINC	Mental Health Facility
LA32924-5	LOINC	Diagnostic Services

Code	Code System	Print Name
LA21437-1	LOINC	Assisted Living Facility
LA32926-0	LOINC	Dialysis Center
LA32927-8	LOINC	Drug and/or Alcohol Rehabilitation Facility
LA27338-5	LOINC	Skilled Nursing Facility
LA32929-4	LOINC	Physical Rehabilitation Facility
LA32930-2	LOINC	Other Recurring Care Center
LA27-8	LOINC	Nursing Home

Destination Ward Kind

Value Set	DestinationWardKind - 2.16.840.1.113883.17.3.11.103
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	The location within the hospital that the patient was taken directly by EMS

Code	Code System	Print Name
LA22808-2	LOINC	Hospital-burn
LA22809-0	LOINC	Hospital-cath lab
LA22810-8	LOINC	Hospital-CCU
LA22824-9	LOINC	Hospital-orthopedic
LA22811-6	LOINC	Hospital-endoscopy
LA22812-4	LOINC	Hospital-hospice
LA22813-2	LOINC	Hospital-hyperbaric oxygen treatment
LA22814-0	LOINC	Hospital-ICU
LA22815-7	LOINC	Hospital-labor and delivery
LA22816-5	LOINC	Hospital-medical/surgery
LA22817-3	LOINC	Hospital-mental health
LA22818-1	LOINC	Hospital-MICU
LA22819-9	LOINC	Hospital-NICU
LA22820-7	LOINC	Hospital-nursery
LA22821-5	LOINC	Hospital-peds (general)
LA22822-3	LOINC	Hospital-peds ICU
LA22823-1	LOINC	Hospital-OR
LA22825-6	LOINC	Hospital-other
LA22826-4	LOINC	Hospital-outpatient bed
LA22827-2	LOINC	Hospital-radiology services - MRI

Code	Code System	Print Name
LA22828-0	LOINC	Hospital-radiology services - CT/PET
LA22829-8	LOINC	Hospital-radiology services - x-ray
LA22830-6	LOINC	Hospital-radiation
LA22831-4	LOINC	Hospital-rehabilitation
LA22832-2	LOINC	Hospital-SICU
LA24394-1	LOINC	Hospital-Oncology
LA24395-8	LOINC	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
LA30039-4	LOINC	Flood
LA32967-4	LOINC	Land Slide
LA32968-2	LOINC	Winter Storm
LA30042-8	LOINC	Tornado
LA30040-2	LOINC	Hurricane
LA30037-8	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
LA32992-2	LOINC	Communication Specialist-Assignment Error
LA32993-0	LOINC	No Receiving MD, Bed, Hospital
LA32994-8	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

Code	Code System	Print Name
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
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

Code	Code System	Print Name
LA23800-8	LOINC	Air medical Transport
LA17392-4	LOINC	Altered Mental Status
LA18716-3	LOINC	Intercept
LA15098-9	LOINC	Nausea
LA15099-7	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
LA32996-3	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
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Level of service provided for an encounter (as defined by CMS)

Code	Code System	Print Name
LA18102-6	LOINC	ALS, level 1
LA18103-4	LOINC	ALS, level 1 emergency
LA18104-2	LOINC	ALS, level 2
LA18105-9	LOINC	BLS
LA18106-7	LOINC	BLS, emergency
LA18107-5	LOINC	Fixed wing (airplane)
LA18108-3	LOINC	Paramedic intercept
LA18109-1	LOINC	Specialty care transport
LA18110-9	LOINC	Rotary wing (helicopter)

EMS Medication Administration Device

Value Set	EMSMedicationAdministrationDevice - 2.16.840.1.113883.17.3.11.108
Code System	LOINC - 2.16.840.1.113883.6.1
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	LOINC	Subcutaneous port
425478008	LOINC	Blow by oxygen mask

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

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
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

Code	Code System	Print Name
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

Code	Code System	Print Name
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
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

Code	Code System	Print Name
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
LA32940-1	LOINC	Foot-Whole Foot-Right
LA32939-3	LOINC	Hand-Whole Hand-Left
LA32941-9	LOINC	Arm-Whole Arm and Hand-Left
LA32942-7	LOINC	Arm-Whole Arm and Hand-Right
LA32938-5	LOINC	Foot-Whole Foot-Left
LA32943-5	LOINC	Leg-Whole Leg-Right
LA32944-3	LOINC	Leg-Whole Leg-Left
LA32945-0	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

Code	Code System	Print Name
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
LA19576-0	LOINC	Dilated
LA32946-8	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
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 System	LOINC - 2.16.840.1.113883.6.1	
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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)
LA32920-3	LOINC	Non-Acute/Routine
LA32921-1	LOINC	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	
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 Human Language

Value Set	HL7 Human Language
Description	Codes for the Representation of Names of Languages

Head Assessment Finding

Value Set	HeadAssessmentFinding - 2.16.840.1.113883.17.3.11.26
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

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
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Characteristic hospital capabilities that might be germane to an EMS destination selection

Code	Code System	Print Name
LA22833-0	LOINC	Behavioral health
LA22834-8	LOINC	Burn center
LA22835-5	LOINC	Critical access hospital
LA22836-3	LOINC	Hospital - general
LA22837-1	LOINC	Neonatal center
LA22838-9	LOINC	Pediatric center
LA22842-1	LOINC	Rehabilitation center
LA22843-9	LOINC	Trauma center level 1
LA22844-7	LOINC	Trauma center level 2
LA22845-4	LOINC	Trauma center level 3
LA22846-2	LOINC	Trauma center level 4

Code	Code System	Print Name
LA22847-0	LOINC	Trauma center level 5
LA22848-8	LOINC	Cardiac-STEMI/PCI Capable
LA22849-6	LOINC	Cardiac-STEMI/PCI Capable (24/7)
LA22850-4	LOINC	Cardiac-STEMI/Non-PCI Capable
LA32931-0	LOINC	Stroke-Acute Stroke Ready Hospital (ASRH)
LA32934-4	LOINC	Stroke-Primary Stroke Center (PSC)
LA32935-1	LOINC	Stroke-Thrombectomy-Capable Stroke Center (TSC)
LA32936-9	LOINC	Stroke-Comprehensive Stroke Center (CSC)
LA32933-6	LOINC	Cancer Center
LA20786-2	LOINC	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
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Description	ICD-10 Procedure Coding System
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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

Code	Code System	Print Name
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
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
LA18765-0	LOINC	Wrist-Right
LA18766-8	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)
LA32920-3	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.)

Code	Code System	Print Name
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
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

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
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
LA33360-1	LOINC	Breath Sounds-Absent
LA33354-4	LOINC	Breath Sounds-Decreased
LA6626-1	LOINC	Normal
LA18402-0	LOINC	Breath Sounds-Equal
LA33362-7	LOINC	Breath Sounds-Normal
LA17232-2	LOINC	Increased Respiratory Effort
LA33365-0	LOINC	Wheezing-Inspiratory
LA18226-3	LOINC	Foreign Body
LA7460-4	LOINC	Pain
LA33356-9	LOINC	Pain with Inspiraton/Expiration
LA33355-1	LOINC	Rales
LA33363-5	LOINC	Rhonchi
LA17612-5	LOINC	Stridor
LA33364-3	LOINC	Wheezing-Expiratory
LA17236-3	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
LA4306-2	LOINC	Right
LA4585-1	LOINC	Left

Code	Code System	Print Name
LA25377-5	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

Code	Code System	Print Name
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
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
Code System	SNOMED CT - 2.16.840.1.113883.6.96
Definition	Specifications for site of substance administration when Route is insufficiently specific

Code	Code System	Print Name
280361007	SNOMED CT	Tracheostomy stoma

Code	Code System	Print Name
15562006	SNOMED CT	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
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

Code	Code System	Print Name
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

Code	Code System	Print Name
LA7438-0	LOINC	Hallucinations
LA9343-0	LOINC	Unresponsive
LA6150-2	LOINC	Agitation
LA23818-0	LOINC	Somnolent
LA17666-1	LOINC	Stupor
LA17313-0	LOINC	Psychologically Impaired
LA32948-4	LOINC	Pharmacologically Sedated
LA17678-6	LOINC	State of emotional shock and stress, unspecified
LA32951-8	LOINC	Altered mental status, unspecified
LA17307-2	LOINC	Developmentally Impaired
LA32953-4	LOINC	Pharmacologically Paralyzed
LA32950-0	LOINC	Slowness and poor responsiveness
LA32956-7	LOINC	Strange and inexplicable behavior
LA17317-1	LOINC	Uncooperative
LA32955-9	LOINC	Unspecified coma
LA17668-7	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
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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
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
LA23823-0	LOINC	Arm Drift-Right
LA32958-3	LOINC	Status Seizure
LA32959-1	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 https://nemsis.org/technical-resources/version-3/version-3-resources/ .

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
LA33311-4	LOINC	Patient Evaluated, No Care Required
LA33312-2	LOINC	Patient Refused Evaluation/Care
LA33310-6	LOINC	Patient Evaluated and Refused Care
LA33309-8	LOINC	Patient Evaluated and Care Provided
LA33313-0	LOINC	Patient Support Services Provided

Patients At Scene

Value Set	PatientsAtScene - 2.16.840.1.113883.17.3.11.110
Code System	LOINC - 2.16.840.1.113883.6.1

Code	Code System	Print Name
LA17717-2	LOINC	Single

Code	Code System	Print Name
LA15382-7	LOINC	Multiple
LA137-2	LOINC	None

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
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

Code	Code System	Print Name
LA17229-8	LOINC	Crush Injury
LA7423-2	LOINC	Contusion
LA14123-6	LOINC	Unstable

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

Code	Code System	Print Name
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

Code	Code System	Print Name
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
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

Code	Code System	Print Name
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
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

Code	Code System	Print Name
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
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)
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 Response Role

Value Set	ProviderResponseRole - 2.16.840.1.113883.17.3.11.80
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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
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
LA32966-6	LOINC	Fire Personnel (non EMS)
LA9277-0	LOINC	Family Member
LA32964-1	LOINC	Law Enforcement

Code	Code System	Print Name
LA28538-9	LOINC	Lay Person
LA4634-7	LOINC	Patient
LA32922-9	LOINC	Emergency Medical Technician - Intermediate
LA33278-5	LOINC	Healthcare Provider (non-911 Responder)
LA9405-7	LOINC	Bystander
LA33280-1	LOINC	First Responder (Law Enforcement)
LA33281-9	LOINC	First Responder (non-EMS Fire)
LA33282-7	LOINC	EMS Responder (transport EMS)
LA33279-3	LOINC	First Responder (EMS)

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	https://phinvads.cdc.gov/vads/ViewValueSet.action?id=67D34BBC-617F-DD11-B38D-00188B398520

Code	Code System	Print Name
1002-5	Race and Ethnicity - CDC	American Indian or Alaska Native
2028-9	Race and Ethnicity - CDC	Asian
2054-5	Race and Ethnicity - CDC	Black or African American
2076-8	Race and Ethnicity - CDC	Native Hawaiian or Other Pacific Islander
2131-1	Race and Ethnicity - CDC	Other Race
2106-3	Race and Ethnicity - CDC	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

Code	Code System	Print Name
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
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Rationale for not attempting to resuscitate a patient

Code	Code System	Print Name
LA17063-1	LOINC	Considered futile
LA17064-9	LOINC	DNR orders
LA17065-6	LOINC	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
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
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Additional tactics or approaches used to support emergent response mode

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
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
LA22806-6	LOINC	Initial No Lights or Sirens, Upgraded to Lights and Sirens
LA22807-4	LOINC	Initial Lights and Sirens, Downgraded to No Lights or Sirens
LA22869-4	LOINC	Unscheduled
LA22866-0	LOINC	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

Code	Code System	Print Name
LA9391-9	LOINC	Eye protection
LA9392-7	LOINC	Protective clothing
LA9393-5	LOINC	Personal flotation device
LA11137-9	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
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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)
LA18716-3	LOINC	Emergency Response (Intercept)
LA18717-1	LOINC	Hospital-to-Hospital Transfer
LA18719-7	LOINC	Mutual aid
LA18720-5	LOINC	Public assistance
LA32978-1	LOINC	Support Services
LA32983-1	LOINC	Emergency Response (Mutual Aid)
LA32982-3	LOINC	Hospital to Non-Hospital Facility Transfer
LA32981-5	LOINC	Non-Hospital Facility to Non-Hospital Facility Transfer
LA32980-7	LOINC	Non-Hospital Facility to Hospital Transfer
LA32979-9	LOINC	Other Routine Medical Transport
LA17595-2	LOINC	Non-Patient Care Rescue/Extrication
LA32977-3	LOINC	Crew Transport Only
LA32984-9	LOINC	Transport of Organs or Body Parts
LA32976-5	LOINC	Mortuary Services
LA32975-7	LOINC	Mobile Integrated Health Care Encounter
LA32974-0	LOINC	Evaluation for Special Referral/Intake Programs
LA32973-2	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)

Code	Code System	Print Name
LA17201-7	LOINC	Flushed
LA17202-5	LOINC	Hot
LA17203-3	LOINC	Jaundiced
LA17204-1	LOINC	Lividity
LA17205-8	LOINC	Mottled
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
LA33001-1	LOINC	Los Angeles Motor Score (LAMS)
LA33000-3	LOINC	Rapid Arterial occlusion Evaluation (RACE)
LA32999-7	LOINC	Melbourne Ambulance Stroke Screen (MASS)
LA32998-9	LOINC	Ontario Prehospital Stroke Scale (OPSS)
LA32997-1	LOINC	Boston Stroke Scale (BOSS)
LA33002-9	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
LA33327-0	LOINC	No Transport
LA33326-2	LOINC	Non-Patient Transport (Not Otherwise Listed)
LA29248-4	LOINC	Patient Refused Transport
LA33324-7	LOINC	Transport by Another EMS Unit, with a Member of This Crew
LA33323-9	LOINC	Transport by Another EMS Unit
LA33322-1	LOINC	Transport by This EMS Unit, with a Member of Another Crew
LA33321-3	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
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

Code	Code System	Print Name
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
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
LA33304-9	LOINC	Cancelled on Scene
LA33305-6	LOINC	Cancelled Prior to Arrival at Scene
LA33306-4	LOINC	No Patient Contact
LA33307-2	LOINC	No Patient Found
LA33308-0	LOINC	Non-Patient Incident (Not Otherwise Listed)
LA33303-1	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
LA32989-8	LOINC	Ground Transport (BLS Equipped)
LA32988-0	LOINC	Ground Transport (Critical Care Equipped)
LA32987-2	LOINC	Non-Transport-Medical Treatment (ALS Equipped)
LA32986-4	LOINC	Non-Transport-Medical Treatment (BLS Equipped)
LA32991-4	LOINC	Wheel Chair Van/Ambulette
LA32985-6	LOINC	Non-Transport-No Medical Equipment
LA32990-6	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

Code	Code System	Print Name
LA10138-8	LOINC	6
LA10139-6	LOINC	7
LA10140-4	LOINC	8
LA10141-2	LOINC	9
LA13942-0	LOINC	10
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

Chapter

6

Appendices

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*
- *Crosswalk*

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.

OID	State Administrator
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
Null Values			
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
Proper Values			
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"

NEMESIS 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	

Crosswalk

This table indicates where in the document to find a given NEMSIS element, and what element is represented by the templates in the guide. Templates defined in this guide have the root 2.16.840.1.113883.17.3.10.

NEMSIS ID	NEMSIS name	Model approach	Template	LOINC
eAirway.02	Airway Confirmation Observation	Observation time	[root].1.175	71576-3

NEMSIS ID	NEMSIS name	Model approach	Template	LOINC
eAirway.03	Device	Procedure device	[root].1.181	71574-8
eAirway.04	Confirmation method	Observation method	[root].1.175	
eArrest.01	Cardiac Arrest	Observation negation	[root].1.27	
eArrest.01	Cardiac Arrest	Observation value	[root].1.123	67502-5
eArrest.02	Cardiac Arrest Etiology	Observation value	[root].1.124	67503-3
eArrest.03	Resuscitation Attempted By EMS	Procedure	[root].1.181	72115-9
eArrest.03	Resuscitation Attempted By EMS	Observation value for negatives	[root].1.137	67504-1
eArrest.04	Arrest Witnessed by	Informant	[root].1.27	67505-8
eArrest.07	AED Use Prior to EMS Arrival	Observation value	[root].1.131	67508-2
eArrest.09	Type of CPR Provided	Procedure	[root].1.181	67510-8
eArrest.10	Therapeutic Hypothermia by EMS	Procedure	[root].1.181	67511-6
eArrest.11	First Monitored Arrest Rhythm of the Patient	Observation value	[root].1.127	67512-4
eArrest.12	Any Return of Spontaneous Circulation	Observation value	[root].1.128	88670-5
eArrest.14	Time of Cardiac Arrest	Observation time	[root].1.27	
eArrest.15	Date/Time Resuscitation Discontinued	Procedure status, time	[root].1.181	none
eArrest.16	Reason CPR/ Resuscitation Discontinued	Observation value	[root].1.130	67574-4
eArrest.17	Cardiac Rhythm on Arrival at Destination	Observation value	[root].1.129	67519-9
eArrest.18	End of EMS Cardiac Arrest Event	Observation value	[root].1.184	77152-7
eArrest.20	Who First Initiated CPR	Procedure performer	[root].1.181	88102-9
eArrest.21	Who First Applied the AED	Procedure performer	[root].1.181	100034-8

NEMSIS ID	NEMSIS name	Model approach	Template	LOINC
eArrest.22	Who First Defibrillated the Patient	Procedure performer	[root].1.181	88663-0
eCrew.01	Crew Member ID	Service event performer	[root].2	
eCrew.02	Crew Member Level	Service event performer	[root].2	71580-5
eCrew.03	Crew Member Response Role	Service event performer	[root].2	71581-3
eDispatch.01	Complaint Reported by Dispatch	Observation value	[root].1.74	67570-2
eDispatch.02	EMD Performed	Observation value	[root].1.73	67488-7
eDisposition.02	Destination/ Transferred To, Code	Header participation	[root].2	71578-9
eDisposition.03	Destination Street Address	Header participation	[root].2	
eDisposition.04	Destination City	Header participation	[root].2	
eDisposition.05	Destination State	Header participation	[root].2	
eDisposition.06	Destination County	Header participation	[root].2	
eDisposition.07	Destination Zip Code	Header participation	[root].2	
eDisposition.11	Number of Patients Transported in this EMS Unit	Observation value	[root].1.31	67547-0
eDisposition.16	EMS Transport Method	Observation value	[root].1.34	67549-6
eDisposition.17	Transport Mode from Scene	Observation value	[root].1.33	67550-4
eDisposition.18	Additional Transport Mode Descriptors	Observation value	[root].1.193	77153-5
eDisposition.19	Final patient acuity	Observation value	[root].1.37	77941-3
eDisposition.20	Reason for Choosing Destination	Observation value	[root].1.35	67552-0
eDisposition.21	Type of Destination	Header participation	[root].2	71578-9
eDisposition.22	Hospital In-Patient Destination	Observation value	[root].1.186	77154-3
eDisposition.23	Hospital Capability	Observation value	[root].1.104	77155-0
eDisposition.24	Destination Prearrival Activation	Observation value	[root].1.36	69462-0

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eDisposition.25	Destination Prearrival Activation Date/ Time	Observation time	[root].1.136	69462-0
eDisposition.27	Unit Disposition	Observation value	[root].1.196	100037-1
eDisposition.28	Patient Evaluation/ Care	Observation value	[root].1.197	100038-9
eDisposition.29	Crew Disposition	Observation value	[root].1.198	100039-7
eDisposition.30	Transport Disposition	Observation value	[root].1.199	100040-5
eExam.01	Estimated Body Weight in Kilograms	Observation value	[root].1.178	8335-2
eExam.02	Length Based Tape Measure	Observation value	[root].1.110	67670-0
eExam.03	Date/Time of Assessment	Observation time	many	
eExam.04	Skin Assessment	Observation value	[root].1.180	67524-9
eExam.05	Head Assessment	Observation value	[root].1.113	67525-6
eExam.06	Face Assessment	Observation value	[root].1.112	67526-4
eExam.07	Neck Assessment	Observation value	[root].1.114	67527-2
eExam.09	Heart Assessment	Observation value	[root].1.116	67529-8
eExam.10	Abdominal Exam Finding Location	Observation site	[root].1.117	71584-7
eExam.11	Abdomen Assessment	Observation value	[root].1.117	67530-6
eExam.12	Pelvis/Genitourinary Assessment	Observation value	[root].1.118	67531-4
eExam.13	Back and Spine Assessment Finding Location	Observation site	[root].1.119	71589-6
eExam.14	Back and Spine Assessment	Observation value	[root].1.119	67532-2
eExam.15	Extremity Assessment Finding Location	Observation site	[root].1.120	71585-4
eExam.16	Extremities Assessment	Observation value	[root].1.120	67533-0
eExam.17	Eye Assessment Finding Location	Observation site	[root].1.121	71586-2
eExam.18	Eye Assessment	Observation value	[root].1.121	67534-8
eExam.19	Mental Status Assessment	Observation value	[root].1.122	67535-5

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eExam.20	Neurological Assessment	Observation value	[root].1.141	67536-3
eExam.22	Lung Assessment Finding Location	Observation site	[root].1.194	100036-3
eExam.23	Lung Assessment	Observation value	[root].1.194	32449-1
eExam.24	Chest Assessment Finding Location	Observation site	[root].1.195	100035-5
eExam.25	Chest Assessment	Observation value	[root].1.195	11422-3
eHistory.01	Barriers to Patient Care	Observation value	[root].1.83	67515-7
eHistory.05	Advance Directives	Observation value	[root].1.98	67516-5
eHistory.06	Medication allergies	Observation value	[root].1.48, 102	67794-8
eHistory.07	Environmental allergies	Observation value	[root].1.104	79151-7
eHistory.07	Environmental allergies	Observation value	[root].1.103	69747-4
eHistory.08	Medical/surgical history	Observation value	[root].1.61	68487-8
eHistory.08	Medical/surgical history	Observation value	[root].1.60, 61	67793-0
eHistory.12	Current Medications	Substance admin present	[root].1.75	67791-4
eHistory.12	Current Medications	Substance admin substance	[root].1.77	
eHistory.12	Current Medications	Substance admin null flavor	[root].1.77	
eHistory.12	Current Medications	Substance admin negation	[root].1.77	
eHistory.13	Current Medication Dose	Substance admin dose	[root].1.77	
eHistory.14	Current Medication Dosage Unit	Substance admin dose unit	[root].1.77	
eHistory.15	Current Medication Administration Route	Substance admin route	[root].1.77	
eHistory.17	Alcohol/Drug Use Indicators	Observation value	[root].1.71	67669-2
eHistory.17	Alcohol/Drug Use Indicators	Observation value	[root].1.70	69757-3
eHistory.18	Pregnancy	Observation value	[root].1.79	67471-3
eHistory.19	Last oral intake	Observation value	[root].1.80	67517-3
eInjury.01	Cause of Injury	Observation value	[root].1.50	69543-7

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eInjury.02	Mechanism of Injury	Observation value	[root].1.51	67494-5
eInjury.03	Trauma Triage Criteria (Steps 1 and 2)	Observation value	[root].1.52	67495-2
eInjury.04	Trauma Triage Criteria (Steps 3 and 4)	Observation value	[root].1.53	67496-0
eInjury.05	The primary area or location of impact on the vehicle	Observation value	[root].1.54	67497-8
eInjury.06	Location of Patient in Vehicle	Observation value	[root].1.55	67498-6
eInjury.07	Use of Occupant Safety Equipment	Observation value	[root].1.56	67499-4
eInjury.08	Airbag Deployment	Observation value	[root].1.57	67500-9
eInjury.09	Height of Fall (feet)	Observation value	[root].1.58	67501-7
eMedications.01	Date/Time Medication Administered	Substance admin time	[root].1.72	
eMedications.02	Medication Administered Prior to this Units EMS Care	Observation value	[root].1.108	67539-7
eMedications.03	Medication Given	Observation value	[root].1.105	72113-4
eMedications.03	Medication Given	Substance admin negation	[root].1.72	
eMedications.03	Medication Given	Substance admin substance	[root].1.72	67797-1
eMedications.04	Medication Administration Route	Substance admin route	[root].1.72	
eMedications.05	Medication Dosage	Substance admin rate	[root].1.72	
eMedications.05	Medication Dosage	Substance admin dose	[root].1.72	
eMedications.06	Medication Dosage Unit	Substance admin dose unit	[root].1.72	
eMedications.06	Medication Dosage Unit	Substance admin rate unit	[root].1.72	
eMedications.07	Response to Medication	Observation value	[root].1.106	67540-5
eMedications.08	Medication Complication	Observation value	[root].1.107	67541-3

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eMedications.09	Medication Crew (Healthcare Professionals) ID	Substance admin performer	[root].1.72	
eMedications.10	EMS or Healthcare Professional Type Administering Medication	Substance admin performer	[root].1.72	
eMedications.11	Medication Authorization	Act relationship	[root].1.72	71573-0
eNarrative.01	Patient Care Report Narrative	Section text	[root].1.1	67781-5
eOther.02	Potential System of Care/Specialty/Registry Patient	Observation value	[root].1.94	67553-8
eOther.05	Suspected EMS Work Related Exposure, Injury, or Death	Observation value	[root].1.89	67554-6
eOther.06	Type of Suspected EMS Blood/Body Fluid Exposure, Injury, or Death	Observation value	[root].1.90	67555-3
eOther.07	Suspected Intentional, or Unintentional Disaster	Observation value	[root].1.59	69463-8
eOther.08	Who Generated this Report?	Assigned Author	[root].2	
epatient.01	id	Record Target	[root].2	
ePatient.02	Last Name	Record Target	[root].2	
ePatient.03	First Name	Record Target	[root].2	
ePatient.04	Middle Initial/Name	Record Target	[root].2	
ePatient.05	Patient's Home Address	Record Target	[root].2	
ePatient.06	Patient's Home City	Record Target	[root].2	
ePatient.07	Patient's Home County	Record Target	[root].2	
ePatient.08	Patient's Home State	Record Target	[root].2	
ePatient.09	Patient's Home Zip Code	Record Target	[root].2	
ePatient.10	Patient's Home Country	Record Target	[root].2	
ePatient.12	Social Security Number	Record Target	[root].2	

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
ePatient.13	Gender	Record Target	[root].2	
ePatient.14	Race	Record Target	[root].2	
ePatient.14	Race	Record Target	[root].2	
ePatient.15	Age	Observation value	[root].1.81	
ePatient.16	Age Units	Observation value	[root].1.81	
ePatient.17	Date of Birth	Record Target	[root].2	
ePatient.18	Primary or Home Telephone Number	Record Target	[root].2	
ePayment.50	CMS Service Level	Observation value	[root].1.92	69464-6
ePayment.51	EMS Condition Code	Observation value	[root].1.91	67556-1
eProcedures.01	Date/Time Procedure Performed	Procedure time	[root].1.181	
eProcedures.02	Procedure Performed Prior to this Units EMS Care	Observation value	[root].1.131	67542-1
eProcedures.03	Procedure	Observation value	[root].1.137	72112-6
eProcedures.03	Procedure	Procedure code	[root].1.181	67798-9
eProcedures.05	Number of Procedure Attempts	Observation value	[root].1.132	67543-9
eProcedures.06	Procedure Successful	Observation value	[root].1.133	67544-7
eProcedures.07	Procedure Complication	Observation value	[root].1.179	67545-4
eProcedures.08	Response to Procedure	Observation value	[root].1.135	67546-2
eProcedures.09	Procedure Crew Members ID	Performer	[root].1.181	
eProcedures.10	EMS or Healthcare Professional Type Performing the Procedure	Performer	[root].1.181	71582-1
eProcedures.13	IV Site Location	Procedure approachSiteCode	[root].1.181	71587-0
eProtocols.01	Protocols Used	Observation value	[root].1.93	67537-1
eProtocols.02	Protocol Age Category	Observation value	[root].1.149	67538-9
eRecord.01	Patient Care Report Number	Document id	[root].2	
eRecord.02	Software Creator	Assigned Author	[root].2	
eRecord.03	Software Name	Assigned Author	[root].2	

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eRecord.04	Software Version	Assigned Author	[root].2	
eResponse.01	EMS Agency Number	Assigned Author	[root].2	
eResponse.03	Incident Number	Service event	[root].2	
eResponse.04	EMS Vehicle (Unit) Response Number	Service event	[root].2	
eResponse.05	Type of Service Requested	Service event	[root].2	71583-9
eResponse.07	Primary Role of the Unit	HealthCare Facility	[root].2	71579-7
eResponse.08	Type of Dispatch Delay	Observation value	[root].1.153	67480-4
eResponse.09	Type of Response Delay	Observation value	[root].1.154	67557-9
eResponse.10	Type of Scene Delay	Observation value	[root].1.155	67558-7
eResponse.11	Type of Transport Delay	Observation value	[root].1.156	67559-5
eResponse.12	Type of Turn-Around Delay	Observation value	[root].1.157	67560-3
eResponse.13	EMS Vehicle (Unit) Number	HealthCare Facility	[root].2	
eResponse.14	EMS Unit Call Sign	HealthCare Facility	[root].2	
eResponse.16	Vehicle Dispatch Location	Observation value	[root].1.150	69466-1
eResponse.17	Vehicle Dispatch GPS Location	Observation value	[root].1.151	69465-3
eResponse.17	Vehicle Dispatch GPS Location	Observation value	[root].1.152	69465-3
eResponse.19	Beginning Odometer Reading of Responding Vehicle	Observation value	[root].1.171	67484-6
eResponse.20	On-Scene Odometer Reading of Responding Vehicle	Observation value	[root].1.172	67485-3
eResponse.21	Patient Destination Odometer Reading of Responding Vehicle	Observation value	[root].1.173	67486-1
eResponse.22	Ending Odometer Reading of Responding Vehicle	Observation value	[root].1.174	67487-9

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eResponse.23	Response Mode to Scene	Observation value	[root].1.182	67482-0
eResponse.24	Additional Response Mode Descriptors	Observation value	[root].1.191	77157-6
eScene.01	First EMS Unit on Scene	Observation value	[root].1.84	67481-2
eScene.02	Other EMS or Public Safety Agencies at Scene	Encounter Participant	[root].2	
eScene.06	Number of Patients at Scene	Observation value	[root].1.86	67489-5
eScene.07	Mass Casualty Incident	Observation value	[root].1.87	67490-3
eScene.09	Incident Location Type	Observation value	[root].1.88	74496-1
eScene.15	Incident Address	HealthCare Facility	[root].2	
eScene.17	Incident City	HealthCare Facility	[root].2	
eScene.18	Incident State	HealthCare Facility	[root].2	
eScene.19	Incident Zip Code	HealthCare Facility	[root].2	
eScene.21	Incident County	HealthCare Facility	[root].2	
eSituation.01	Date/Time of Symptom Onset/ Last Normal	Observation value	[root].1.63	
eSituation.02	Possible Injury	Observation value	[root].1.64	69467-9
eSituation.03	Complaint Type	Observation value	[root].1.138	72114-2
eSituation.04	Chief Complaint	Observation value	[root].1.63	10154-3
eSituation.05	Complaint duration	Observation value	[root].1.139	67491-1
eSituation.06	Time Units of Duration of Complaint	Observation value units	[root].1.139	
eSituation.07	Chief Complaint Anatomic Location	Observation targetsitecode	[root].1.63	71588-8
eSituation.08	Chief Complaint Organ System	Observation value	[root].1.140	69468-7
eSituation.09	Primary Symptom	Observation value	[root].1.66	67774-0
eSituation.10	Other Associated Symptoms	Observation value	[root].1.67	67776-5
eSituation.11	Provider's Primary Impression	Observation value	[root].1.65	67492-9
eSituation.12	Provider's Secondary Impression	Observation value	[root].1.68	69542-9

NEMSIS ID	NEMSIS name	Model approach	Template	LOINC
eSituation.13	Patient's Initial Condition at Scene	Observation value	[root].1.69	67493-7
eTimes.01	PSAP Call Date/ Time	Observation value	[root].1.38	69469-5
eTimes.02	Dispatch Notified Date/Time	Observation value	[root].1.46	69470-3
eTimes.03	Unit Notified by Dispatch Date/Time	Observation value	[root].1.39	69471-1
eTimes.05	Unit Enroute Date/ Time	Observation value	[root].1.40	69472-9
eTimes.06	Unit Arrived on Scene Date/Time	Observation value	[root].1.41	69473-7
eTimes.07	Arrived at Patient Date/Time	Observation value	[root].1.42	69474-5
eTimes.09	Unit Left Scene Date/Time	Observation value	[root].1.43	69475-2
eTimes.11	Patient Arrived at Destination Date/ Time	Observation value	[root].1.44	69476-0
eTimes.12	Destination Patient Transfer of Care Date/Time	Destination participation	[root].2	
eTimes.13	Unit Back in Service Date/Time	Observation value	[root].1.45	69477-8
eVitals.01	Date/Time Vital Signs Taken	Observation time	[root].1.30	
eVitals.02	Obtained Prior to this Units EMS Care	Observation value	[root].1.29	67518-1
eVitals.03	Cardiac Rhythm and Electrocardiography	Observation value	[root].1.169	67519-9
eVitals.04	ECG Type	Observation device	[root].1.169	71575-5
eVitals.05	The method of ECG interpretation	Observation method	[root].1.169	71577-1
eVitals.06	SBP (Systolic Blood Pressure)	Observation value	[root].1.23.1	8480-6
eVitals.07	DBP (Diastolic Blood Pressure)	Observation value	[root].1.144	8462-4
eVitals.08	Method of Blood Pressure Measurement	Observation method	[root].1.144, 23.1	
eVitals.08	Method of Blood Pressure Measurement	Observation method	[root].1.144, 23.1	
eVitals.10	Heart Rate	Observation value	[root].1.145	8867-4

NEMESIS ID	NEMESIS name	Model approach	Template	LOINC
eVitals.12	Pulse Oximetry	Observation value	[root].1.177	2708-6
eVitals.14	Respiratory Rate	Observation value	[root].1.146	9279-1
eVitals.16	Carbon Dioxide (CO2)	Observation value	[root].1.168	19889-5
eVitals.17	Carbon Monoxide	Observation value	[root].1.167	19911-7
eVitals.18	Blood Glucose Level	Observation value	[root].1.166	2339-0
eVitals.19	Glasgow Coma Score: Eye	Observation value	[root].1.160	9267-6
eVitals.20	Glasgow Coma Score: Verbal	Observation value	[root].1.162	9270-0
eVitals.21	Glasgow Coma Score-Motor	Observation value	[root].1.192	9268-4
eVitals.22	Glasgow Coma Score-Qualifier	Observation value	[root].1.159	55285-1
eVitals.23	Total Glasgow Coma Score	Observation value	[root].1.158	9269-2
eVitals.24	Temperature	Observation value	[root].1.176	8310-5
eVitals.26	Level of Responsiveness (APVU)	Observation value	[root].1.165	67775-7
eVitals.27	Pain Score	Observation value	[root].1.164	56840-2
eVitals.29	Stroke Scale Score	Observation value	[root].1.163	67520-7
eVitals.30	Stroke Scale Type	Observation method	[root].1.163	67521-5
eVitals.31	Reperfusion Checklist	Observation value	[root].1.82	67523-1

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. documents 2. patients 3. events 4. document artifacts (sections, organizers, statements) 5. facilities 6. 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.

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<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. -->
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  <templateId root="2.16.840.1.113883.17.3.10.2"/>
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  <!-- 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. -->
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        <code code="IA17575-4" displayName="Ground transport" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
        <location classCode="PLC">
          <name>Highway 50 and Ipava Ave</name>
        </location>
        <addr>
          <streetAddressLine>Highway 50 and Ipava Ave</streetAddressLine>
          <city>Two Harbors</city>
          <state>MN</state>
          <postalCode>55616</postalCode>
          <country>US</country>
        </addr>
      </healthCareFacility>
    </location>
  </encapsulatingEncounter>
</componentOf>
<component>
  <structuredBody>
    <component>
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        <code code="67659-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="EMS Billing Section"/>
        <title>EMS Billing Section</title>
        <text>
          <table border="1" width="100%">
            <thead>
              <tr><th>property</th><th>value</th><th>Notes</th></tr>
            </thead>
            <tbody>
              <tr>
                <td>Billing Condition</td>
                <td>Puncture wound with foreign body of left front wall of thorax with penetration intothoracic cavity</td>
                <td></td>
              </tr>
              <tr>
                <td>EMS level of service</td>
                <td>ALS, level 1</td>
                <td></td>
              </tr>
            </tbody>
          </table>
        </text>
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            <templateId root="2.16.840.1.113883.17.3.10.1.91"/>
            <id root="2.16.840.1.113883.19.4" extension="477978662"/>
            <code code="67556-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Billing condition"/>
            <value xsi:type="CD" code="S21.342" codeSystem="2.16.840.1.113883.6.90" codeSystemName="ICD-10 CM" displayName="Puncture wound with foreign body of left front wall of thorax with penetration intothoracic cavity"/>
          </observation>
        </entry>
        <entry>
          <observation classCode="OBS" moodCode="EVN">
            <templateId root="2.16.840.1.113883.17.3.10.1.92"/>
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            <code code="69464-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="EMS level of service"/>
            <value xsi:type="CD" code="IA18102-6" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="ALS, level 1"/>
          </observation>
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  </structuredBody>
</component>
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  <templateId root="2.16.840.1.113883.10.20.22.2.1"/>
  <templateId root="2.16.840.1.113883.10.20.22.2.1"/>
  <code code="10160-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="History of medication use"/>
  <title>EMS Current Medications Section</title>
  <text>
    <table border="1" width="100%">
      <thead>
        <tr><th>property</th><th>value</th><th>Notes</th></tr>
      </thead>
      <tbody>
        <tr>
          <td>Currently on medication</td>
          <td>No information</td>
          <td></td>
        </tr>
      </tbody>
    </table>
  </text>

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```

        <tr>
            <td>Patient on anticoagulants</td>
            <td>No information</td>
        </tr>
    </tbody>
</table>
</text>
<entry>
    <observation classCode="OBS" moodCode="EVN">
        <templateId root="2.16.840.1.113883.17.3.10.1.75"/>
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        <code code="67791-4" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Currently on medication"/>
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        <code code="69749-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Patient on anticoagulants"/>
        <value xsi:type="CD" nullFlavor="NI"/>
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        <code code="48765-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Allergies and Adverse Reactions Section"/>
        <title>EMS Allergies and Adverse Reactions</title>
        <text>
            <table border="1" width="100%">
                <thead>
                    <tr><th>property</th><th>value</th><th>Notes</th></tr>
                </thead>
                <tbody>
                    <tr>
                        <td>Existence of drug allergy</td>
                        <td>No information</td>
                    </tr>
                </tbody>
            </table>
        </text>
    </section>
</component>
<component>
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        <id root="2.16.840.1.113883.19.4" extension="1219703426"/>
        <code code="67794-8" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Existence of drug allergy"/>
        <value xsi:type="CD" nullFlavor="NI"/>
    </observation>
</entry>
</section>
</component>
<component>
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        <code code="67842-5" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="EMS Past Medical History Section"/>
        <title>EMS Past Medical History</title>
        <text>No history known</text>
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        <templateId root="2.16.840.1.113883.17.3.10.1.22"/>
        <id root="2.16.840.1.113883.19.4" extension="1433550562"/>
        <code code="67843-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="EMS Social History Section"/>
        <title>EMS Social History</title>
        <text>
            <table border="1" width="100%">
                <thead>
                    <tr><th>property</th><th>value</th><th>Notes</th></tr>
                </thead>
                <tbody>
                    <tr>
                        <td>Indications of drug or alcohol use by the patient</td>
                        <td>true</td>
                    </tr>
                    <tr>
                        <td>Alcohol - drug use</td>
                        <td>Smell of alcohol on breath</td>
                    </tr>
                </tbody>
            </table>
        </text>
    </section>
</component>
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        <value xsi:type="BL" value="true"/>
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        <id root="2.16.840.1.113883.19.4" extension="1289611790"/>
        <code code="67669-2" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Alcohol - drug use"/>
        <value xsi:type="CD" code="LA17328-8" displayName="Alcohol - drug use" codeSystem="2.16.840.1.113883.6.1"/>
    </observation>
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        <id root="2.16.840.1.113883.19.4" extension="1059740514"/>
        <code code="29545-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="PHYSICAL EXAMINATION"/>
        <title>EMS Physical Assessment Section</title>
        <text>
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                </thead>
                <tbody>
                    <tr>
                        <td>HeadAssessmentFinding</td>
                        <td>Normal</td>
                    </tr>
                </tbody>
            </table>
        </text>
    </section>

```

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|  |  |
| --- | --- |
| <td>NeckAssessmentFinding</td> | <td>Normal</td> |
| </tr> |  |
| <td>ChestAndLungsAssessmentFinding</td> | <td>Bleeding - controlled</td> |
| </tr> |  |
| <td></td> | <td>ChestAndLungsAssessmentFinding</td> |
| <td>Gunshot wound - entry</td> |  |
| </tr> |  |
| <td>ChestAndLungsAssessmentFinding</td> | <td>Breath sounds-decreased-left</td> |
| </tr> |  |
| <td>Abdomen assessment</td> | <td>Normal</td> |
| </tr> |  |
| <td>targetSiteCode: Generalized</td> |  |
| </tr> |  |
| <td>Abdomen assessment</td> | <td>Other</td> |
| </tr> |  |
| <td>GI normal</td> |  |
| </tr> |  |
| <td>Pelvic and genitourinary assessment</td> | <td>Normal</td> |
| </tr> |  |
| <td>Extremities assessment</td> | <td>Normal</td> |
| </tr> |  |
| <td>Patient Pregnancy</td> | <td>Not Applicable</td> |
| </tr> |  |
| <td>Last Oral Intake</td> | <td>No Information</td> |
| </tr> |  |
| <td>Patient Age</td> | <td>28 years</td> |
| </tr> |  |
| <td>Contraindications to thrombolytic use</td> | <td>No Information</td> |
| </tr> |  |
| <td>Barrier to care</td> | <td>Unconscious</td> |
| </tr> |  |

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</tbody>

</table>

</text>

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<value xsi:type="CD" code="LA6626-1" displayName="Normal" codeSystem="2.16.840.1.113883.6.1"/>

</observation>

</component>

<component>

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<value xsi:type="CD" code="LA6626-1" displayName="Normal" codeSystem="2.16.840.1.113883.6.1"/>

</observation>

</component>

<component>

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<code code="67528-0" displayName="ChestAndLungsAssessmentFinding" codeSystem="2.16.840.1.113883.6.1"/>

<value xsi:type="CD" code="LA17208-2" displayName="Bleeding controlled" codeSystem="2.16.840.1.113883.6.1"/>

<value xsi:type="CD" code="LA17244-7" displayName="Gunshot wound entry" codeSystem="2.16.840.1.113883.6.1"/>

</observation>

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<component>

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<code code="67528-0" displayName="ChestAndLungsAssessmentFinding" codeSystem="2.16.840.1.113883.6.1"/>

<value xsi:type="CD" code="LA17225-6" displayName="Breath sounds-decreased-left" codeSystem="2.16.840.1.113883.6.1"/>

</observation>

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<value xsi:type="CD" code="LA6626-1" displayName="Normal" codeSystem="2.16.840.1.113883.6.1"/>

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</observation>

</component>

<component>

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<value xsi:type="CD" nullFlavor="OTH">

<originalText>GI normal</originalText>

</value>

<targetSiteCode code="LA18721-3" displayName="Generalized" codeSystem="2.16.840.1.113883.6.1"/>

</observation>

</component>

<component>

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<code code="67531-4" displayName="Pelvic and genitourinary assessment" codeSystem="2.16.840.1.113883.6.1"/>

<value xsi:type="CD" code="LA6626-1" displayName="Normal" codeSystem="2.16.840.1.113883.6.1"/>

</observation>

</component>

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    <value xsi:type="CD" code="LA6626-1" displayName="Normal" codeSystem="2.16.840.1.113883.6.1"/>
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    <code code="67471-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Patient Pregnancy"/>
    <value xsi:type="BL" nullFlavor="NA"/>
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    <templateId root="2.16.840.1.113883.17.3.10.1.80"/>
    <id root="2.16.840.1.113883.19.4" extension="894353050"/>
    <code code="67517-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Last oral intake"/>
    <value xsi:type="TS" nullFlavor="NI"/>
  </observation>
</entry>
<entry>
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    <templateId root="2.16.840.1.113883.17.3.10.1.81"/>
    <id root="2.16.840.1.113883.19.4" extension="1252535422"/>
    <code code="30525-0" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Patient age"/>
    <value xsi:type="PQ" value="28" unit="a"/>
  </observation>
</entry>
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  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.17.3.10.1.82"/>
    <code code="67523-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Contraindications to thrombolytic use"/>
    <value xsi:type="CD" nullFlavor="NI"/>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.17.3.10.1.83"/>
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    <code code="67523-1" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Barriers to patient care"/>
    <value xsi:type="CD" code="LA17711-5" displayName="Unconscious" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  </observation>
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</component>
<component>
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    <templateId root="2.16.840.1.113883.10.20.22.2.38"/>
    <id root="2.16.840.1.113883.19.4" extension="539703118"/>
    <code code="29549-3" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" displayName="Medications Administered"/>
    <title>Medications Administered Section</title>
    <text>
      <table border="1" width="100%">
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            <th>time</th>
            <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>
        </tbody>
      </table>
    </text>
    <entry>
      <substanceAdministration classCode="SBADM" moodCode="EVN">
        <templateId root="2.16.840.1.113883.17.3.10.1.72"/>
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        <routeCode code="C38216" displayName="Respiratory" codeSystem="2.16.840.1.113883.3.26.1.1.1" codeSystemName="FDA Route of Administration"/>
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            <manufacturedMaterial>
              <code code="7806" displayName="Oxygen" codeSystem="2.16.840.1.113883.6.88" codeSystemName="RxnNorm"/>
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        </consumable>
        <performer>
          <assignedEntity>
            <id root="2.16.840.1.113883.19.4" extension="908786906"/>
            <code code="LA18703-1" displayName="EMT-paramedic" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          </assignedEntity>
        </performer>
        <participant typeCode="DEV">
          <participantRole classCode="MANU">
            <playingDevice>
              <code code="425926003" codeSystem="2.16.840.1.113883.6.5" displayName="partial rebreather oxygen mask" codeSystemName="SNOMED CT"/>
            </playingDevice>
          </participantRole>
        </participant>
        <entryRelationship typeCode="COMP">
          <observation classCode="OBS" moodCode="EVN">
            <code code="67540-5" displayName="Response to medication" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
            <value xsi:type="CD" code="LA17181-1" displayName="Unchanged" codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          </observation>
        </entryRelationship>
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<text>
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      <tr><th>time</th><th>procedure</th><th>prior</th><th>success</th><th>complication</th><th>performer</th><th>response</th><th>note</th> </
tr>
    </thead>
    <tbody>
      <tr>
        <td>2012 01 01 1602</td>
        <td>Nasopharyngeal airway insertion</td>
        <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>
        <td>false</td>
        <td>true</td>
        <td>None</td>
        <td>EMT-paramedic: 42742618</td>
        <td>Improved</td>
        <td></td>
      </tr>
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Airway/ No qualifier" codeSystem="2.16.840.1.113883.6.4" codeSystemName="ICD-10 PCS"/>
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    <performer>
      <assignedEntity>
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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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          <tr>
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References

- CDA: *Clinical Document Architecture 2.1*
- Extensible Markup Language (XML): www.w3.org/XML .
- FDA Routes of Administration: *Food and Drug Administration Routes of Administration*
- LOINC®: *Logical Observation Identifiers Names and Codes*, Regenstrief Institute.
- NEMESIS (National Emergency Medical Services Information System Data Dictionary, version 3.5: Available at NEMESIS.org
- Race and Ethnicity

OMB race categories can be found in *VSAC* or in the *US Core FHIR* specification

Detailed races can be found in *VSAC* or in the *US Core FHIR* specification

OMB ethnicity categories can be found in *VSAC* or in the *US Core FHIR* specification

Detailed ethnicities can be found in *VSAC* or in the *US Core FHIR* specification
- SNOMED CT: *SNOMED CT*® : SNOMED Clinical Terms SNOMED International Organization.

