HL7 Draft Standard for Trial Use
Emergency Medical
Services; Patient Care Report

HL7 Draft Standard for Trial Use

Contents

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Chapter

1

INTRODUCTION

Topics:

- *Overview*
- *Audience*
- *Scope*
- *Approach*
- *Organization of This Guide*
- *Use of Templates*
- *Conventions Used in This Guide*

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

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

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 Centers for Disease Control, and the Health Resources and Services Administration at the the University of Utah.

We expect this standard to change during the DSTU period. Issues should be reported on the HL7 Draft Standard for Trial Use (DSTU) comment page at http://www.hl7.org/dstucomments. For more information and status on the progress of this specification during the DSTU period, consult the HL7 wiki, EMS projects page.

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. 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 set supports many uses, including the transfer of patient care reports from EMS crews to emergency departments, the 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 in "level one" documents, or they may populate the structured sections as specified herein.

Because the NEMSIS data set is so broad, it extends beyond the Emergency Transfer of Care specified by Integrating the Healthcare Enterprise (IHE). These templates may be harmonized in the future; at this point, they are distinct.

Approach

We first converted the NEMSIS specification into an analysis model in 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. Both DAM and DIM are scheduled for publication in 2013, but they can be found on the HL7 Wiki.

This guide is the first implementable specification developed based on the EMS DIM.

An initial iteration, balloted in May 2011, supports what is commonly termed "level one" CDA compliance, i.e., a document with structured header information containing an unstructured document of some form (whether pdf, image, or other recognized format). In addition, this iteration supported "level two" compliance, in which human-readable text information is provided for sections identified in XML. A sender of a document, however, must choose whether to send the "level one" encapsulated document or the "level two" set of XML sections: a document containing both is not acceptable.

The September, 2011 iteration modeled the sections to "level three," in which the sections also include detailed, structured information representing the section text. This structured information follows standard patterns in such a way that receiving applications will be able to process specific semantically identified elements for storage in medical

records, application of business rules, or other computable services. This iteration also includes changes to the level two template assignments, so the May 2011 iteration is no longer correct.

Harmonization has been approached semantically rather than syntactically. There are clear parallels, but few exact matches, with the CDA Consolidation project--an effort by the Office of the National Coordinator's Standards & Interoperability initiative in collaboration with HL7 to bring together several similar extant CDA specifications. We expect that LOINC codes will offer the ability to identify consistent information elements, even when the structures they inhabit (templates) may be subject to differing requirements. Similarly, harmonization with the Emergency Department specification *Data Elements for Emergency Department Systems*(DEEDS) involved use of extant LOINC codes for shared elements.

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. Interface values that are not actual physical units are handled differently: see appendix C for mappings.

Null and Negative Values

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

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

As a result, we manage negation and uncertainty for procedures with explicit observations. Using an observation allows the clinician to assert a history of zero disorders, or a lack of knowledge about disorders, without tying that assertion to a notional disorder that may imply unanticipated facts or questions. Questions supporting observations about procedures can differentiate between encounter and patient history, letting assertions about the truth or existence of the knowledge obtain in the appropriate scope.

As a result, the medical history sections include, in addition to problems, procedures, medications, and allergies, observations regarding the existence of problems, procedures, medications, and allergies.

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

Null Value Mapping

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

NEMSIS 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 Appendix B.

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 section 13.02" Draft Standard for Trial Use Documents" within 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.

This guide uses templates sparingly--primarily for section management. When requirements are identified to use templates for more granular elements (e.g., observations), the benefit of those requiremenst will be assessed against the burden of maintaining those templates.

Vocabulary and Value Sets

Vocabularies recommended in this guide are derived from standard vocabularies where possible. Most questions, however, are fairly specific to the EMS domain. These questions have been encodede in clinical LOINC, and the answer sets have been encoded there as well, and they are included in this document. We plan to submit these sets to the US extension of SNOMED CT. The LOINC answer codes will remain valid identifiers.

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 `templateId`s 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

CCD templates are included within this implementation guide for ease of reference. CCD templates contained within this implementation guide are formatted WITHOUT typical **KEYWORD** and **XML** element styles. A WIKI site is available if you would like to make a comment to be considered for the next release of CCD: *http://wiki.hl7.org/ index.php?title=CCD_Suggested_Enhancements* The user name and password are: wiki/wikiwiki. You will need to create an account to edit the page and add your suggestion.

1. The value for "Observation / @moodCode" in a problem observation SHALL be "EVN" 2.16.840.1.113883.5.1001 ActMood STATIC. (CONF: 814).
2. A problem observation SHALL include exactly one Observation / statusCode. (CONF: 815).
3. The value for "Observation / statusCode" in a problem observation SHALL be "completed" 2.16.840.1.113883.5.14 ActStatus STATIC. (CONF: 816).
4. A problem observation SHOULD contain exactly one Observation / effectiveTime, to indicate the biological timing of condition (e.g. the time the condition started, the onset of the illness or symptom, the duration of a condition). (CONF: 817).

Figure 3: CCD conformance statements example

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 various figures 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:hl7-org:v3'>
   ...
</ClinicalDocument>
```

Figure 4: ClinicalDocument example

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

Chapter

2

DOCUMENT TEMPLATES

Topics:

- *Patient Care Report*

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

Patient Care Report

[ClinicalDocument: templateId 2.16.840.1.113883.17.3.10.1]

1. **SHALL** conform to *Consol General Header Constraints* template (templateId: 2.16.840.1.113883.10.20.22.1.1)
2. **SHALL** contain exactly one [1..1] **@classCode**="DOCCLIN" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:10000)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:10001)
4. **SHALL** contain exactly one [1..1] **code** (CONF:5253)/**@code**="67796-3" *EMS Patient Care Report* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10002)
5. **SHALL** contain exactly one [1..1] **title** = "EMS Patient Care Report" (CONF:5254)
6. **MAY** contain zero or one [0..1] **versionNumber** (CONF:5264)

   • May be null, and in most cases will not be used. In circumstances where updates are likely, it may be advantageous to default to "1" in the first instance.
7. **SHALL** contain exactly one [1..1] **id** (CONF:5363)

   • NEMSIS trace: ERecord.01 /@root should be the OID for the Agency; @extension the internally assigned ID
8. **SHALL** contain exactly one [1..1] **author** (CONF:10003)

   a. This author **SHALL** contain zero or one [0..1] **@typeCode**="AUT" (CONF:10037)
   b. This author **SHALL** contain zero or one [0..1] **assignedAuthor**

      a. This assignedAuthor **SHALL** contain zero or one [0..1] **@classCode**="ASSIGNED" (CONF:10038)
      b. This assignedAuthor **SHALL** contain zero or one [0..1] **assignedAuthoringDevice**

         a. This assignedAuthoringDevice **SHALL** conform to *Consol Authoring Device*
         b. This assignedAuthoringDevice **SHALL** contain exactly one [1..1] **manufacturerModelName** (CONF:9936)

            NEMSIS Trace: ERecord.02
         c. This assignedAuthoringDevice **SHALL** contain exactly one [1..1] **softwareName** (CONF:9999)

            NEMSIS Trace: ERecord.03 and ERecord.04 (version), concatenated with an intervening caret ("^")
9. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:10004)

   a. This recordTarget **SHALL** conform to *Consol Record Target*
   b. This recordTarget **SHALL** contain exactly one [1..1] **patientRole**

      a. This patientRole **SHALL** contain at least one [1..*] **addr** (CONF:10031)

         NEMSIS Trace EPatient.05 . . . /PatientRole/addr/streetAddressLine EPatient.06 . . . /PatientRole/addr/ city EPatient.07 . . . /PatientRole/addr/county EPatient.08 . . . /PatientRole/addr/state Paatient.09 . . . / PatientRole/addr/postalCode EPatient.10 . . . /PatientRole/addr/country
      b. This patientRole **SHALL** contain at least one [1..*] **id**

         NEMSIS Trace EPatient.01: root= the OID for the generating EMS agency, or "NI" EPatient.12: root=" 2.16.840.1.113883.3.184" (Social Security Administration) EPatient.20 and EPatient.21: root= the OID for the state department of motor vehicles, found at HL7.org, and reproduced as found in March of 2011 in appendix A.
      c. This patientRole Contains zero or more [0..*] **telecom**

         NEMSIS Trace: EPatient.18
      d. This patientRole **SHALL** contain exactly one [1..1] **patient**

         a. This patient **SHOULD** contain zero or one [0..1] **birthTime**

            NEMSIS Trace EPatient.17

b. This patient **SHALL** contain zero or one [0..1] **ethnicGroupCode**, where the @code **SHALL** be selected from ValueSet *Ethnicity* 2.16.840.1.113883.1.11.15836 **STATIC** (CONF:10032)

NEMSIS Trace: EPatient.14

c. This patient **SHALL** contain zero or more [0..*] **name**

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

d. This patient **SHALL** contain zero or one [0..1] **raceCode**, where the @code **SHALL** be selected from ValueSet Race 2.16.840.1.113883.1.11.14914 **STATIC** 1 (CONF:10033)

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

e. This patient **SHALL** contain zero or more [0..*] **sDTCRaceCode**, where the @code **SHALL** be selected from ValueSet Race 2.16.840.1.113883.1.11.14914 **STATIC** 1 (CONF:10034)

NEMSIS Trace: EPatient.14

f. This patient **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:10035), where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.5.1 AdministrativeGenderCode) (CONF:10036)

NEMSIS Trace: EPatient.13

10. **MAY** contain zero or one [0..1] **author** (CONF:10005)
   a. This author **SHALL** contain zero or one [0..1] **assignedAuthor**
      a. This assignedAuthor **SHALL** contain exactly one [1..1] **id** (CONF:10039)

      NEMSIS Trace: EOther.08

      b. This assignedAuthor **SHALL** contain zero or more [0..*] **addr** (CONF:10040)

      NEMSIS Trace DProfessional.04. . . / AssignedAuthor/addr/streetAddressLine DProfessional.05 . . . / AssignedAuthor/addr/city DProfessional.06. . . / AssignedAuthor/addr/state DProfessional.07. . . / AssignedAuthor/addr/postalCode DProfessional.08. . . / AssignedAuthor/addr/country

      c. This assignedAuthor **SHALL** contain exactly one [1..1] **telecom** (CONF:10041)

      NEMSIS Trace: DProfessional.09

      d. This assignedAuthor **SHALL** contain zero or one [0..1] **assignedPerson**
         a. This assignedPerson **SHALL** conform to *Consol Person*
         b. This assignedPerson **SHALL** contain exactly one [1..1] **name** (CONF:9406)

         NEMSIS Trace DProfessional.01 . . . Person/name/family DProfessional.02 . . . Person/name/given DProfessional.03 . . . Person/name/given

11. **SHALL** contain exactly one [1..1] **component** (CONF:10006)
   a. Contains exactly one [1..1] *EMS Billing Section* (templateId: 2.16.840.1.113883.17.3.10.1.5)
12. **MAY** contain zero or one [0..1] **component** (CONF:10007)
   a. Contains exactly one [1..1] *EMS Injury Incident Description Section* (templateId: 2.16.840.1.113883.17.3.10.1.17)
13. **SHALL** contain exactly one [1..1] **component** (CONF:10008)

    a. Contains exactly one [1..1] *EMS Current Medication Section* (templateId:
2.16.840.1.113883.17.3.10.1.15)

14. **MAY** contain zero or one [0..1] **component** (CONF:10009)

    a. Contains exactly one [1..1] *EMS Cardiac Arrest Event Section* (templateId:
2.16.840.1.113883.17.3.10.1.14)

15. **SHOULD** contain exactly one [1..1] **component** (CONF:10010)

    a. Contains exactly one [1..1] *EMS Advance Directives Section* (templateId:
2.16.840.1.113883.17.3.10.1.12)

16. **SHALL** contain exactly one [1..1] **component** (CONF:10011)

    a. Contains exactly one [1..1] *EMS Allergies And Adverse Reactions Section* (templateId:
2.16.840.1.113883.17.3.10.1.13)

17. **SHALL** contain exactly one [1..1] **component** (CONF:10012)

    a. Contains exactly one [1..1] *EMS Past Medical History Section* (templateId:
2.16.840.1.113883.17.3.10.1.19)

18. **SHALL** contain exactly one [1..1] **component** (CONF:10013)

    a. Contains exactly one [1..1] *EMS Social History Section* (templateId:
2.16.840.1.113883.17.3.10.1.22)

19. **SHALL** contain exactly one [1..1] **component** (CONF:10014)

    a. Contains exactly one [1..1] *EMS Physical Assessment Section* (templateId:
2.16.840.1.113883.17.3.10.1.20)

20. **MAY** contain zero or one [0..1] **component** (CONF:10015)

    a. Contains exactly one [1..1] *EMS Medications Administered Section* (templateId:
2.16.840.1.113883.17.3.10.1.18)

21. **SHALL** contain exactly one [1..1] **component** (CONF:10016)

    a. Contains exactly one [1..1] *EMS Procedures Performed Section* (templateId:
2.16.840.1.113883.17.3.10.1.21)

22. **SHALL** contain exactly one [1..1] **component** (CONF:10017)

    a. Contains exactly one [1..1] *EMS Patient Care Narrative Section* (templateId:
2.16.840.1.113883.17.3.10.1.1)

23. **SHALL** contain exactly one [1..1] **component** (CONF:10018)

    a. Contains exactly one [1..1] *EMS Scene Section* (templateId: 2.16.840.1.113883.17.3.10.1.8)

24. **SHALL** contain exactly one [1..1] **componentOf** (CONF:9955)

    a. This componentOf **SHALL** contain zero or one [0..1] **@typeCode**="COMP" (CONF:10042)

    b. This componentOf **SHALL** contain zero or one [0..1] **encompassingEncounter**

        a. This encompassingEncounter **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10043)

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

        b. This encompassingEncounter Contains zero or one [0..1] **location**

            a. This location **SHALL** contain exactly one [1..1] **healthCareFacility** (CONF:10044)

                a. This healthCareFacility **SHALL** contain exactly one [1..1] **id** (CONF:10045)

                NEMSIS Trace: EResponse.04

                b. This healthCareFacility **SHALL** contain exactly one [1..1] **location** (CONF:10046)

                    a. This location **SHALL** contain zero or one [0..1] **@classCode**="PLC" (CONF:10050)

                    b. This location **MAY** contain zero or one [0..1] **name** (CONF:10048)

                    NEMSIS Trace: EScene.13

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

NEMSIS Trace: EScene.15-21

    c. This healthCareFacility **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *UnitResponseRole* `2.16.840.1.113883.17.3.5.82` **STATIC** (CONF:10047)

NEMSIS Trace: EResponse.07

25. **SHALL** contain exactly one [1..1] **component** (CONF:10019)

    a. Contains exactly one [1..1] *EMS Dispatch Section* (templateId: `2.16.840.1.113883.17.3.10.1.2`)

26. **MAY** contain zero or one [0..1] **component** (CONF:10020)

    a. Contains exactly one [1..1] *EMS Disposition Section* (templateId: `2.16.840.1.113883.17.3.10.1.4`)

27. **SHALL** contain exactly one [1..1] **component** (CONF:10021)

    a. Contains exactly one [1..1] *EMS Personnel Adverse Event Section* (templateId: `2.16.840.1.113883.17.3.10.1.6`)

28. **SHALL** contain exactly one [1..1] **component** (CONF:10022)

    a. Contains exactly one [1..1] *EMS Protocol Section* (templateId: `2.16.840.1.113883.17.3.10.1.7`)

29. **SHALL** contain exactly one [1..1] **component** (CONF:10023)

    a. Contains exactly one [1..1] *EMS Response Section* (templateId: `2.16.840.1.113883.17.3.10.1.3`)

30. **SHALL** contain exactly one [1..1] **component** (CONF:10024)

    a. Contains exactly one [1..1] *EMS Situation Section* (templateId: `2.16.840.1.113883.17.3.10.1.9`)

31. **MAY** contain zero or one [0..1] **component** (CONF:10025)

    a. Contains exactly one [1..1] *EMS Times Section* (templateId: `2.16.840.1.113883.17.3.10.1.10`)

32. **SHALL** contain exactly one [1..1] **component** (CONF:10026)

    a. Contains exactly one [1..1] *EMS Vital Signs Section* (templateId: `2.16.840.1.113883.17.3.10.1.23`)

33. **SHOULD** contain exactly one [1..1] **author** (CONF:10027)

    a. This author **SHALL** contain zero or one [0..1] **assignedAuthor**

        a. This assignedAuthor **SHALL** contain exactly one [1..1] **id** (CONF:10039)

NEMSIS Trace: EOther.08

        b. This assignedAuthor **SHALL** contain zero or more [0..*] **addr** (CONF:10040)

NEMSIS Trace DProfessional.04. . . / AssignedAuthor/addr/streetAddressLine DProfessional.05 . . . / AssignedAuthor/addr/city DProfessional.06. . . / AssignedAuthor/addr/state DProfessional.07. . . / AssignedAuthor/addr/postalCode DProfessional.08. . . / AssignedAuthor/addr/country

        c. This assignedAuthor **SHALL** contain exactly one [1..1] **telecom** (CONF:10041)

NEMSIS Trace: DProfessional.09

        d. This assignedAuthor **SHALL** contain zero or one [0..1] **assignedPerson**

            a. This assignedPerson **SHALL** conform to *Consol Person*

            b. This assignedPerson **SHALL** contain exactly one [1..1] **name** (CONF:9406)

NEMSIS Trace DProfessional.01 . . . Person/name/family DProfessional.02 . . . Person/name/given DProfessional.03 . . . Person/name/given

34. **SHALL** contain exactly one [1..1] **custodian** (iv., CONF:5519)

    a. This custodian **SHALL** conform to *Consol Custodian*

    b. This custodian **SHALL** contain zero or one [0..1] **assignedCustodian**

        a. This assignedCustodian **SHALL** contain zero or one [0..1] **representedCustodianOrganization**

            a. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **addr**

NEMSIS Trace DContact.05. . . / representedCustodianOrganization/addr/streetAddressLine DContact.06 . . . / representedCustodianOrganization/addr/city DContact.07. . . /

representedCustodianOrganization/addr/county DContact.08. . . / representedCustodianOrganization/ addr/state DContact.09. . . / representedCustodianOrganization/addr/postalCode DContact.10. . . / representedCustodianOrganization/addr/country

   b. This representedCustodianOrganization **SHALL** contain at least one [1..*] `id`

   NEMSIS Trace: EResponse.01 @extension is the Agency identifier; @root, if included, the OID of the assigning body

   c. This representedCustodianOrganization **SHALL** contain exactly one [1..1] `name`

   NEMSIS Trace: EResponse.02

35. SHALL contain exactly one [1..1] `documentationOf` (CONF:10028)

   a. This documentationOf **SHALL** contain zero or one [0..1] `serviceEvent`

      a. This serviceEvent **SHALL** contain exactly one [1..1] `code`, where the @code **SHALL** be selected from ValueSet *ServiceType* `2.16.840.1.113883.17.3.5.79` **STATIC** (CONF:10051)

      NEMSIS Trace: EResponse.05, type of service requested

      b. This serviceEvent **SHALL** contain exactly one [1..1] `id`

      NEMSIS Trace: EReponse.03 id/@extension is the incident number assigned by the 911 Dispatch System, where the id/@root SHOULD be the OID of the dispatching organization

      c. This serviceEvent **SHALL** contain zero or one [0..1] `performer`

         a. This performer **SHALL** contain zero or one [0..1] `functionCode`, where the @code **SHALL** be selected from ValueSet *ProviderResponseRole* `2.16.840.1.113883.17.3.5.80` **STATIC** (CONF:10052)

         NEMSIS Trace: ECrew.03

         b. This performer **SHALL** contain zero or one [0..1] `assignedEntity`

            a. This assignedEntity **SHALL** contain exactly one [1..1] `code`, where the @code **SHALL** be selected from ValueSet *ProviderRoleLevel* `2.16.840.1.113883.17.3.5.81` **STATIC** (CONF:10053)

            NEMSIS Trace: ECrew.02

            b. This assignedEntity **SHALL** contain at least one [1..*] `id`

            NEMSIS Trace: ECrew.01

            c. This assignedEntity **SHALL** contain exactly one [1..1] `addr`

            NEMSIS Trace DProfessional.04 . . . / assignedentity /addr/streetAddressLine DProfessional.05. . . / assignedentity /addr/city DProfessional.06 . . . / assignedentity /addr/state DProfessional.07 . . . / assignedentity /addr/postalCode DProfessional.08 . . . / assignedentity /addr/ country

            d. This assignedEntity **SHALL** contain exactly one [1..1] `telecom`

            NEMSIS Trace: DProfessional.09

            e. This assignedEntity **SHALL** contain zero or one [0..1] `assignedPerson`

               a. This assignedPerson **SHALL** contain exactly one [1..1] `name`

               NEMSIS Trace DProfessional.01 Last: @ENXP="FAM" DProfessional.02 First: @ENXP="GIV" DProfessional.03 Middle: @ENXP="GIV"

36. SHALL contain exactly one [1..1] `relatedDocument` (CONF:10029)

   a. This relatedDocument Contains exactly one [1..1] `@typeCode`="RPLC"

   b. This relatedDocument **MAY** contain zero or one [0..1] `parentDocument`

      a. This parentDocument **SHALL** contain exactly one [1..1] `id`

      NEMSIS Trace: ERecord.01

37. SHALL contain exactly one [1..1] `participant` (CONF:10030)

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

    b. This participant Contains zero or one [0..1] **associatedEntity**

        a. This associatedEntity **SHOULD** contain zero or one [0..1] **addr** (CONF:10055)

        NEMSIS Trace: EDisposition.03-07

        b. This associatedEntity **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *DestinationType* 2.16.840.1.113883.17.3.5.69 **STATIC** (CONF:10056)

        NEMSIS Trace: EDisposition.21

        c. This associatedEntity Contains zero or one [0..1] **scopingOrganization**

            a. This scopingOrganization **SHALL** contain exactly one [1..1] **name** (CONF:10057)

            NEMSIS Trace: EDisposition.01

Patient Care Report example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<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">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.22.1.1"/>
  <templateId root="2.16.840.1.113883.17.3.10.1"/>
  <id root="570885675" extension="MDHT"/>
  <code code="67796-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS Patient Care Report"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode codeSystem="2.16.840.1.113883.5.25"
 codeSystemName="ConfidentialityCode"/>
  <setId root="66d0fa46-9fd8-4df4-84aa-64dc31da5555" extension="MDHT"/>
  <versionNumber value="1"/>
  <recordTarget>
    <patientRole>
      <id root="1209350461" extension="MDHT"/>
      <addr/>
      <patient>
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
 codeSystemName="AdministrativeGenderCode"/>
        <raceCode codeSystem="2.16.840.1.113883.6.238" codeSystemName="Race
and Ethnicity - CDC"/>
        <sdtc:raceCode codeSystem="2.16.840.1.113883.6.238"
 codeSystemName="Race and Ethnicity - CDC"/>
        <ethnicGroupCode codeSystem="2.16.840.1.113883.6.238"
 codeSystemName="Race and Ethnicity - CDC"/>
      </patient>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
    <time/>
    <assignedAuthor classCode="ASSIGNED">
      <id root="772358739" extension="MDHT"/>
      <assignedAuthoringDevice/>
    </assignedAuthor>
  </author>
  <author>
    <time/>
    <assignedAuthor>
      <id root="1052002458" extension="MDHT"/>
      <addr/>
```

```xml
              <telecom/>
              <assignedPerson/>
          </assignedAuthor>
      </author>
      <author>
          <time/>
          <assignedAuthor>
              <id root="466242750" extension="MDHT"/>
              <addr/>
              <telecom/>
              <assignedPerson/>
          </assignedAuthor>
      </author>
      <custodian>
          <assignedCustodian>
              <representedCustodianOrganization/>
          </assignedCustodian>
      </custodian>
      <participant typeCode="DST">
          <associatedEntity>
              <addr/>
              <scopingOrganization/>
          </associatedEntity>
      </participant>
      <documentationOf>
          <serviceEvent>
              <id root="495211803" extension="MDHT"/>
              <performer/>
          </serviceEvent>
      </documentationOf>
      <relatedDocument typeCode="RPLC">
          <parentDocument>
              <id root="549133693" extension="MDHT"/>
          </parentDocument>
      </relatedDocument>
      <componentOf typeCode="COMP">
          <encompassingEncounter>
              <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
              </effectiveTime>
              <location/>
          </encompassingEncounter>
      </componentOf>
      <component>
          <structuredBody>
              <component>
                  <section/>
              </component>
              <component>
                  <section/>
              </component>
              <component>
                  <section/>
              </component>
              <component>
                  <section/>
              </component>
          </structuredBody>
      </component>
  </ClinicalDocument>
```

Chapter

3

SECTION TEMPLATES

Topics:

EMS Advance Directives Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.12`]

1. **SHALL** contain exactly one [1..1] **code/@code**=`"67840-9"` *EMS Advance Directives Section* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10191)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Advance Directives Section"
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10193)
   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
   b. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67516-5"` *Advanced directive* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10194)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *AdvanceDirectiveType* `2.16.840.1.113883.17.3.5.63` **STATIC** (CONF:10195)
   a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Advance Directives Section example

EMS Allergies And Adverse Reactions Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.13`]

1. **SHALL** contain exactly one [1..1] **code/@code**=`"67841-7"` *EMS Allergies and Adverse Reactions Section* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10196)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Allergies and Adverse Reactions"
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10198)
   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
   b. This entry **SHALL** contain exactly one [1..1] **organizer** (CONF:10200)
      a. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10201)
         a. This component **SHALL** contain exactly one [1..1] **code/@code**=`"67794-8"` *Existence of drug allergy* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10203)
         b. This component **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10204)

            If NEMSIS 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 NEMSIS flavors into HL7; original values may be stored in Observation.text.
      b. This organizer **MAY** contain zero or more [0..*] **component** (CONF:10202)

         Required if existence is True
         a. Such components **SHALL** contain exactly one [1..1] **code** (CONF:10205)/**@code**=`"67850-8"` *Drug allergy* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10206)
         b. Such components **SHALL** contain exactly one [1..1] **value** with data type CD/**@code**=`"106190000"` *allergy* (CodeSystem: `2.16.840.1.113883.6.96 SNOMEDCT`) (CONF:10207)

    c. Such components Contains exactly one [1..1] **participant**

        a. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:10208)

            a. This participantRole **SHALL** contain exactly one [1..1] **playingEntity** (CONF:10209)

                a. This playingEntity **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.88 RxNorm`) (CONF:10210)

                NEMSIS Trace: EHistory.06

        Required if existence is True

  a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10199)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

  b. This entry **SHALL** contain exactly one [1..1] **organizer** (CONF:10211)

    a. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10212)

        a. This component **SHALL** contain exactly one [1..1] **code/@code**="69747-4" *EMS Existence of environmental allergy* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10214)

        b. This component **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10215)

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

    b. This organizer **MAY** contain zero or more [0..*] **component** (CONF:10213)

        a. Such components **SHALL** contain exactly one [1..1] **code/@code**="69748-2" *Known allergies to food or environmental agents* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10216)

        b. Such components **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *EnvironmentalAllergyType* `2.16.840.1.113883.17.3.5.83` **STATIC** (CONF:10217)

  a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Allergies And Adverse Reactions Section example

EMS Billing Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.5`]

1. **SHALL** contain exactly one [1..1] **code/@code**="67659-3" *EMS Billing Section* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10080)

2. **SHALL** contain exactly one [1..1] **title** = "EMS Billing Section"

3. **SHALL** contain exactly one [1..1] **text**

4. **SHALL** contain exactly one [1..1] **entry** (CONF:10081)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10083)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10084)**/@code**="67556-1" *Billing condition* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10086)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10087), where the @code **SHALL** be selected from ValueSet *EMSBillingCondition* `2.16.840.1.113883.17.3.5.71` **STATIC** (CONF:10088)

  a. Contains exactly one [1..1] *Billing Condition Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10082)
   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
   b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10089)
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10090)**/@code**=`"69464-6"` *EMS level of service* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10091)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10092), where the @code **SHALL** be selected from ValueSet *EMSLevelOfService* `2.16.840.1.113883.17.3.5.70` **STATIC** (CONF:10093)
   a. Contains exactly one [1..1] *Level Of Service Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Billing Section example

EMS Cardiac Arrest Event Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.14`]

1. **SHALL** contain exactly one [1..1] **code/@code**=`"67799-7"` *EMS Cardiac Arrest Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10134)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Cardiac Arrest Event"
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10136)
   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
   b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10137)
      a. This observation **SHOULD** contain zero or one [0..1] **@negationInd** (CONF:10141)

         Populate as true if NEMSIS EArrest.01 = "No"
      b. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"ASSERTION"` *ASSERTION* (CodeSystem: `2.16.840.1.113883.5.4` HL7ActCode) (CONF:10138)
      c. This observation **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:10139)

         NEMSIS Trace: EArrest.14
      d. This observation **SHALL** contain exactly one [1..1] **value** with data type CD**/@code**=`"410429000"` *cardiac arrest* (CodeSystem: `2.16.840.1.113883.6.96` SNOMEDCT) (CONF:10140)

         NEMSIS Trace: EArrest.01
      e. This observation **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10142)
         a. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd**=`"TRUE"` (CONF:10154)
         b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10155)
         c. This entryRelationship **SHALL** contain exactly one [1..1] **observation**
            a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67503-3"` *Cardiac arrest cause* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10156)
            b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *CardiacArrestCause* `2.16.840.1.113883.17.3.5.10` **STATIC** (CONF:10157)

               NEMSIS Trace: EArrest.02
      f. This observation **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10143)
         a. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd**=`"TRUE"` (CONF:10149)

    b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10151)

    c. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10150)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67502-5"` *Cardiac arrest occurrence* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10152)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *CardiacArrestTiming* `2.16.840.1.113883.17.3.5.91` **STATIC** (CONF:10153)

        NEMSIS Trace: EArrest.01

g. This observation **MAY** contain zero or one [0..1] **informant** (CONF:10144)

    a. This informant **SHALL** contain exactly one [1..1] **@typeCode**=`"INF"` (CONF:10158)

    b. This informant **SHALL** contain zero or one [0..1] **relatedEntity**

        a. This relatedEntity **SHALL** contain exactly one [1..1] **@classCode**=`"AGNT"` (CONF:10159)

        b. This relatedEntity **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *CardiacArrestWitnessRole* `2.16.840.1.113883.17.3.5.11` **STATIC** (CONF:10160)

        NEMSIS Trace: EArrest.04

h. This observation **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10145)

    a. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd**=`"TRUE"` (CONF:10161)

    b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10162)

    c. This entryRelationship **SHALL** contain exactly one [1..1] **observation**

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67506-6"` *CPR prior to EMS arrival* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10163)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10164)

        NEMSIS Trace: EArrest.05

        c. This observation **MAY** contain zero or one [0..1] **participant** (CONF:10165)

            a. This participant **MAY** contain exactly one [1..1] **@typeCode**=`"RESP"` (CONF:10166)

            b. This participant **SHALL** contain zero or one [0..1] **participantRole**

                a. This participantRole **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *PriorCareProviderRole* `2.16.840.1.113883.17.3.5.12` **STATIC** (CONF:10167)

i. This observation **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10146)

    a. This entryRelationship **SHALL** contain zero or one [0..1] **@inversionInd**=`"TRUE"` (CONF:10168)

    b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10169)

    c. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10170)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67508-2"` *AED use prior to EMS arrival* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10171)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *AEDUsePriorToEMSArrival* `2.16.840.1.113883.17.3.5.13` **STATIC** (CONF:10172)

        NEMSIS Trace: EArrest.07

        c. This observation **SHALL** contain zero or one [0..1] **participant** (CONF:10173)

            a. This participant Contains exactly one [1..1] **@typeCode**=`"RESP"`

            b. This participant **SHALL** contain zero or one [0..1] **participantRole** (CONF:10174)

    a. This participantRole **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *PriorCareProviderRole* `2.16.840.1.113883.17.3.5.12` **STATIC** (CONF:10175)

    NEMSIS Trace: EArrest.08

j. This observation **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10147)

    a. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd**=`"TRUE"` (CONF:10181)

    b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10182)

    c. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10183)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67513-2"` *Return of spontaneous circulation* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10184)

        b. This observation **SHALL** contain zero or more [0..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *ReturnOfSpontaneousCirculation* `2.16.840.1.113883.17.3.5.15` **STATIC** (CONF:10185)

        NEMSIS Trace: EArrest.12

k. This observation **MAY** contain zero or more [0..*] **entryRelationship** (CONF:10148)

    a. Such entryRelationships **SHALL** contain exactly one [1..1] **@inversionInd**=`"TRUE"` (CONF:10186)

    b. Such entryRelationships **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10187)

    c. Such entryRelationships **SHALL** contain exactly one [1..1] **observation** (CONF:10188)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67519-9"` *Cardiac rhythm* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10189)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *CardiacRhythmReading* `2.16.840.1.113883.17.3.5.16` **STATIC** (CONF:10190)

        NEMSIS Trace: EArrest.17

l. This observation **MAY** contain zero or one [0..1] **entryRelationship**

    a. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd**=`"TRUE"` (CONF:10176)

    b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**=`"SUBJ"` (CONF:10177)

    c. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10178)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67512-4"` *First monitored rhythm* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10179)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *FirstMonitoredRhythm* `2.16.840.1.113883.17.3.5.14` **STATIC** (CONF:10180)

        NEMSIS Trace: EArrest. 11

a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Cardiac Arrest Event Section example

EMS Current Medication Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.15`]

NEMSIS Trace: EHistory.12

1. **SHALL** contain exactly one [1..1] **code/@code**="67844-1" *EMS Current Medications Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10218)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Current Medications Section" (CONF:10219)
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10220)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10223)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67791-4" *Currently on medication* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10224)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data 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.

    a. Contains exactly one [1..1] *Derived Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10221)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10226)

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**="69749-0" *Patient on anticoagulants* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10227)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10228)

        If EHistory.12 has the value "No anticoagulants," the value is False

    a. Contains exactly one [1..1] *Derived Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

6. **SHALL** contain exactly one [1..1] **entry** (CONF:10222)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **MAY** contain zero or more [0..*] **substanceAdministration** (CONF:10229)

        a. Such substanceAdministrations **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"

        b. Such substanceAdministrations **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"

        c. Such substanceAdministrations **SHOULD** contain zero or one [0..1] **doseQuantity** (CONF:10230)

        NEMSIS Trace: EHistory.13, EHistory.14

        d. Such substanceAdministrations **SHOULD** contain zero or one [0..1] **routeCode** (CONF:10232), where the @code **SHALL** be selected from ValueSet *CurrentMedicationAdministrationRoute* 2.16.840.1.113883.17.3.5.17 **STATIC** (CONF:10231)

        NEMSIS Trace: EMedication.15

        e. Such substanceAdministrations **SHALL** contain exactly one [1..1] **consumable** (CONF:10235)

            a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:10236)

                a. This manufacturedProduct **SHALL** contain exactly one [1..1] **manufacturedLabeledDrug** (CONF:10237)

     a. This manufacturedLabeledDrug **SHALL** contain exactly one [1..1] **code** (CONF:10239), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.88 RxNorm`) (CONF:10238)

   a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Current Medication Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="1930387279" extension="MDHT"/>
  <code code="67844-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS Current Medications"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="2097304319"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="1174187470"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
  <entry>
    <substanceAdministration>
      <routeCode code="143188532"/>
      <doseQuantity/>
      <consumable/>
    </substanceAdministration>
  </entry>
</section>
```

EMS Dispatch Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.2`]

1. **SHALL** contain exactly one [1..1] **code/@code**="67660-1" *EMS Dispatch Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10556)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Dispatch" (CONF:10558)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10557)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10560)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **MAY** contain zero or one [0..1] **observation** (CONF:10562)

     a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10564)**/@code**="67488-7" *EMDPerformed* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10563)

     b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10566), where the @code **SHALL** be selected from ValueSet *EMDPerformed* `2.16.840.1.113883.17.3.5.48` **STATIC** (CONF:10565)

   a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10561)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **MAY** contain zero or one [0..1] **observation** (CONF:10567)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10568)**/@code**=`"67570-2"` *Complaint reported by dispatch* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10569)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10571), where the @code **SHALL** be selected from ValueSet *Complaint* `2.16.840.1.113883.17.3.5.49` **STATIC** (CONF:10570)

    a. Contains exactly one [1..1] *Derived Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Dispatch Section example

EMS Disposition Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.4`]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10652)**/@code**=`"67796-3"` *EMS Disposition Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10651)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Disposition" (CONF:10654)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10653)
4. **MAY** contain exactly one [1..1] **entry** (CONF:10656)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10663)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10665)**/@code**=`"67547-0"` *EMS Number of patients* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10664)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:10666)

    a. Contains exactly one [1..1] *Number Of Patients Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **MAY** contain exactly one [1..1] **entry** (CONF:10657)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10667)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10669)**/@code**=`"67548-8"` *EMS incident disposition* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10668)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10670), where the @code **SHALL** be selected from ValueSet *IncidentOutcome* `2.16.840.1.113883.17.3.5.64` **STATIC** (CONF:10671)

    a. Contains exactly one [1..1] *Incident Disposition Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

6. **MAY** contain exactly one [1..1] **entry** (CONF:10658)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10672)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10674)**/@code**=`"67550-4"` *EMS transport mode* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10673)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10675), where the @code **SHALL** be selected from ValueSet *TransportMode* `2.16.840.1.113883.17.3.5.66` **STATIC** (CONF:10676)

    a. Contains exactly one [1..1] *Transport Mode Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

7. **MAY** contain exactly one [1..1] **entry** (CONF:10659)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10682)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10684)**/@code**=`"67552-0"` *EMS reason for choosing destination* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10683)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10685), where the @code **SHALL** be selected from ValueSet *DestinationChoiceReason* `2.16.840.1.113883.17.3.5.68` **STATIC** (CONF:10686)

    a. Contains exactly one [1..1] *Destination Choice Reason Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

8. **MAY** contain exactly one [1..1] **entry** (CONF:10660)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10687)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10689)**/@code**=`"69462-0"` *EMS prearrival activation performed* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10688)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10690)

        c. This observation **SHALL** contain zero or one [0..1] **effectiveTime** (CONF:10691)

        NEMSIS Trace: EDisposition.25 Required if value is TRUE

    a. Contains exactly one [1..1] *Prearrival Activation Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

9. **MAY** contain exactly one [1..1] **entry** (CONF:10661)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10692)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10694)**/@code**=`"67551-2"` *EMS patient condition change at destination* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10693)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10695), where the @code **SHALL** be selected from ValueSet *PatientConditionChange* `2.16.840.1.113883.17.3.5.59` **STATIC** (CONF:10696)

    a. Contains exactly one [1..1] *Patient Condition Change Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

10. **MAY** contain exactly one [1..1] **entry** (CONF:10662)

    a. This entry **SHALL** contain exactly one [1..1] **code** (CONF:10679)**/@code**=`"67549-6"` *EMS transport method* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10678)

    b. This entry **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10680), where the @code **SHALL** be selected from ValueSet *TransportMethod* `2.16.840.1.113883.17.3.5.65` **STATIC** (CONF:10681)

EMS Disposition Section example

EMS Injury Incident Description Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.17`]

1. **SHALL** contain exactly one [1..1] **code/@code**=`"11374-6"` *Injury Incident Description Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10094)
2. **SHALL** contain exactly one [1..1] **title** = "Injury Incident Description Section"
3. **SHALL** contain exactly one [1..1] **text**
4. **MAY** contain exactly one [1..1] **entry** (CONF:10095)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10105)

      a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"69543-7"` *Injury Cause* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10106)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.3.1` ICD-10) (CONF:10108)

      Causes are in ICD-10 chapter XX

   a. Contains exactly one [1..1] *Injury Cause Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
5. **MAY** contain exactly one [1..1] **entry** (CONF:10096)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **SHALL** contain zero or one [0..1] **observation**

      a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67494-5"` *Injury Mechanism* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10109)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *MechanismOfInjury* `2.16.840.1.113883.17.3.5.1` **STATIC** (CONF:10110)

   a. Contains exactly one [1..1] *Injury Mechanism Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
6. **MAY** contain exactly one [1..1] **entry** (CONF:10097)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **SHALL** contain zero or one [0..1] **observation**

      a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67495-2"` *Trauma Center Critieria* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10111)

      b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *TraumaCenterCriteria* `2.16.840.1.113883.17.3.5.3` **STATIC** (CONF:10112)

   a. Contains exactly one [1..1] *Trauma Center Criteria Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
7. **MAY** contain exactly one [1..1] **entry** (CONF:10098)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10113)

      a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"67496-0"` *Other injury risk factors* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10114)

    b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *InjuryRiskFactor* 2.16.840.1.113883.17.3.5.4 **STATIC** (CONF:10115)

  a. Contains exactly one [1..1] *Injury Risk Factor Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

8. **MAY** contain exactly one [1..1] **entry** (CONF:10099)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10116)

    a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67497-8" *Location of impact on the vehicle* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10117)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *VehicleImpactArea* 2.16.840.1.113883.17.3.5.5 **STATIC** (CONF:10118)

  a. Contains exactly one [1..1] *Vehicle Impact Area Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

9. **MAY** contain exactly one [1..1] **entry** (CONF:10100)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10119)

    a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67498-6" *Location of patient in vehicle* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10120)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *VehiclePassengerLocation* 2.16.840.1.113883.17.3.5.6 **STATIC** (CONF:10121)

  a. Contains exactly one [1..1] *Patient Location In Vehicle Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

10. **MAY** contain exactly one [1..1] **entry** (CONF:10101)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10122)

    a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67499-4" *Safety equipment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10123)

    b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *SafetyEquipmentType* 2.16.840.1.113883.17.3.5.7 **STATIC** (CONF:10124)

  a. Contains exactly one [1..1] *Vehicle Occupant Safety Equipment Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

11. **MAY** contain exactly one [1..1] **entry** (CONF:10102)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10125)

    a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67500-9" *Airbag deployment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10126)

    b. This observation **SHALL** contain zero or more [0..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *AirbagStatus* 2.16.840.1.113883.17.3.5.8 **STATIC** (CONF:10127)

     a. Contains exactly one [1..1] *Airbag Deployment Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

12. **MAY** contain exactly one [1..1] **entry** (CONF:10103)

     a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

     b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10128)

          a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67501-7" *Height of fall* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10129)

          b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ

     a. Contains exactly one [1..1] *Fall Height Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

13. **MAY** contain exactly one [1..1] **entry** (CONF:10104)

     a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

     b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10131)

          a. This observation **SHALL** contain exactly one [1..1] **code/@code**="69463-8" *Suspected intentional or unintentional disaster* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10132)

          b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *DisasterType* 2.16.840.1.113883.17.3.5.9 **STATIC** (CONF:10133)

     a. Contains exactly one [1..1] *Disaster Type Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Injury Incident Description Section example

EMS Medications Administered Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.18]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10439)**/@code**="67849-0" *Medications Administered Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10440)
2. **SHALL** contain exactly one [1..1] **title** = "Medications Administered Section" (CONF:10442)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10441)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10443)

     a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

     b. This entry **SHOULD** contain zero or one [0..1] **substanceAdministration** (CONF:10444)

          a. This substanceAdministration **SHALL** contain exactly one [1..1] **@classCode**="SBADM" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:10445)

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

          NEMSIS Trace: EMedications.03 negative action values If a substance is recorded as not given, it shall be recorded with a negationInd =True, and with an entryRelationship such that it SHALL contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType 2.16.840.1.113883.5.1002) SHALL contain exactly one [1..1] @inversionInd="true" True SHALL contain exactly one /Observation with code drawn from 2.16.840.1.113883.17.3.5.42 Medication omission reason and value = "Assertion."

          c. This substanceAdministration **SHALL** contain exactly one [1..1] **doseQuantity** (CONF:10446)

          NEMSIS Trace: EMedications.05, 06

          d. This substanceAdministration **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10447)

          NEMSIS Trace: EMedications.01

e. This substanceAdministration **SHALL** contain zero or one [0..1] **routeCode** (CONF:10450), where the @code **SHALL** be selected from ValueSet *MedicationAdministeredRoute* `2.16.840.1.113883.17.3.5.43` **STATIC** (CONF:10449)

   NEMSIS Trace: EMedications.04

f. This substanceAdministration **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10451)

   a. This entryRelationship **SHALL** contain exactly one [1..1] **@inversionInd**="TRUE" (CONF:10458)

   b. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode** (CONF:10460)/**@code**="RSON" *Reason* (CodeSystem: `2.16.840.1.113883.5.1002` HL7ActRelationshipType) (CONF:10459)

   c. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10461)

      a. This observation **SHALL** contain exactly one [1..1] **code/@code**="ASSERTION" *Assertion* (CodeSystem: `2.16.840.1.113883.5.4` HL7ActCode) (CONF:10462)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10463), where the @code **SHALL** be selected from ValueSet *MedicationNotGivenReason* `2.16.840.1.113883.17.3.5.92` **STATIC** (CONF:10464)

g. This substanceAdministration **SHALL** contain exactly one [1..1] **consumable** (CONF:10452)

   a. This consumable **SHALL** contain exactly one [1..1] **manufacturedProduct** (CONF:10465)

      a. This manufacturedProduct **SHALL** contain exactly one [1..1] **manufacturedLabeledDrug** (CONF:10466)

         a. This manufacturedLabeledDrug **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.88` RxNorm) (CONF:10467)

         NEMSIS Trace: EMedications.03

h. This substanceAdministration **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10453)

   a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10468)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10469)/**@code**="67540-5" *Response to medication* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10470)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *PatientConditionChange* `2.16.840.1.113883.17.3.5.59` **STATIC** (CONF:10471)

i. This substanceAdministration **MAY** contain at least one [1..*] **entryRelationship** (CONF:10454)

   a. Such entryRelationships **SHALL** contain exactly one [1..1] **observation** (CONF:10472)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10473)/**@code**="67541-3" *Medication complication* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10474)

      b. This observation **SHALL** contain zero or more [0..*] **value** with data type CD (CONF:10475), where the @code **SHALL** be selected from ValueSet *MedicationComplication* `2.16.840.1.113883.17.3.5.45` **STATIC** (CONF:10476)

j. This substanceAdministration **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10455)

   a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10477)

      NEMSIS Trace: EMedications.02

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10478)/**@code**="67539-7" *Prior administration* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10479)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10480)

      NEMSIS Trace: EMedications.02

k. This substanceAdministration **MAY** contain zero or one [0..1] **participant** (CONF:10456)

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

    a. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:10481)

        a. This participantRole **SHALL** contain exactly one [1..1] **code** (CONF:10482), where the @code **SHALL** be selected from ValueSet *ProviderRole* `2.16.840.1.113883.17.3.5.46` **STATIC** (CONF:10483)

        NEMSIS Trace: EMedications.10

        b. This participantRole **SHALL** contain exactly one [1..1] **id** (CONF:10484)

        NEMSIS Trace: EMedications.09

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

  l. This substanceAdministration **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10457)

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

    a. This entryRelationship **SHALL** contain exactly one [1..1] **act** (CONF:10485)

        a. This act **SHALL** contain exactly one [1..1] **@classCode** (CONF:10486)**/@code**=`"INFRM"` (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass) (CONF:10487)

        b. This act **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *MedicationAuthorizationType* `2.16.840.1.113883.17.3.5.47` **STATIC** (CONF:10488)

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

  a. Contains exactly one [1..1] *Medication Administered Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Medications Administered Section example

EMS Past Medical History Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.19`]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10059)**/@code**=`"67842-5"` *EMS Past Medical History Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10058)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Past Medical History" (CONF:10060)
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10062)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

  b. This entry **MAY** contain zero or one [0..1] **organizer** (CONF:10064)

  INLINE

    a. This organizer **MAY** contain zero or one [0..1] **component**

        a. This component **SHALL** contain zero or one [0..1] **observation**

            a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10070)**/@code**=`"68487-8"` *EMS History of Condition* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10069)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10072), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.90 ICD-10 CM`) (CONF:10071)

      If NEMSIS EHistory.08 is "No bleeding disorder," the value should be the appropriate ICD-10 code (D66, D67, D68) and negationIndicator should be TRUE.

    b. This organizer **SHALL** contain zero or one [0..1] **component**

      a. This component **SHALL** contain zero or one [0..1] **observation**

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67793-0" *Has the patient had any significant medical conditions* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10067)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10068)

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

  INLINE

  a. Contains exactly one [1..1] *History Of Conditions Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. SHALL contain exactly one [1..1] **entry** (CONF:10063)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

  b. This entry Contains zero or one [0..1] **organizer**

    a. This organizer **SHALL** contain at least one [1..*] **component** (CONF:10073)

      a. Such components **SHALL** contain exactly one [1..1] **procedure** (CONF:10077)

        a. This procedure **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.4 ICD-10 PCS`) (CONF:10076)

    b. This organizer **MAY** contain zero or one [0..1] **component**

      a. This component **SHALL** contain zero or one [0..1] **procedure**

        a. This procedure **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.4 ICD-10 PCS`) (CONF:10076)

  a. Contains exactly one [1..1] *History Of Procedures Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Past Medical History Section example

EMS Patient Care Narrative Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.1`]

1. SHALL contain exactly one [1..1] **code** (CONF:10551)**/@code**="67781-5" *EMS Patient Care Report Narrative Section* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10552)

2. SHALL contain exactly one [1..1] **title** = "EMS Patient Care Report Narrative" (CONF:10554)

3. SHALL contain exactly one [1..1] **text** (CONF:10553)

- NEMSIS Trace: ENarrative.01

EMS Patient Care Narrative Section example

EMS Personnel Adverse Event Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.6]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10698)**/@code**="67658-5" *Exposures or Injuries of EMS Personnel Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10697)
2. **SHALL** contain exactly one [1..1] **title** = "Exposures or Injuries of EMS Personnel" (CONF:10700)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10699)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10702)
    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)
    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10704)
        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10705)**/@code**="67554-6" *EMS personnel exposed or injured* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10706)
        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10707)
    a. Contains exactly one [1..1] *EMS Exposure Or Injury Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)
5. **MAY** contain exactly one [1..1] **entry** (CONF:10703)
    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)
    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10708)
        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10710)**/@code**="67555-3" *EMS personnel adverse event type* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10709)
        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10711), where the @code **SHALL** be selected from ValueSet *ProviderAdverseEventType* 2.16.840.1.113883.17.3.5.72 **STATIC** (CONF:10712)
    a. Contains exactly one [1..1] *Adverse Event Type Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Personnel Adverse Event Section example

EMS Physical Assessment Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.20]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10337)**/@code**="67668-4" *EMS Physical Assessment Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10336)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Physical Assessment Section" (CONF:10339)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10338)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10340)
    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)
    b. This entry **SHALL** contain at least one [1..*] **organizer** (CONF:10346)
        a. Such organizers **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10347)

        NEMSIS Trace: EExam.03
        b. Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10348)
            a. This component **SHALL** contain exactly one [1..1] **code/@code**="8335-2" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10363)

    b. This component **SHALL** contain exactly one [1..1] `value` with data type PQ (CONF:10364)

    UCUM units should be 'kg'

c. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10349)

    a. This component **SHALL** contain exactly one [1..1] `code` (CONF:10366)**/@code**`="67670-0"` (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10365)

    b. This component **SHALL** contain exactly one [1..1] `value` with data type CD, where the @code **SHALL** be selected from ValueSet *LengthBasedTapeMeasure* `2.16.840.1.113883.17.3.5.24` **STATIC** (CONF:10367)

d. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10350)

    a. This component **SHALL** contain exactly one [1..1] `code` (CONF:10368)**/@code**`="67524-9"` (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10369)

    b. This component **SHALL** contain at least one [1..*] `value` with data type CD (CONF:10370), where the @code **SHALL** be selected from ValueSet *SkinAssessment* `2.16.840.1.113883.17.3.5.25` **STATIC** (CONF:10371)

e. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10351)

    a. This component **SHALL** contain exactly one [1..1] `code` (CONF:10373)**/@code**`="67525-6"` (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10372)

    b. This component **SHALL** contain at least one [1..*] `value` with data type CD, where the @code **SHALL** be selected from ValueSet *HeadAssessmentFinding* `2.16.840.1.113883.17.3.5.26` **STATIC** (CONF:10374)

f. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10352)

    a. This component **SHALL** contain exactly one [1..1] `code` (CONF:10376)**/@code**`="67526-4"` (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10375)

    b. This component **SHALL** contain at least one [1..*] `value` with data type CD (CONF:10377), where the @code **SHALL** be selected from ValueSet *FaceAssessmentFinding* `2.16.840.1.113883.17.3.5.27` **STATIC** (CONF:10378)

g. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10353)

    a. This component **SHALL** contain exactly one [1..1] `code/@code`=`"67527-2"` *Neck assessment finding* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10379)

    b. This component **SHALL** contain at least one [1..*] `value` with data type CD, where the @code **SHALL** be selected from ValueSet *NeckAssessmentFinding* `2.16.840.1.113883.17.3.5.28` **STATIC** (CONF:10380)

h. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10354)

    a. This component **SHALL** contain exactly one [1..1] `code/@code`=`"67528-0"` *Chest and lungs assessment* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10381)

    b. This component **SHALL** contain at least one [1..*] `value` with data type CD, where the @code **SHALL** be selected from ValueSet *ChestLungAssessmentFinding* `2.16.840.1.113883.17.3.5.29` **STATIC** (CONF:10382)

i. Such organizers **MAY** contain zero or one [0..1] `component` (CONF:10355)

    a. This component **SHALL** contain exactly one [1..1] `code` (CONF:10384)**/@code**`="67529-8"` *Heart assessment finding* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10383)

    b. This component **SHALL** contain at least one [1..*] `value` with data type CD (CONF:10385), where the @code **SHALL** be selected from ValueSet *HeartAssessmentFinding* `2.16.840.1.113883.17.3.5.30` **STATIC** (CONF:10386)

j. Such organizers **MAY** contain zero or more [0..*] `component` (CONF:10356)

    a. Such components **SHALL** contain exactly one [1..1] `code/@code`=`"67530-6"` *Abdomen assessment* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10387)

    b. Such components **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *AbdomenAssessmentFinding* 2.16.840.1.113883.17.3.5.31 **STATIC** (CONF:10388)

    c. Such components **SHALL** contain exactly one [1..1] **targetSiteCode**, where the @code **SHALL** be selected from ValueSet *AbdominalFindingLocation* 2.16.840.1.113883.17.3.5.32 **STATIC** (CONF:10389)

k. Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10357)

    a. This component **SHALL** contain exactly one [1..1] **code/@code**="67531-4" *Pelvic and genitourinary assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10390)

    b. This component **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10392), where the @code **SHALL** be selected from ValueSet *PelvisGenitourinaryAssessment* 2.16.840.1.113883.17.3.5.33 **STATIC** (CONF:10391)

l. Such organizers **MAY** contain zero or more [0..*] **component** (CONF:10358)

    a. Such components **SHALL** contain exactly one [1..1] **code** (CONF:10394)**/@code**="67532-2" *Back and spine assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10393)

    b. Such components **SHALL** contain exactly one [1..1] **targetSiteCode** (CONF:10396), where the @code **SHALL** be selected from ValueSet *BackSpineFindingLocation* 2.16.840.1.113883.17.3.5.35 **STATIC** (CONF:10395)

    c. Such components **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10397), where the @code **SHALL** be selected from ValueSet *BackSpineAssessmentFinding* 2.16.840.1.113883.17.3.5.34 **STATIC** (CONF:10398)

m. Such organizers **MAY** contain zero or more [0..*] **component** (CONF:10359)

    a. Such components **SHALL** contain exactly one [1..1] **code** (CONF:10399)**/@code**="67533-0" *Extremities assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10400)

    b. Such components **MAY** contain exactly one [1..1] **targetSiteCode** (CONF:10402), where the @code **SHALL** be selected from ValueSet *ExtremityFindingLocation* 2.16.840.1.113883.17.3.5.37 **STATIC** (CONF:10401)

    c. Such components **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *ExtremitiesAssessmentFinding* 2.16.840.1.113883.17.3.5.36 **STATIC** (CONF:10403)

n. Such organizers **MAY** contain zero or more [0..*] **component** (CONF:10360)

    a. Such components **SHALL** contain exactly one [1..1] **code** (CONF:10405)**/@code**="67534-8" *Eye assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10404)

    b. Such components **SHALL** contain exactly one [1..1] **targetSiteCode** (CONF:10406), where the @code **SHALL** be selected from ValueSet *EyeFindingLocation* 2.16.840.1.113883.17.3.5.39 **STATIC** (CONF:10407)

    c. Such components **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10408), where the @code **SHALL** be selected from ValueSet *EyeAssessmentFinding* 2.16.840.1.113883.17.3.5.38 **STATIC** (CONF:10409)

o. Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10361)

    a. This component **MAY** contain exactly one [1..1] **code** (CONF:10410)**/@code**="67535-5" *Mental status assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10411)

    b. This component **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *MentalStatusFinding* 2.16.840.1.113883.17.3.5.84 **STATIC** (CONF:10412)

p. Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10362)

    a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10414)**/@code**="67536-3" *Neurological status assessment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10413)

      b. This component **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10415), where the @code **SHALL** be selected from ValueSet *NeurologicalAssessmentFinding* `2.16.840.1.113883.17.3.5.40` **STATIC** (CONF:10416)

   a. Contains exactly one [1..1] *Physical Assessment Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10341)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **MAY** contain zero or one [0..1] **observation** (CONF:10417)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10418)**/@code**=`"67471-3"` *Patient Pregnancy* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10419)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10420), where the @code **SHALL** be selected from ValueSet *Pregnancy* `2.16.840.1.113883.17.3.5.42` **STATIC** (CONF:10421)

   a. Contains exactly one [1..1] *Pregnancy Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

6. **SHALL** contain exactly one [1..1] **entry** (CONF:10342)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **MAY** contain zero or one [0..1] **observation** (CONF:10422)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10423)**/@code**=`"67517-3"` *Last oral intake* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10424)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10425)

   a. Contains exactly one [1..1] *Oral Intake Entry* (templateId: `2.16.840.1.113883.17.3.10.1.24`)

7. **SHALL** contain exactly one [1..1] **entry** (CONF:10343)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10426)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10427)**/@code**=`"30525-0"` *Patient age* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10428)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10429)

      UCUM units SHOULD be 'a'

   a. Contains exactly one [1..1] *Patient Age Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

8. **SHALL** contain exactly one [1..1] **entry** (CONF:10344)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **MAY** contain zero or one [0..1] **observation** (CONF:10430)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10431)**/@code**=`"67523-1"` *Contraindications to thrombolytic use* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10432)

      b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *ExistenceOfContraindicationsToThrombolyticUse* `2.16.840.1.113883.17.3.5.41` **STATIC** (CONF:10433)

   a. Contains exactly one [1..1] *Thrombolytic Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

9. **SHALL** contain exactly one [1..1] **entry** (CONF:10345)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10434)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10435)/**@code**="67523-1" *Barriers to patient care* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10436)

        b. This observation **SHALL** contain zero or more [0..*] **value** with data type CD (CONF:10437), where the @code **SHALL** be selected from ValueSet *BarrierToCare* `2.16.840.1.113883.17.3.5.85` **STATIC** (CONF:10438)

    a. Contains exactly one [1..1] *Barrriers Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Physical Assessment Section example

EMS Procedures Performed Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.21`]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10490)/**@code**="67802-9" *EMS Procedures Performed Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10489)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Procedures Performed" (CONF:10492)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10491)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10494)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry **SHALL** contain zero or more [0..*] **procedure** (CONF:10495)

        a. Such procedures **SHALL** contain exactly one [1..1] **code** (CONF:10496)

        NEMSIS Trace: EProcedures.03 If EArrest.10 = true, include here as ICD-10 PCS "6A4" For EArrest.03, it is permissible to use NEMSIS value set Cardiopulmonary Resuscitation Type (2.16.840.1.113883.17.3.5.57) 3003001 Attempted Defibrillation = Defibrillation 5A2204Z 3003005 Initiated Chest Compressions: use more detailed Cardiopulmonary Resuscitation Type (2.16.840.1.113883.17.3.5.57); reader may infer from these values if necessary 3003003 Attempted Ventilation: use more detailed Cardiopulmonary Resuscitation Type (2.16.840.1.113883.17.3.5.57); reader may infer from these values if necessary 3003007 Not Attempted-Considered Futile = Assistance 5A0; SuccessfulObservation = False; ReasonNotAttempted required 3003009 Not Attempted-DNR Orders = Assistance 5A0; SuccessfulObservation = False; ReasonNotAttempted required 3003011 Not Attempted-Signs of Circulation = Assistance 5A0; SuccessfulObservation = False; ReasonNotAttempted required

        b. Such procedures **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10497)

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

        c. Such procedures **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10498)

            a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10510)

                a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10512)/**@code**="ASSERTION" *Assertion* (CodeSystem: `2.16.840.1.113883.5.4` HL7ActCode) (CONF:10511)

                b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10514), where the @code **SHALL** be selected from ValueSet *ResusctitationDiscontinueReason* `2.16.840.1.113883.17.3.5.62` **STATIC** (CONF:10513)

        d. Such procedures **MAY** contain zero or one [0..1] **statusCode** (CONF:10499)/**@code**="Aborted" *Aborted* (CodeSystem: `2.16.840.1.113883.5.14` ActStatus) (CONF:10500)

        NEMSIS Trace: EArrest.15

e. Such procedures **MAY** contain zero or one [0..1] **approachSiteCode** (CONF:10502), where the @code **SHALL** be selected from ValueSet *IVSite* 2.16.840.1.113883.17.3.5.56 **STATIC** (CONF:10501)

NEMSIS Trace: EProcedures.13 Required conditionally if procedure code is intravenous catheterization (E303)

f. Such procedures **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10503)

    a. This entryRelationship **SHALL** contain zero or one [0..1] **observation** (CONF:10515)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10516)**/@code**="67542-1" *Procedure performed prior to EMS arrival* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10517)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10518)

g. Such procedures **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10504)

    a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10519)

NEMSIS Trace: EProcedures.05

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10520)**/@code**="67543-9" *Number of procedure attempts* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10521)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:10522)

NEMSIS Trace: EProcedures.05

h. Such procedures **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10505)

    a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10523)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10524)**/@code**="67544-7" *Procedure successful indicator* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10525)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10526)

i. Such procedures **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10506)

    a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10527)

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

        b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *ProcedureComplicationType* 2.16.840.1.113883.17.3.5.58 **STATIC** (CONF:10530)

j. Such procedures **SHALL** contain exactly one [1..1] **entryRelationship** (CONF:10507)

    a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10531)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10532)**/@code**="67546-2" *Procedure patient response* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10533)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10534), where the @code **SHALL** be selected from ValueSet *PatientConditionChange* 2.16.840.1.113883.17.3.5.59 **STATIC** (CONF:10535)

k. Such procedures **SHALL** contain exactly one [1..1] **performer** (CONF:10508)

    a. This performer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:10536)

        a. This assignedEntity **SHALL** contain exactly one [1..1] **code** (CONF:10537), where the @code **SHALL** be selected from ValueSet *ProviderRole* 2.16.840.1.113883.17.3.5.46 **STATIC** (CONF:10538)

NEMSIS Trace: EProcedures.10

    b. This assignedEntity **SHALL** contain exactly one [1..1] **id** (CONF:10539)

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

l. Such procedures **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10509)

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

    a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10540)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10542)**/@code**="TBD" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10541)

        b. This observation **SHALL** contain exactly one [1..1] **methodCode** (CONF:10544), where the @code **SHALL** be selected from ValueSet *AirwayDeviceConfirmationMethod* 2.16.840.1.113883.17.3.5.60 **STATIC** (CONF:10543)

        c. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10545)

        d. This observation **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10546)

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

        e. This observation **SHALL** contain exactly one [1..1] **participant** (CONF:10547)

            a. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:10548)

                a. This participantRole **SHALL** contain exactly one [1..1] **playingDevice** (CONF:10549)

                    a. This playingDevice **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *AirwayDeviceType* 2.16.840.1.113883.17.3.5.61 **STATIC** (CONF:10550)

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

a. Contains exactly one [1..1] *Derived Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Procedures Performed Section example

EMS Protocol Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.7]

1. **SHALL** contain exactly one [1..1] **code/@code**="67537-1" *EMS Protocol Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10713)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Protocol Section"
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10714)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10717)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10719)**/@code**="67537-1" *EMS protocol* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10718)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10720), where the @code **SHALL** be selected from ValueSet *Protocol* 2.16.840.1.113883.17.3.5.73 **STATIC** (CONF:10721)

        c. This observation Contains zero or one [0..1] **entryRelationship**

            a. This entryRelationship **SHALL** contain exactly one [1..1] **observation**

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10723)**/@code**="67538-9" *EMS Protocol age category* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10724)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10725), where the @code **SHALL** be selected from ValueSet *ProtocolAgeCategory* 2.16.840.1.113883.17.3.5.86 **STATIC** (CONF:10726)

   a. Contains exactly one [1..1] *EMS Protocol Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

5. **SHALL** contain zero or more [0..*] **entry** (CONF:10716)

   a. Such entrys **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

   b. Such entrys **SHALL** contain exactly one [1..1] **observation** (CONF:10727)

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10728)**/@code**="67553-8" *EMS candidate patient registry* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10729)

      b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10730), where the @code **SHALL** be selected from ValueSet *RegistryType* 2.16.840.1.113883.17.3.5.74 **STATIC** (CONF:10731)

   a. Contains exactly one [1..1] *EMS Candidate Patient Registry Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Protocol Section example

EMS Response Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.3]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10573)**/@code**="67664-3" *EMS Response Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10572)

2. **SHALL** contain exactly one [1..1] **title** = "EMS Response" (CONF:10575)

3. **SHALL** contain exactly one [1..1] **text** (CONF:10574)

4. **SHALL** contain exactly one [1..1] **entry** (CONF:10577)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

   b. This entry **SHALL** contain exactly one [1..1] **organizer** (CONF:10581)

      a. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10583)

         a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10588)

         NEMSIS Trace: EResponse.08

            a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10590)**/@code**="67480-4" *Dispatch delay* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10589)

            b. This observation **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10592), where the @code **SHALL** be selected from ValueSet *DispatchDelayType* 2.16.840.1.113883.17.3.5.50 **STATIC** (CONF:10591)

         NEMSIS Trace: EResponse.08

      b. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10584)

         a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10593)

            a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10595)**/@code**="67557-9" *Response delay* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10594)

    b. This observation **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10597), where the @code **SHALL** be selected from ValueSet *ResponseDelayType* `2.16.840.1.113883.17.3.5.51` **STATIC** (CONF:10596)

c. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10585)

    a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10598)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10600)**/@code**=`"67558-7"` *Scene delay* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10599)

        b. This observation **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10602), where the @code **SHALL** be selected from ValueSet *SceneDelayType* `2.16.840.1.113883.17.3.5.52` **STATIC** (CONF:10601)

d. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10586)

    a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10603)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10605)**/@code**=`"67559-5"` *Transport delay* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10604)

        b. This observation **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10607), where the @code **SHALL** be selected from ValueSet *TransportDelayType* `2.16.840.1.113883.17.3.5.53` **STATIC** (CONF:10606)

e. This organizer **SHALL** contain exactly one [1..1] **component** (CONF:10587)

    a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10608)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10610)**/@code**=`"67560-3"` *Turnaround delay* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10609)

        b. This observation **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10612), where the @code **SHALL** be selected from ValueSet *TurnAroundDelayType* `2.16.840.1.113883.17.3.5.54` **STATIC** (CONF:10611)

a. Contains exactly one [1..1] *EMS Delay Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10578)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

    b. This entry Contains zero or one [0..1] **organizer**

        a. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10613)

            a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10616)

                a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"69466-1"` *Dispatch Location Name* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10617)

                b. This observation **SHALL** contain exactly one [1..1] **value** with data type ST (CONF:10618)

        b. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10614)

            a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10619)

                a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"52002-3"` *Dispatch Location Latitude* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10620)

                b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10621)

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

        c. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10615)

            a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10622)

                a. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"52003-1"` *Dispatch Location Longitude* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10623)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10624)

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

  a. Contains exactly one [1..1] *EMS Dispatch Location Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

6. SHALL contain exactly one [1..1] **entry** (CONF:10579)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **organizer** (CONF:10625)

    a. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10626)

      a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10630)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10631)**/@code**="67484-6" *EMS Response odometer beginning reading* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10632)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10633)

        UCUM units SHOULD be "[mi_i]"

    b. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10627)

      a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10634)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10635)**/@code**="67485-3" *EMS Response odometer on-scene reading* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10636)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10637)

        UCUM units SHOULD be "[mi_i]"

    c. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10628)

      a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10638)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10639)**/@code**="67486-1" *EMS Response odometer destination reading* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10640)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10641)

        UCUM units SHOULD be "[mi_i]"

    d. This organizer **MAY** contain zero or one [0..1] **component** (CONF:10629)

      a. This component **SHALL** contain exactly one [1..1] **observation** (CONF:10642)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10643)**/@code**="67487-9" *EMS Response odometer ending reading* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10644)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10645)

        UCUM units SHOULD be "[mi_i]"

  a. Contains exactly one [1..1] *EMS Odometer Reading Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

7. SHALL contain exactly one [1..1] **entry** (CONF:10580)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10646)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10647)**/@code**="67482-0" *Response mode to scene* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10648)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10650), where the @code **SHALL** be selected from ValueSet *TransportationMode* 2.16.840.1.113883.17.3.5.66 **STATIC** (CONF:10649)

  a. Contains exactly one [1..1] *EMS Response Mode Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Response Section example

EMS Scene Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.8]

1. **SHALL** contain exactly one [1..1] **code/@code**="67665-0" *EMS Scene Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10732)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Scene" (CONF:10734)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10733)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10736)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10740)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10741)**/@code**="67665-0" *EMS reporter is first unit on scene* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10742)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10743)

  c. This entry **SHALL** contain zero or one [0..1] **observation**

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10746)**/@code**="67481-2" *Name of first unit on scene* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10745)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type ST (CONF:10747)

  a. Contains exactly one [1..1] *EMS First Unit Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10738)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10748)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10750)**/@code**="67489-5" *EMS Count of patients at scene* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10749)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:10751)

  c. This entry **SHALL** contain zero or one [0..1] **observation**

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10753)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10754)

  a. Contains exactly one [1..1] *EMS Scene Patient Count Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Scene Section example

EMS Situation Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.9`]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10755)**/@code**=`"67666-8"` *EMS Situation Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10756)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Situation Section" (CONF:10758)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10757)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10759)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **MAY** contain zero or more [0..*] **observation** (CONF:10767)

      a. Such observations **SHALL** contain exactly one [1..1] **code** (CONF:10768)**/@code**=`"10154-3"` *EMS complaint* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10769)

      b. Such observations **MAY** contain zero or one [0..1] **value** with data type ST (CONF:10770)

      c. Such observations **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10771)

         a. This entryRelationship Contains exactly one [1..1] **observation**

            a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10779)**/@code**=`"67491-1"` *Complaint duration* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10780)

            b. This observation **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10781)

            Units SHALL be selected from UCUM time units (i.e., s, min, h, d, wk, mo, a)

      d. Such observations **MAY** contain zero or one [0..1] **entryRelationship** (CONF:10772)

         a. This entryRelationship Contains at least one [1..*] **observation**

            a. Such observations **SHALL** contain exactly one [1..1] **code** (CONF:10777), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10776)

            b. Such observations **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10778)

      e. Such observations **SHOULD** contain exactly one [1..1] **targetSiteCode** (CONF:10773), where the @code **SHALL** be selected from ValueSet *AnatomicLocation* `2.16.840.1.113883.17.3.5.76` **STATIC** (CONF:10774)

      NEMSIS Trace: ESituation.07 Complaint site is required if complaint is type "Chief complaint"

      f. Such observations **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:10775)

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

         a. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:10782)

            a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10784)**/@code**=`"69468-7"` *Organ system* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10783)

            b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10786), where the @code **SHALL** be selected from ValueSet *OrganSystem* `2.16.840.1.113883.17.3.5.77` **STATIC** (CONF:10785)

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

   a. Contains exactly one [1..1] *EMS Complaint Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10760)

   a. This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

   b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10787)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10788)**/@code**="TBD" (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10789)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10790)

  a. Contains exactly one [1..1] *EMS Situation Onset Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

6. SHALL contain exactly one [1..1] **entry** (CONF:10761)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10791)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10792)**/@code**="69467-9" *Possible injury* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10793)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:10794)

  a. Contains exactly one [1..1] *EMS Possible Injury Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

7. SHALL contain exactly one [1..1] **entry** (CONF:10762)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10800)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10801)**/@code**="67774-0" *EMS Primary Symptom* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10802)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10803)**/@code**="ADD ICD 10" (CONF:10804)

  a. Contains exactly one [1..1] *EMS Primary Symptom Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

8. MAY contain zero or one [0..1] **entry** (CONF:10763)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain zero or one [0..1] **observation** (CONF:10805)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10806)**/@code**="67776-5" *Other symptoms* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10807)

    b. This observation **SHALL** contain zero or more [0..*] **value** with data type CD (CONF:10808), where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.90 ICD-10 CM) (CONF:10809)

  a. Contains exactly one [1..1] *EMS Other Symptom Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

9. SHALL contain exactly one [1..1] **entry** (CONF:10764)

  a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

  b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10795)

    a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10796)**/@code**="67492-9" *Provider Primary Impression* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10797)

    b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10798)**/@code**="ADD ICD10 CM" (CONF:10799)

  a. Contains exactly one [1..1] *EMS Provider Primary Impression Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

10. SHALL contain exactly one [1..1] **entry** (CONF:10765)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **MAY** contain exactly one [1..1] **observation** (CONF:10810)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10811)**/@code**="69542-9" *Provider Secondary Impressions* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10812)

        b. This observation **SHALL** contain at least one [1..*] **value** with data type CD (CONF:10813)**/@code**="ADD ICD 10 CM" (CONF:10814)

    a. Contains exactly one [1..1] *EMS Provider Secondary Impression Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

11. **SHALL** contain exactly one [1..1] **entry** (CONF:10766)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10815)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10816)**/@code**="67493-7" *Initial Patient Acuity* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10817)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10818), where the @code **SHALL** be selected from ValueSet *PatientStatus* 2.16.840.1.113883.17.3.5.78 **STATIC** (CONF:10819)

    a. Contains exactly one [1..1] *EMS Patient Acuity Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Situation Section example

EMS Social History Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.22]

1. **SHALL** contain exactly one [1..1] **code** (CONF:10241)**/@code**="67843-3" *EMS Social History Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10240)

2. **SHALL** contain exactly one [1..1] **title** = "EMS Social History" (CONF:10243)

3. **SHALL** contain exactly one [1..1] **text**

4. **SHALL** contain exactly one [1..1] **entry** (CONF:10244)

    a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)

    b. This entry **SHALL** contain exactly one [1..1] **observation** (CONF:10246)

        a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10248)**/@code**="69757-3" *Indications of drug or alcohol use by the patient* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10247)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL

    c. This entry Contains zero or one [0..1] **observation**

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67669-2" *Alcohol - drug use* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10250)

        b. This observation **SHALL** contain at least one [1..*] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *AlcoholDrugUseIndicator* 2.16.840.1.113883.17.3.5.18 **STATIC** (CONF:10251)

    a. Contains exactly one [1..1] *EMS Drug Use Entry* (templateId: 2.16.840.1.1133883.17.3.10.1.24)

EMS Social History Section example

EMS Times Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.10]

1. **SHALL** contain exactly one [1..1] **code/@code**="67667-6" *EMS Times Section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10820)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Times" (CONF:10822)
3. **SHALL** contain exactly one [1..1] **text** (CONF:10821)
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10832)
   a. This entry **SHALL** conform to *Derived Entry* template (templateId: 2.16.840.1.1133883.17.3.10.1.24)
   b. This entry **SHALL** contain zero or more [0..*] **observation** (CONF:10833)
      a. Such observations **SHALL** contain exactly one [1..1] **code** (CONF:10835)**/@code**="69469-5" *Call time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10834)
      b. Such observations **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10836)
   c. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10839)**/@code**="69471-1" *Unit notified time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10838)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10840)
   d. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10843)**/@code**="69472-9" *Unit en route time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10842)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10844)
   e. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10847)**/@code**="69473-7" *Unit on scene time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10846)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10848)
   f. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10851)**/@code**="69474-5" *Unit at patient time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10850)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10852)
   g. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10855)**/@code**="69475-2" *Unit left scene time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10854)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10856)
   h. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10859)**/@code**="69476-0" *Patient arrived at destination time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10858)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10860)
   i. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10863)**/@code**="69477-8" *Unit back in service time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10862)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10864)
   j. This entry **SHALL** contain zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10867)**/@code**="69470-3" *Dispatch notified time* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:10866)
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:10868)

    a. Contains exactly one [1..1] *EMS Times Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Times Section example

EMS Vital Signs Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.23`]

1. **SHALL** contain exactly one [1..1] **code/@code**=`"67801-1"` *EMS Vital Signs Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10252)
2. **SHALL** contain exactly one [1..1] **title** = "EMS Vital Signs" (CONF:10254)
3. **SHALL** contain exactly one [1..1] **text**
4. **SHALL** contain exactly one [1..1] **entry** (CONF:10255)
   - **a.** This entry **SHALL** conform to *Derived Entry* template (templateId: `2.16.840.1.1133883.17.3.10.1.24`)
   - **b.** This entry **SHALL** contain at least one [1..*] **organizer** (CONF:10256)
     - **a.** Such organizers **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10257)

       NEMSIS Trace: EVitals.01
     - **b.** Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10258)
       - **a.** This component **SHALL** contain exactly one [1..1] **code/@code**=`"67518-1"` *Obtained prior to units EMS care* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10273)
       - **b.** This component Contains exactly one [1..1] **value** with data type BL
     - **c.** Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10259)
       - **a.** This component **SHALL** contain exactly one [1..1] **code** (CONF:10275)/**@code**=`"67519-9"` *Cardiac rhythm* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10274)
       - **b.** This component **SHALL** contain exactly one [1..1] **methodCode** (CONF:10277), where the @code **SHALL** be selected from ValueSet *MethodOfECGInterpretation* `2.16.840.1.113883.17.3.5.20` **STATIC** (CONF:10276)

         NEMSIS Trace: EVitals.05
       - **c.** This component **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10278), where the @code **SHALL** be selected from ValueSet *ECGType* `2.16.840.1.113883.17.3.5.19` **STATIC** (CONF:10279)

         NEMSIS Trace: EVitals.03
     - **d.** Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10260)
       - **a.** This component **SHALL** contain exactly one [1..1] **code/@code**=`"8480-6"` *Intravascular systolic* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10280)
       - **b.** This component **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10281)

         UCUM units SHOULD be "mm[Hg]".
     - **e.** Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10261)
       - **a.** This component **SHALL** contain exactly one [1..1] **code/@code**=`"8462-4"` *Intravascular diastolic* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10282)
       - **b.** This component **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10283)

         UCUM units SHOULD be "mm[Hg]".
     - **f.** Such organizers **SHOULD** contain exactly one [1..1] **component** (CONF:10262)
       - **a.** This component **SHALL** contain exactly one [1..1] **code** (CONF:10285)/**@code**=`"8867-4"` *Heart rate* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10284)
       - **b.** This component **SHALL** contain zero or more [0..*] **value** with data type PQ (CONF:10286)

UCUM units SHOULD be "/min".

g. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10263)

    a. This component **SHALL** contain exactly one [1..1] **code/@code**=`"9279-1"` *Breaths* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10287)

    b. This component **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10288)

    UCUM units SHOULD be "/min".

h. Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10264)

    a. This component **SHALL** contain exactly one [1..1] **code/@code**=`"8310-5"` *Body temperature* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10289)

    b. This component **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10290)

    UCUM units SHOULD be "Cel".

i. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10265)

    a. This component **SHALL** contain exactly one [1..1] **code/@code**=`"2710-2"` *Oxygen saturation* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10291)

    b. This component **SHALL** contain exactly one [1..1] **value** (CONF:10292)

    UCUM units will typically be "%".

j. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10266)

    a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10294)**/@code**=`"19889-5"` *Carbon dioxide/Gas.total.at end expiration* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10293)

    b. This component **SHALL** contain exactly one [1..1] **value** (CONF:10295)

    UCUM units will typically be "%".

k. Such organizers **MAY** contain zero or one [0..1] **component** (CONF:10267)

    a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10297)**/@code**=`"19911-7"` *Diffusion capacity.carbon monoxide* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10296)

    b. This component **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10298)

    UCUM units will typically be "[ppm]".

l. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10268)

    a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10300)**/@code**=`"2339-0"` *Glucose* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10299)

    b. This component **SHALL** contain exactly one [1..1] **value** with data type PQ (CONF:10301)

    UCUM units will typically be "mg/dl".

m. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10269)

    a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10303)**/@code**=`"67775-7"` *Level of responsiveness* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10302)

    b. This component **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10305), where the @code **SHALL** be selected from ValueSet *LevelOfResponsiveness* `2.16.840.1.113883.17.3.5.21` **STATIC** (CONF:10304)

n. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10270)

    a. This component **SHALL** contain exactly one [1..1] **code/@code**=`"56840-2"` *Pain severity verbal numeric scale* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10306)

    b. This component Contains exactly one [1..1] **value** with data type INT

    An ordinal value between 0 and 10, inclusive. There are three scales, but the values are equivalent.

o. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10271)

      a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10308)**/@code**=`"67520-7"` *Stroke scale overall interpretation* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10307)

      b. This component **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:10310), where the @code **SHALL** be selected from ValueSet *Stroke Scale Score* `2.16.840.1.113883.17.3.5.93` **STATIC** (CONF:10309)

      NEMSIS Trace: EVitals.29

      c. This component **SHALL** contain exactly one [1..1] **methodCode** (CONF:10312), where the @code **SHALL** be selected from ValueSet *StrokeScale* `2.16.840.1.113883.17.3.5.88` **STATIC** (CONF:10311)

      NEMSIS Trace: EVitals.30

p. Such organizers **SHALL** contain exactly one [1..1] **component** (CONF:10272)

    a. This component **SHALL** contain exactly one [1..1] **component** (CONF:10313)

      a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10325)**/@code**=`"9267-6"` *Glasgow coma score.eye opening* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10324)

      b. This component **SHALL** contain exactly one [1..1] **value** with data type CO (CONF:10326), where the @code **SHALL** be selected from ValueSet *GCS eye response* `2.16.840.1.113883.17.3.5.99` **STATIC** (CONF:10327)

    b. This component **SHALL** contain exactly one [1..1] **component** (CONF:10314)

      a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10328)**/@code**=`"9268-4"` *Glasgow coma score.motor* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10329)

      b. This component **SHALL** contain exactly one [1..1] **value** with data type CO (CONF:10330), where the @code **SHALL** be selected from ValueSet *GCS motor response* `2.16.840.1.113883.17.3.5.96` **STATIC** (CONF:10331)

    c. This component **MAY** contain zero or one [0..1] **component** (CONF:10315)

      a. This component **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)

      b. This component **MAY** contain zero or more [0..*] **value** with data type CD (CONF:10323)

    d. This component **SHOULD** contain zero or one [0..1] **component** (CONF:10316)

      a. This component **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)

      b. This component **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:10320)

      Integer value equal to the sum of verbal, motor, and eye

    e. This component **SHALL** contain exactly one [1..1] **component** (CONF:10317)

      a. This component **SHALL** contain exactly one [1..1] **code** (CONF:10332)**/@code**=`"9270-0"` *Glasgow coma score.verbal* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10333)

      b. This component **SHALL** contain exactly one [1..1] **value** with data type CO (CONF:10334), where the @code **SHALL** be selected from ValueSet *GCS verbal response* `2.16.840.1.113883.17.3.5.98` **STATIC** (CONF:10335)

q. Such organizers **MAY** contain zero or one [0..1] **component**, where its type is *EMSTEST Consol Vital SBP*

    a. Contains exactly one [1..1] *EMSTEST Consol Vital SBP* (templateId: `2.16.840.1.113883.17.3.10.1.23.1`)

a. Contains exactly one [1..1] *EMS Vital Signs Entry* (templateId: `2.16.840.1.1133883.17.3.10.1.24`)

EMS Vital Signs Section example

Chapter

4

CLINICAL STATEMENT TEMPLATES

Topics:

- *EMSTEST Consol Vital SBP*

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.

EMSTEST Consol Vital SBP

[Observation: templateId `2.16.840.1.113883.17.3.10.1.23.1`]

NEMSIS Trace: EVitals.06

1. **SHALL** conform to *Consol Vital Sign Observation* template (templateId: `2.16.840.1.113883.10.20.22.4.27`)
2. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet `HITSP Vital Sign Result Type 2.16.840.1.113883.3.88.12.80.62` **STATIC** 1
3. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:7304)

   • Same as Organizer time; EVitals.01
4. **SHALL** contain at least one [1..*] **id** (CONF:7300)

   • Local ID for the observation, unique to generating system
5. **SHALL** contain exactly one [1..1] **value** (CONF:7305)

EMSTEST Consol Vital SBP example

Chapter

5

OTHER CLASSES

Topics:

• *Derived Entry*

This section of the Implementation Guide describes other classes that are not CDA Clinical Documents, Sections, or Clinical Statements.

Derived Entry

[Entry: templateId `2.16.840.1.1133883.17.3.10.1.24`]

This class asserts that the section narrative is derived from the structured data contained in the section entries.

1. **SHALL** contain exactly one [1..1] **@typeCode**=`"DRIV"`   (CONF:10869)

Derived Entry example

Chapter

6

VALUE SETS

Topics:

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

- *EMS Condition Code*
- *EMS Level Of Service*
- *Environmental Allergy Type*
- *Ethnicity*
- *Existence Of Contraindications To Thrombolytic Use*
- *Extremities Assessment Finding*
- *Extremity Finding Location*
- *Eye Assessment Finding*
- *Eye Finding Location*
- *Face Assessment Finding*
- *First Monitored Rhythm*
- *GCS eye response*
- *GCS motor response*
- *GCS verbal response*
- *Glasgow Coma Score Qualifier*
- *HL7 Administrative Gender*
- *HL7 Confidentiality*
- *HL7 Human Language*
- *Head Assessment Finding*
- *Heart Assessment Finding*
- *Human language*
- *IC D-10*
- *ICD-10 CM*
- *ICD-10 PCS*
- *IV Site*
- *Incident Outcome*
- *Injury Risk Factor*
- *LOINC*
- *Length Based Tape Measure*
- *Level Of Responsiveness*
- *Mechanism Of Injury*
- *Medication Administered Route*
- *Medication Authorization Type*
- *Medication Complication*
- *Medication Not Given Reason*
- *Mental Status Finding*
- *Method Of ECG Interpretation*
- *Neck Assessment Finding*
- *Neurological Assessment Finding*
- *Organ System*
- *Patient Condition Change*
- *Patient Status*
- *Patient Status Change*
- *Pelvis Genitourinary Assessment*
- *Pregnancy*

- *Prior Care Provider Role*
- *Procedure Complication Type*
- *Protocol*
- *Protocol Age Category*
- *Provider Adverse Event Type*
- *Provider Response Role*
- *Provider Role*
- *Provider Role Level*
- *Race*
- *Race and Ethnicity*
- *Reason Procedure not Performed*
- *Registry Type*
- *Response Delay Type*
- *Resuscitation Attempt*
- *Resuscitation Not Attempted Reason*
- *Resusctitation Discontinue Reason*
- *Return Of Spontaneous Circulation*
- *Safety Equipment Type*
- *Scene Delay Type*
- *Service Level*
- *Service Type*
- *Skin Assessment*
- *Stroke Scale*
- *Stroke Scale Score*
- *Transport Delay Type*
- *Transport Method*
- *Transport Mode*
- *Transportation Mode*
- *Trauma Center Criteria*
- *Turn Around Delay Type*
- *Unit Response Role*
- *Vehicle Impact Area*
- *Vehicle Passenger Location*

AED Use Prior To EMS Arrival

Value Set	AEDUsePriorToEMSArrival - 2.16.840.1.113883.17.3.5.13
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17066-4	Yes, with defibrillation	LOINC	
LA17067-2	Yes, applied without defibrillation	LOINC	
LA32-8	No	LOINC	

Abdomen Assessment Finding

Value Set	AbdomenAssessmentFinding - 2.16.840.1.113883.17.3.5.31
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17213-2	Mass/lesion	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17242-1	Distention	LOINC	
LA17243-9	Guarding	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA17246-2	Mass-pulsating	LOINC	
LA17247-0	Pregnant-palpable uterus	LOINC	
LA17709-9	Tenderness	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	
LA18226-3	Foreign body	LOINC	

Concept Code	Concept Name	Code System	Description
LA18247-9	Bowel sounds-absent	LOINC	
LA18248-7	Bowel sounds-present	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Abdominal Finding Location

Value Set	AbdominalFindingLocation - 2.16.840.1.113883.17.3.5.32
Code System	LOINC - 2.16.840.1.113883.6.1

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

Administrative Gender

Value Set	Administrative Gender - 2.16.840.1.113883.1.11.1
Code System	HL7 Administrative Gender - 2.16.840.1.113883.5.1

Advance Directive Type

Value Set	AdvanceDirectiveType - 2.16.840.1.113883.17.3.5.63
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17319-7	State EMS DNR or medical order form	LOINC	

Concept Code	Concept Name	Code System	Description
LA17320-5	Other healthcare advanced directive form	LOINC	
LA17321-3	Living will	LOINC	
LA17322-1	Family/guardian request DNR (but no documentation)	LOINC	

Airbag Status

Value Set	AirbagStatus - 2.16.840.1.113883.17.3.5.8
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17384-1	Airbag deployed front	LOINC	
LA17385-8	Airbag deployed side	LOINC	
LA17386-6	Airbag deployed other (knee, airbelt, etc.)	LOINC	
LA17387-4	No airbag deployed	LOINC	
LA17388-2	No airbag present	LOINC	
LA46-8	Other	LOINC	

Airway Device Confirmation Method

Value Set	AirwayDeviceConfirmationMethod - 2.16.840.1.113883.17.3.5.60
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18672-8	Auscultation	LOINC	
LA18673-6	Bulb syringe aspiration	LOINC	
LA18674-4	Colorimetric ETCO2	LOINC	
LA18675-1	Condensation in tube	LOINC	
LA18676-9	Digital (numeric) ETCO2	LOINC	
LA18677-7	Direct re-visualization of tube in place	LOINC	
LA18678-5	Endotracheal tube whistle (BAAM, etc)	LOINC	
LA18679-3	Other airway device placement confirmation	LOINC	

Concept Code	Concept Name	Code System	Description
LA18680-1	Visualization of vocal cords	LOINC	
LA18681-9	Waveform ETCO2	LOINC	

Airway Device Type

Value Set	AirwayDeviceType - 2.16.840.1.113883.17.3.5.61
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18004-4	Tracheostomy tube	LOINC	
LA18657-9	Cricothyrotomy tube	LOINC	
LA18658-7	Endotrachial tube	LOINC	
LA18659-5	Other invasive airway	LOINC	
LA18660-3	Supraglottic airway device-combitube	LOINC	
LA18661-1	Supraglottic airway device-king	LOINC	
LA18662-9	Supraglottic airway device-LMA	LOINC	
LA18663-7	Supraglottic airway device-other	LOINC	

Alcohol Drug Use Indicator

Value Set	AlcoholDrugUseIndicator - 2.16.840.1.113883.17.3.5.18
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17323-9	Alcohol containers/ paraphernalia at scene	LOINC	
LA17324-7	Drug paraphernalia at scene	LOINC	
LA17325-4	Patient admits to alcohol use	LOINC	
LA17326-2	Patient admits to drug use	LOINC	
LA17327-0	Positive level known from law enforcement or hospital record	LOINC	

Concept Code	Concept Name	Code System	Description
LA17328-8	Smell of alcohol on breath	LOINC	

Anatomic Location

Value Set	AnatomicLocation - 2.16.840.1.113883.17.3.5.76		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA12703-7	Neck	LOINC	
LA12705-2	Back	LOINC	
LA12706-0	Abdomen	LOINC	
LA18111-7	Chest	LOINC	
LA18112-5	Extremity-lower	LOINC	
LA18113-3	Extremity-upper	LOINC	
LA18114-1	General/global	LOINC	
LA18115-8	Genitalia	LOINC	
LA18116-6	Head	LOINC	

Back Spine Assessment Finding

Value Set	BackSpineAssessmentFinding - 2.16.840.1.113883.17.3.5.34		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA17256-1	Pain with range of motion	LOINC	
LA17257-9	Tenderness costovertebral angle (CVA)	LOINC	

Concept Code	Concept Name	Code System	Description
LA17258-7	Tenderness midline spinous process	LOINC	
LA17259-5	Tenderness paraspinous	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Back Spine Finding Location

Value Set	BackSpineFindingLocation - 2.16.840.1.113883.17.3.5.35
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18726-2	Back-general	LOINC	
LA18727-0	Cervical-left	LOINC	
LA18728-8	Cervical-midline	LOINC	
LA18729-6	Cervical-right	LOINC	
LA18730-4	Lumbar-left	LOINC	
LA18731-2	Lumbar-right	LOINC	
LA18732-0	Sacral-right	LOINC	
LA18733-8	Sacral-left	LOINC	
LA18734-6	Sacral-midline	LOINC	
LA18735-3	Lumbar-midline	LOINC	
LA18736-1	Thoracic-midline	LOINC	
LA18737-9	Thoracic-left	LOINC	
LA18738-7	Thoracic-right	LOINC	

Barrier To Care

Value Set	BarrierToCare - 2.16.840.1.113883.17.3.5.85
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17306-4	Cultural, custom, religious	LOINC	
LA17307-2	Developmentally impaired	LOINC	
LA17308-0	Hearing impaired	LOINC	
LA17309-8	Language	LOINC	
LA17310-6	Physical barrier (unable to access patient)	LOINC	
LA17311-4	Physically impaired	LOINC	
LA17312-2	Physically restrained	LOINC	
LA17313-0	Psychologically impaired	LOINC	
LA17314-8	Sight impaired	LOINC	
LA17315-5	Speech impaired	LOINC	
LA17316-3	Unattended or unsupervised (including minors)	LOINC	
LA17317-1	Uncooperative	LOINC	
LA17318-9	None noted	LOINC	
LA17711-5	Unconscious	LOINC	
LA6301-1	Obesity	LOINC	

Cardiac Arrest Cause

Value Set	CardiacArrestCause - 2.16.840.1.113883.17.3.5.10
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17056-5	Cardiac (presumed)	LOINC	
LA17058-1	Trauma	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17977-2	Drowning/submersion	LOINC	
LA17978-0	Drug overdose	LOINC	
LA17979-8	Exsanguination	LOINC	

Concept Code	Concept Name	Code System	Description
LA17980-6	Respiratory/asphyxia	LOINC	
LA9539-3	Electrocution	LOINC	

Cardiac Arrest Timing

Value Set	CardiacArrestTiming - 2.16.840.1.113883.17.3.5.91		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA17054-0	Yes, prior to EMS arrival	LOINC	
LA17055-7	Yes, after EMS arrival	LOINC	
LA32-8	No	LOINC	

Cardiac Arrest Witness Role

Value Set	CardiacArrestWitnessRole - 2.16.840.1.113883.17.3.5.11		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA18020-0	Witnessed by family member	LOINC	
LA18021-8	Witnessed by healthcare provider	LOINC	
LA18022-6	Witnessed by lay person	LOINC	
LA18023-4	Not witnessed	LOINC	

Cardiac Rhythm Reading

Value Set	CardiacRhythmReading - 2.16.840.1.113883.17.3.5.16		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA12904-1	Artifact	LOINC	
LA12904-1	Artifact	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17068-0	Asystole	LOINC	
LA17068-0	Asystole	LOINC	

Concept Code	Concept Name	Code System	Description
LA17070-6	PEA	LOINC	
LA17070-6	PEA	LOINC	
LA17071-4	Unknown AED non-shockable rhythm	LOINC	
LA17071-4	Unknown AED non-shockable rhythm	LOINC	
LA17072-2	Unknown AED shockable rhythm	LOINC	
LA17072-2	Unknown AED shockable rhythm	LOINC	
LA17073-0	Ventricular fibrillation	LOINC	
LA17073-0	Ventricular fibrillation	LOINC	
LA17074-8	Ventricular tachycardia-pulseless	LOINC	
LA17074-8	Ventricular tachycardia-pulseless	LOINC	
LA17083-9	Agonal/idioventricular	LOINC	
LA17083-9	Agonal/idioventricular	LOINC	
LA17084-7	Atrial fibrillation	LOINC	
LA17084-7	Atrial fibrillation	LOINC	
LA17085-4	Atrial flutter	LOINC	
LA17085-4	Atrial flutter	LOINC	
LA17086-2	AV block-1st degree	LOINC	
LA17086-2	AV block-1st degree	LOINC	
LA17087-0	AV block-2nd degree-type 1	LOINC	
LA17087-0	AV block-2nd degree-type 1	LOINC	
LA17088-8	AV block-2nd degree-type 2	LOINC	
LA17088-8	AV block-2nd degree-type 2	LOINC	
LA17089-6	AV block-3rd degree	LOINC	
LA17089-6	AV block-3rd degree	LOINC	
LA17090-4	Junctional	LOINC	
LA17090-4	Junctional	LOINC	
LA17091-2	Left bundle branch block	LOINC	
LA17091-2	Left bundle branch block	LOINC	
LA17093-8	Paced rhythm	LOINC	

Concept Code	Concept Name	Code System	Description
LA17093-8	Paced rhythm	LOINC	
LA17094-6	Premature atrial contractions	LOINC	
LA17094-6	Premature atrial contractions	LOINC	
LA17095-3	Premature ventricular contractions	LOINC	
LA17095-3	Premature ventricular contractions	LOINC	
LA17096-1	Right bundle branch block	LOINC	
LA17096-1	Right bundle branch block	LOINC	
LA17097-9	Sinus arrhythmia	LOINC	
LA17097-9	Sinus arrhythmia	LOINC	
LA17098-7	Sinus bradycardia	LOINC	
LA17098-7	Sinus bradycardia	LOINC	
LA17099-5	Sinus tachycardia	LOINC	
LA17099-5	Sinus tachycardia	LOINC	
LA17100-1	Supraventricular tachycardia	LOINC	
LA17100-1	Supraventricular tachycardia	LOINC	
LA17101-9	Torsades de points	LOINC	
LA17101-9	Torsades de points	LOINC	
LA17703-2	STEMI-anterior ischemia	LOINC	
LA17703-2	STEMI-anterior ischemia	LOINC	
LA17704-0	STEMI-inferior ischemia	LOINC	
LA17704-0	STEMI-inferior ischemia	LOINC	
LA17705-7	STEMI-lateral ischemia	LOINC	
LA17705-7	STEMI-lateral ischemia	LOINC	
LA17706-5	STEMI-posterior ischemia	LOINC	
LA17706-5	STEMI-posterior ischemia	LOINC	
LA17708-1	Ventricular tachycardia with pulse	LOINC	
LA17708-1	Ventricular tachycardia with pulse	LOINC	

Concept Code	Concept Name	Code System	Description
LA17718-0	Sinus rhythm	LOINC	
LA17718-0	Sinus rhythm	LOINC	
LA18205-7	Non-STEMI anterior ischemia	LOINC	
LA18205-7	Non-STEMI anterior ischemia	LOINC	
LA18206-5	Non-STEMI inferior ischemia	LOINC	
LA18206-5	Non-STEMI inferior ischemia	LOINC	
LA18207-3	Non-STEMI lateral ischemia	LOINC	
LA18207-3	Non-STEMI lateral ischemia	LOINC	
LA18208-1	Non-STEMI posterior ischemia	LOINC	
LA18208-1	Non-STEMI posterior ischemia	LOINC	

Cardinality

Value Set	Cardinality - 2.16.840.1.113883.17.3.5.75
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA15382-7	Multiple	LOINC	
LA17717-2	Single	LOINC	

Cardiopulmonary Resuscitation Type

Value Set	CardiopulmonaryResuscitationType - 2.16.840.1.113883.17.3.5.57
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17749-5	Compressions-continuous	LOINC	
LA17750-3	Compressions-external band type device	LOINC	
LA17751-1	Compressions-external plunger type device	LOINC	

Concept Code	Concept Name	Code System	Description
LA17752-9	Compressions-external thumper type device	LOINC	
LA17753-7	Compressions-intermittant with ventilation	LOINC	
LA17754-5	Compressions-other device (not listed)	LOINC	
LA17755-2	Ventilation-bag valve mask	LOINC	
LA17756-0	Ventilation-impedence threshold device	LOINC	
LA17757-8	Ventilation-mouth to mouth	LOINC	
LA17758-6	Ventilation-pocket mask	LOINC	

Chest Lung Assessment Finding

Value Set	ChestLungAssessmentFinding - 2.16.840.1.113883.17.3.5.29
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17222-3	Accessory muscles used with breathing	LOINC	
LA17223-1	Breath sounds-absent-left	LOINC	
LA17224-9	Breath sounds-absent-right	LOINC	
LA17225-6	Breath sounds-decreased-left	LOINC	
LA17226-4	Breath sounds-decreased-right	LOINC	
LA17227-2	Breath sounds-normal-left	LOINC	
LA17228-0	Breath sounds-normal-right	LOINC	

Concept Code	Concept Name	Code System	Description
LA17229-8	Crush injury	LOINC	
LA17230-6	Flail segment-left	LOINC	
LA17231-4	Flail segment-right	LOINC	
LA17232-2	Increased respiratory effort	LOINC	
LA17233-0	Pain with inspiration/ expiration-left	LOINC	
LA17234-8	Pain with inspiration/ expiration-right	LOINC	
LA17236-3	Rhonchi/wheezing	LOINC	
LA17237-1	Tenderness-left	LOINC	
LA17238-9	Tenderness-right	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA18229-7	Rales-left	LOINC	
LA18230-5	Rales-right	LOINC	
LA18231-3	Retraction	LOINC	
LA18232-1	Rhonchi-left	LOINC	
LA18233-9	Rhonchi-right	LOINC	
LA18234-7	Stridor-left	LOINC	
LA18235-4	Stridor-right	LOINC	
LA18236-2	Implanted device	LOINC	
LA18237-0	Wheezing-expiratory- right	LOINC	
LA18238-8	Wheezing-expiratory-left	LOINC	
LA18239-6	Wheezing-inspiratory-left	LOINC	
LA18240-4	Wheezing-inspiratory- right	LOINC	
LA18402-0	Breath sounds-equal	LOINC	
LA6626-1	Normal	LOINC	

Concept Code	Concept Name	Code System	Description
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Complaint

Value Set	Complaint - 2.16.840.1.113883.17.3.5.49
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15468-4	Abdominal pain	LOINC	
LA15903-0	Headache	LOINC	
LA17117-5	Allergic reaction/stings	LOINC	
LA17118-3	Animal bite	LOINC	
LA17119-1	Assault	LOINC	
LA17120-9	Automated crash notification	LOINC	
LA17121-7	Back pain (non-traumatic)	LOINC	
LA17122-5	Breathing problems	LOINC	
LA17123-3	Burns/explosion	LOINC	
LA17124-1	Carbon monoxide poisoning/hazmat/ inhalation/chemical/ biological/radiological/ nuclear	LOINC	
LA17125-8	Cardiac arrest/death	LOINC	
LA17126-6	Chest pain (non-traumatic)	LOINC	
LA17127-4	Choking	LOINC	
LA17128-2	Convulsions/seizure	LOINC	
LA17129-0	Diabetic problem	LOINC	
LA17131-6	Electrocution/lightning	LOINC	
LA17132-4	Eye problem/injury	LOINC	
LA17133-2	Falls	LOINC	
LA17134-0	Healthcare professional/ admission	LOINC	
LA17135-7	Heart problems/AICD	LOINC	

Concept Code	Concept Name	Code System	Description
LA17136-5	Heat/cold exposure	LOINC	
LA17137-3	Hemorrhage/lacerations	LOINC	
LA17138-1	Industrial accident/ inaccessible incident/ other entrapments (non-vehicle)	LOINC	
LA17140-7	Overdose/poisoning/ ingestion	LOINC	
LA17141-5	Pandemic/epidemic/ outbreak	LOINC	
LA17142-3	Pregnancy/childbirth/ miscarriage	LOINC	
LA17143-1	Psychiatric problem/ abnormal behavior/ suicide attempt	LOINC	
LA17144-9	Sick person	LOINC	
LA17145-6	Stab/gunshot wound/ penetrating trauma	LOINC	
LA17146-4	Traffic/transportation incident	LOINC	
LA17147-2	Transfer/interfacility/ palliative Care	LOINC	
LA17148-0	Unconscious/fainting/ near-fainting	LOINC	
LA17149-8	Unknown problem person down	LOINC	
LA17150-6	Standby	LOINC	
LA18093-7	Fire	LOINC	
LA18209-9	No other appropriate choice	LOINC	
LA18210-7	Medical alarm	LOINC	
LA18211-5	Well person check	LOINC	
LA9553-4	Stroke/CVA	LOINC	
LA9555-9	Traumatic injury	LOINC	

Complaint Type

Value Set	Complaint Type - 2.16.840.1.113883.17.3.5.94
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	
LA18923-5	Chief - primary	LOINC	
LA18924-3	Secondary	LOINC	

Confidentiality

Value Set	Confidentiality - 2.16.840.1.113883.1.11.10228
Code System	HL7 Confidentiality - 2.16.840.1.113883.5.25

Current Medication Administration Route

Value Set	CurrentMedicationAdministrationRoute - 2.16.840.1.113883.17.3.5.17
Code System	LOINC - 2.16.840.1.113883.6.1

Destination Choice Reason

Value Set	DestinationChoiceReason - 2.16.840.1.113883.17.3.5.68
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	
LA17182-9	Closest facility	LOINC	
LA17184-5	Family choice	LOINC	
LA17185-2	Insurance status/ requirement	LOINC	
LA17186-0	Law enforcement choice	LOINC	
LA17187-8	On-line medical direction	LOINC	
LA17188-6	Patient's choice	LOINC	
LA17189-4	Patient's physician's choice	LOINC	
LA17190-2	Protocol	LOINC	
LA17191-0	Regional specialty center	LOINC	
LA18301-4	Diversion	LOINC	

Destination Prearrival Activation

Value Set	DestinationPrearrivalActivation - 2.16.840.1.113883.17.3.5.87

	Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18117-4	Yes, adult trauma	LOINC	
LA18118-2	Yes, cardiac arrest	LOINC	
LA18119-0	Yes, obstetrics	LOINC	
LA18120-8	Yes, other	LOINC	
LA18121-6	Yes, pediatric trauma	LOINC	
LA18122-4	Yes, STEMI	LOINC	
LA18123-2	Yes, stroke	LOINC	
LA32-8	No	LOINC	

Destination Type

Value Set	DestinationType - 2.16.840.1.113883.17.3.5.69
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA11504-0	Hospital emergency department	LOINC	
LA14084-0	Home	LOINC	
LA18686-8	Hospital non-emergency department bed	LOINC	
LA18687-6	Medical office/clinic	LOINC	
LA18688-4	Morgue/mortuary	LOINC	
LA18689-2	Nursing home/assisted living facility	LOINC	
LA18690-0	Other destination	LOINC	
LA18691-8	Other EMS responder (air)	LOINC	
LA18692-6	Other EMS responder (ground)	LOINC	
LA18693-4	Police/jail	LOINC	

Disaster Type

Value Set	DisasterType - 2.16.840.1.113883.17.3.5.9
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17594-5	Weather	LOINC	
LA18089-5	Biologic agent	LOINC	
LA18090-3	Building failure	LOINC	
LA18091-1	Chemical agent	LOINC	
LA18092-9	Explosive device	LOINC	
LA18093-7	Fire	LOINC	
LA18094-5	Hostage event	LOINC	
LA18095-2	Mass gathering	LOINC	
LA18096-0	Mass illness	LOINC	
LA18097-8	Nuclear agent	LOINC	
LA18098-6	Radioactive device	LOINC	
LA18099-4	Secondary destructive device	LOINC	
LA18100-0	Shooting/sniper	LOINC	
LA18101-8	Vehicular	LOINC	

Dispatch Delay Type

Value Set	DispatchDelayType - 2.16.840.1.113883.17.3.5.50
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	
LA17183-7	Diversion/failure (of previous unit)	LOINC	
LA17579-6	Caller (uncooperative)	LOINC	
LA17580-4	High call volume	LOINC	
LA17581-2	Location (inability to obtain)	LOINC	
LA17582-0	No EMS vehicles (units) available	LOINC	
LA17584-6	Technical failure (computer, phone etc.)	LOINC	
LA18081-2	None/no delay	LOINC	
LA7540-3	Language barrier	LOINC	

ECG Type

Value Set	ECGType - 2.16.840.1.113883.17.3.5.19
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18664-5	3 lead	LOINC	
LA18665-2	4 lead	LOINC	
LA18666-0	5 lead	LOINC	
LA18667-8	12 lead-left sided (normal)	LOINC	
LA18668-6	12 lead-right sided	LOINC	
LA18669-4	15 lead	LOINC	
LA18670-2	18 lead	LOINC	
LA18671-0	Other ECG device	LOINC	

EMD Performed

Value Set	EMDPerformed - 2.16.840.1.113883.17.3.5.48
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17151-4	Yes, with pre-arrival instructions	LOINC	
LA17152-2	Yes, without pre-arrival instructions	LOINC	
LA17153-0	Yes, unknown if pre-arrival instructions given	LOINC	
LA32-8	No	LOINC	

EMS Billing Condition

Value Set	EMSBillingCondition - 2.16.840.1.113883.17.3.5.71
Code System	LOINC - 2.16.840.1.113883.6.1

EMS Condition Code

Value Set	EMSConditionCode - 2.16.840.1.113883.17.3.5.71
Code System	LOINC - 2.16.840.1.113883.6.1

EMS Level Of Service

Value Set	EMSLevelOfService - 2.16.840.1.113883.17.3.5.70
Code System	LOINC - 2.16.840.1.113883.6.1

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

Environmental Allergy Type

Value Set	EnvironmentalAllergyType - 2.16.840.1.113883.17.3.5.83
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA18356-8	Chemical	LOINC	
LA18357-6	Dander/dust/mold/pollen	LOINC	
LA18358-4	Food allergy	LOINC	
LA18359-2	Insect sting	LOINC	
LA18360-0	Latex	LOINC	
LA18361-8	Plant	LOINC	

Ethnicity

Value Set	Ethnicity - 2.16.840.1.113883.1.11.15836
Code System	Race and Ethnicity - CDC - 2.16.840.1.113883.6.238

Existence Of Contraindications To Thrombolytic Use

Value Set	ExistenceOfContraindicationsToThrombolyticUse - 2.16.840.1.113883.17.3.5.41		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA17114-2	Definite contraindications to thrombolytic use	LOINC	
LA17115-9	Possible contraindications to thrombolytic Use	LOINC	
LA17116-7	No contraindications to thrombolytic Use	LOINC	

Extremities Assessment Finding

Value Set	ExtremitiesAssessmentFinding - 2.16.840.1.113883.17.3.5.36		
Code System	LOINC - 2.16.840.1.113883.6.1		

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17229-8	Crush injury	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA17260-3	Amputation-acute	LOINC	
LA17261-1	Amputation-previous	LOINC	
LA17262-9	Dislocation	LOINC	
LA17263-7	Edema	LOINC	
LA17264-5	Fracture-closed	LOINC	
LA17265-2	Fracture-open	LOINC	
LA17266-0	Motor function- abnormal/weakness	LOINC	
LA17267-8	Motor function-absent	LOINC	
LA17268-6	Motor function-normal	LOINC	

Concept Code	Concept Name	Code System	Description
LA17269-4	Pulse-abnormal	LOINC	
LA17270-2	Pulse-absent	LOINC	
LA17271-0	Pulse-normal	LOINC	
LA17272-8	Sensation-abnormal	LOINC	
LA17273-6	Sensation-absent	LOINC	
LA17274-4	Sensation-normal	LOINC	
LA17344-5	Paralysis	LOINC	
LA17709-9	Tenderness	LOINC	
LA18220-6	Avulsion	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA18249-5	Clubbing of fingers	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Extremity Finding Location

Value Set	ExtremityFindingLocation - 2.16.840.1.113883.17.3.5.37
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18739-5	Ankle-left	LOINC	
LA18740-3	Ankle-right	LOINC	
LA18741-1	Arm-upper-left	LOINC	
LA18742-9	Arm-upper-right	LOINC	
LA18743-7	Elbow-left	LOINC	
LA18744-5	Elbow-right	LOINC	
LA18745-2	Finger-2nd (index)-left	LOINC	
LA18746-0	Finger-2nd (index)-right	CDOINC	
LA18747-8	Finger-3rd (middle)-left	LOINC	

Concept Code	Concept Name	Code System	Description
LA18748-6	Finger-3rd (middle)-right	LOINC	
LA18749-4	Finger-4th (ring)-left	LOINC	
LA18750-2	Finger-4th (ring)-right	LOINC	
LA18751-0	Finger-5th (smallest)-left	LOINC	
LA18752-8	Finger-5th (smallest)-right	LOINC	
LA18753-6	Foot-dorsal-left	LOINC	
LA18754-4	Foot-dorsal-right	LOINC	
LA18755-1	Foot-plantar-right	LOINC	
LA18756-9	Foot-plantar-left	LOINC	
LA18757-7	Forearm-left	LOINC	
LA18758-5	Forearm-right	LOINC	
LA18759-3	Hand-dorsal-left	LOINC	
LA18760-1	Hand-dorsal-right	LOINC	
LA18761-9	Hand-palm-right	LOINC	
LA18762-7	Hand-palm-left	LOINC	
LA18763-5	Hip-left	LOINC	
LA18764-3	Hip-right	LOINC	
LA18765-0	Wrist-right	LOINC	
LA18766-8	Wrist-left	LOINC	
LA18767-6	Knee-left	LOINC	
LA18768-4	Knee-right	LOINC	
LA18769-2	Leg-lower-left	LOINC	
LA18770-0	Leg-lower-right	LOINC	
LA18771-8	Leg-upper-right	LOINC	
LA18772-6	Leg-upper-left	LOINC	
LA18773-4	Shoulder-left	LOINC	
LA18774-2	Shoulder-right	LOINC	
LA18775-9	Thumb-left	LOINC	
LA18776-7	Thumb-right	LOINC	
LA18777-5	Toe-1st (big)-left	LOINC	
LA18778-3	Toe-1st (big)-right	LOINC	
LA18779-1	Toe-2nd-left	LOINC	
LA18780-9	Toe-2nd-right	LOINC	
LA18781-7	Toe-3rd-left	LOINC	
LA18782-5	Toe-3rd-right	LOINC	

Concept Code	Concept Name	Code System	Description
LA18783-3	Toe-4th-left	LOINC	
LA18784-1	Toe-4th-right	LOINC	
LA18785-8	Toe-5th (smallest)-left	LOINC	
LA18786-6	Toe-5th (smallest)-right	LOINC	

Eye Assessment Finding

Value Set	EyeAssessmentFinding - 2.16.840.1.113883.17.3.5.38
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA14698-7	Missing	LOINC	
LA15255-5	Reactive	LOINC	
LA15256-3	Nonreactive	LOINC	
LA17275-1	1 mm	LOINC	
LA17276-9	2 mm	LOINC	
LA17277-7	3 mm	LOINC	
LA17278-5	4 mm	LOINC	
LA17279-3	5 mm	LOINC	
LA17280-1	6 mm	LOINC	
LA17281-9	7 mm	LOINC	
LA17282-7	Clouded	LOINC	
LA17283-5	Hyphema	LOINC	
LA17284-3	Open globe	LOINC	
LA17285-0	Pupil-irregular/teardrop	LOINC	
LA17710-7	Blind	LOINC	
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA18250-3	Cataract present	LOINC	
LA18251-1	Dysconjugate gaze	LOINC	
LA18253-7	Jaundiced sclera	LOINC	
LA18254-5	Nonreactive prosthetic	LOINC	
LA18255-2	Nystagmus noted	LOINC	
LA18256-0	PERRL	LOINC	
LA18257-8	Sluggish	LOINC	
LA18258-6	8 mm or >	LOINC	

Concept Code	Concept Name	Code System	Description
LA6630-3	Not done	LOINC	

Eye Finding Location

Value Set	EyeFindingLocation - 2.16.840.1.113883.17.3.5.39
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18787-4	Eyes-bilateral	LOINC	
LA18788-2	Eye-left	LOINC	
LA18789-0	Eye-right	LOINC	

Face Assessment Finding

Value Set	FaceAssessmentFinding - 2.16.840.1.113883.17.3.5.27
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17210-8	Decapitation	LOINC	
LA17211-6	Drainage	LOINC	
LA17213-2	Mass/lesion	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17216-5	Asymmetric smile or droop	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	

Concept Code	Concept Name	Code System	Description
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

First Monitored Rhythm

Value Set	FirstMonitoredRhythm - 2.16.840.1.113883.17.3.5.14
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17068-0	Asystole	LOINC	
LA17070-6	PEA	LOINC	
LA17071-4	Unknown AED non-shockable rhythm	LOINC	
LA17072-2	Unknown AED shockable rhythm	LOINC	
LA17073-0	Ventricular fibrillation	LOINC	
LA17074-8	Ventricular tachycardia-pulseless	LOINC	
LA17394-0	Bradycardia	LOINC	

GCS eye response

Value Set	GCS eye response - 2.16.840.1.113883.17.3.5.99
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17798-2	No eye movement when assessed	LOINC	
LA9345-5	Opens eyes in response to painful stimulation	LOINC	
LA9346-3	Opens eyes in response to verbal stimulation	LOINC	
LA9347-1	Opens eyes spontaneously	LOINC	

GCS motor response

Value Set	GCS motor response - 2.16.840.1.113883.17.3.5.96
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17727-1	Withdrawal from pain	LOINC	
LA17797-4	Obeys commands (>2 yrs); Appropriate response to stimulation (<=2 yrs)	LOINC	
LA6562-8	No motor response	LOINC	
LA6563-6	Extension to pain	LOINC	
LA6564-4	Flexion to pain	LOINC	
LA6566-9	Localizing pain	LOINC	

GCS verbal response

Value Set	GCS verbal response - 2.16.840.1.113883.17.3.5.98
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17793-3	Incomprehensible sounds (>2 yrs); Inconsolable, agitated (<=2 yrs)	LOINC	
LA17794-1	Inappropriate words (>2 yrs); Inconsistently consolable, moaning (<=2 yrs)	LOINC	
LA17795-8	Confused (>2 yrs); Cries but is consolable, inappropriate interactions (<=2 yrs)	LOINC	
LA17796-6	Oriented (>2 yrs); Smiles, oriented to sounds, follows objects, interacts (<=2 yrs)	LOINC	
LA6557-8	No verbal response (>2 yrs); no vocal response (<=2 yrs)	LOINC	

Glasgow Coma Score Qualifier

Value Set	GlasgowComaScoreQualifier - 2.16.840.1.113883.17.3.5.89
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17102-7	Initial GCS has legitimate values without interventions such as intubation and sedation	LOINC	
LA17103-5	Eye obstruction prevents eye assessment	LOINC	
LA17104-3	Patient chemically sedated	LOINC	
LA17105-0	Patient chemically paralyzed	LOINC	
LA17106-8	Patient intubated	LOINC	

HL7 Administrative Gender

Value Set	HL7 Administrative Gender

HL7 Confidentiality

Value Set	HL7 Confidentiality

HL7 Human Language

Value Set	HL7 Human Language

Head Assessment Finding

Value Set	HeadAssessmentFinding - 2.16.840.1.113883.17.3.5.26
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17210-8	Decapitation	LOINC	
LA17211-6	Drainage	LOINC	

Concept Code	Concept Name	Code System	Description
LA17213-2	Mass/lesion	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Heart Assessment Finding

Value Set	HeartAssessmentFinding - 2.16.840.1.113883.17.3.5.30
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17239-7	Heart sounds decreased	LOINC	
LA17240-5	Murmur-diastolic	LOINC	
LA17241-3	Murmur-systolic	LOINC	
LA18241-2	Clicks	LOINC	
LA18242-0	S1	LOINC	
LA18243-8	S2	LOINC	
LA18244-6	S3	LOINC	
LA18245-3	S4	LOINC	
LA18246-1	Rubs	LOINC	
LA6626-1	Normal	LOINC	

Concept Code	Concept Name	Code System	Description
LA6630-3	Not done	LOINC	

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

IC D-10

Value Set	ICD-10

ICD-10 CM

Value Set	ICD-10 CM

ICD-10 PCS

Value Set	ICD-10 PCS

IV Site

Value Set	IVSite - 2.16.840.1.113883.17.3.5.56
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18112-5	Extremity-lower	LOINC	
LA18113-3	Extremity-upper	LOINC	
LA18757-7	Forearm-left	LOINC	
LA18758-5	Forearm-right	LOINC	
LA18790-8	Antecubital-left	LOINC	
LA18791-6	Antecubital-right	LOINC	
LA18792-4	External jugular-left	LOINC	
LA18793-2	External jugular-right	LOINC	
LA18794-0	Femoral-left	LOINC	
LA18795-7	Femoral-right	LOINC	
LA18796-5	Foot-left	LOINC	
LA18797-3	Foot-right	LOINC	

Concept Code	Concept Name	Code System	Description
LA18798-1	Hand-right	LOINC	
LA18799-9	Hand-left	LOINC	
LA18800-5	Internal jugular-left	LOINC	
LA18801-3	Internal jugular-right	LOINC	
LA18802-1	IO-femur-left distal	LOINC	
LA18803-9	IO-femur-right distal	LOINC	
LA18804-7	IO-humerus-left	LOINC	
LA18805-4	IO-humerus-right	LOINC	
LA18806-2	IO-iliac crest-left	LOINC	
LA18807-0	IO-iliac crest-right	LOINC	
LA18808-8	IO-sternum	LOINC	
LA18809-6	IO-tibia-left distal	LOINC	
LA18810-4	IO-tibia-right distal	LOINC	
LA18811-2	IO-tibia-left proximal	LOINC	
LA18812-0	IO-tibia-right proximal	LOINC	
LA18813-8	Other central access (PICC, portacath, not listed)	LOINC	
LA18814-6	Other peripheral access (not listed)	LOINC	
LA18815-3	Scalp	LOINC	
LA18816-1	Subclavian-left	LOINC	
LA18817-9	Subclavian-right	LOINC	
LA18818-7	Umbilical	LOINC	

Incident Outcome

Value Set	IncidentOutcome - 2.16.840.1.113883.17.3.5.64
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17154-8	Patient treated, transported by EMS	LOINC	
LA17155-5	Canceled (prior to arrival at scene)	LOINC	
LA17156-3	No patient found (canceled on scene)	LOINC	

Concept Code	Concept Name	Code System	Description
LA17157-1	Patient dead at scene-no EMS transport	LOINC	
LA17158-9	Patient dead at scene-transported by EMS	LOINC	
LA17159-7	Patient evaluated, no treatment/transport required	LOINC	
LA17160-5	Patient refused evaluation/care (with transport)	LOINC	
LA17161-3	Patient treated, released (AMA)	LOINC	
LA17162-1	Patient treated, transferred care to another EMS professional	LOINC	
LA17163-9	Patient treated, transported by law enforcement	LOINC	
LA17164-7	Patient treated, transported by private vehicle	LOINC	
LA17165-4	Standby-no services or support provided	LOINC	
LA17166-2	Standby-public safety, fire, or EMS operational support provided	LOINC	
LA17167-0	Transport of body parts or organs only	LOINC	
LA18080-4	Patient treated, released (per protocol)	LOINC	
LA18212-3	Assist, agency	LOINC	
LA18213-1	Assist, public	LOINC	
LA18214-9	Assist, unit	LOINC	
LA18215-6	No patient contact (canceled on scene)	LOINC	
LA18216-4	Patient refused evaluation/care (without transport)	LOINC	

Injury Risk Factor

Value Set	InjuryRiskFactor - 2.16.840.1.113883.17.3.5.4

Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17348-6	Fall adults: > 20 ft. (one story is equal to 10 ft.)	LOINC	
LA17349-4	Fall children: > 10 ft. or 2-3 times the height of the child	LOINC	
LA17350-2	Motorcycle crash > 20 mph	LOINC	
LA17352-8	Crash death in same passenger compartment	LOINC	
LA17353-6	Crash ejection (partial or complete) from vehicle	LOINC	
LA17357-7	Crash intrusion: > 12 in. occupant site; > 18 in. any site	LOINC	
LA17360-1	Auto v. pedestrian/ bicyclist thrown, run over, or > 20 MPH impact	LOINC	
LA18124-0	Crash vehicle telemetry data (AACN) consistent with high risk of injury	LOINC	

LOINC

Value Set	LOINC

Length Based Tape Measure

Value Set	LengthBasedTapeMeasure - 2.16.840.1.113883.17.3.5.24
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15553-3	Blue	LOINC	
LA15554-1	Grey	LOINC	
LA15555-8	Green	LOINC	
LA17192-8	Pink	LOINC	
LA17193-6	Red	LOINC	
LA17194-4	Purple	LOINC	
LA17195-1	Yellow	LOINC	

Concept Code	Concept Name	Code System	Description
LA17196-9	Orange	LOINC	
LA4457-3	White	LOINC	

Level Of Responsiveness

Value Set	LevelOfResponsiveness - 2.16.840.1.113883.17.3.5.21
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17107-6	Painful	LOINC	
LA17108-4	Verbal	LOINC	
LA9340-6	Alert	LOINC	
LA9343-0	Unresponsive	LOINC	

Mechanism Of Injury

Value Set	MechanismOfInjury - 2.16.840.1.113883.17.3.5.1
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17335-3	Blunt	LOINC	
LA17336-1	Penetrating	LOINC	
LA46-8	Other	LOINC	
LA7318-4	Burn	LOINC	

Medication Administered Route

Value Set	MedicationAdministeredRoute - 2.16.840.1.113883.17.3.5.43
Code System	LOINC - 2.16.840.1.113883.6.1

Medication Authorization Type

Value Set	MedicationAuthorizationType - 2.16.840.1.113883.17.3.5.47
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17187-8	On-line medical direction	LOINC	

Concept Code	Concept Name	Code System	Description
LA18654-6	On-scene	LOINC	
LA18655-3	Protocol (standing order)	LOINC	
LA18656-1	Written orders (patient specific)	LOINC	

Medication Complication

Value Set	MedicationComplication - 2.16.840.1.113883.17.3.5.45
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA15098-9	Nausea	LOINC	
LA15099-7	Vomiting	LOINC	
LA15424-7	Diarrhea	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17392-4	Altered mental status	LOINC	
LA17393-2	Apnea	LOINC	
LA17394-0	Bradycardia	LOINC	
LA17396-5	Hypoxia	LOINC	
LA17397-3	Itching/urticaria	LOINC	
LA17713-1	Injury	LOINC	
LA17714-9	Tachycardia	LOINC	
LA18266-9	Bradypnea	LOINC	
LA18267-7	Tachypnea	LOINC	
LA7418-2	Bleeding	LOINC	
LA7434-9	Extravasation	LOINC	
LA7443-0	Hypotension	LOINC	
LA7444-8	Hypertension	LOINC	
LA9540-1	Hyperthermia	LOINC	
LA9541-9	Hypothermia	LOINC	
LA9548-4	Respiratory distress	LOINC	

Medication Not Given Reason

Value Set	MedicationNotGivenReason - 2.16.840.1.113883.17.3.5.92
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15185-4	Unable to complete	LOINC	
LA18921-9	Medication already taken	LOINC	
LA18922-7	Medication allergy	LOINC	
LA18925-0	Denied by order	LOINC	
LA4216-3	Contraindicated	LOINC	
LA4389-8	Refused	LOINC	

Mental Status Finding

Value Set	MentalStatusFinding - 2.16.840.1.113883.17.3.5.84
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17286-8	Normal baseline for patient	LOINC	
LA17287-6	Combative	LOINC	
LA17288-4	Oriented-person	LOINC	
LA17289-2	Oriented-place	LOINC	
LA17290-0	Oriented-time	LOINC	
LA18259-4	Oriented-event	LOINC	
LA18260-2	Pharmacologically sedated/paralyzed	LOINC	
LA6560-2	Confused	LOINC	
LA6630-3	Not done	LOINC	
LA7438-0	Hallucinations	LOINC	
LA9343-0	Unresponsive	LOINC	

Method Of ECG Interpretation

Value Set	MethodOfECGInterpretation - 2.16.840.1.113883.17.3.5.20
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18682-7	Computer interpretation	LOINC	
LA18683-5	Manual interpretation	LOINC	
LA18684-3	Transmission with no interpretation	LOINC	

Concept Code	Concept Name	Code System	Description
LA18685-0	Transmission with remote interpretation	LOINC	

Neck Assessment Finding

Value Set	NeckAssessmentFinding - 2.16.840.1.113883.17.3.5.28
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17210-8	Decapitation	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17217-3	Jugular vein distention - JVD	LOINC	
LA17219-9	Subcutaneous air	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA17612-5	Stridor	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	
LA18226-3	Foreign body	LOINC	
LA18227-1	Tracheal deviation-right	LOINC	
LA18228-9	Tracheal deviation-left	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Neurological Assessment Finding

Value Set	NeurologicalAssessmentFinding - 2.16.840.1.113883.17.3.5.40
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15899-0	Seizures	LOINC	
LA17286-8	Normal baseline for patient	LOINC	
LA17291-8	Cerebellar function-abnormal	LOINC	
LA17292-6	Cerebellar function-normal	LOINC	
LA17293-4	Gait-abnormal	LOINC	
LA17294-2	Gait-normal	LOINC	
LA17295-9	Hemiplegia-left	LOINC	
LA17296-7	Hemiplegia-right	LOINC	
LA17297-5	Speech-normal	LOINC	
LA17298-3	Speech-slurring	LOINC	
LA17299-1	Strength-normal	LOINC	
LA17300-7	Strength-symmetric	LOINC	
LA17301-5	Tremors	LOINC	
LA17302-3	Weakness-facial droop-left	LOINC	
LA17303-1	Weakness-facial droop-right	LOINC	
LA17304-9	Weakness-left sided	LOINC	
LA17305-6	Weakness-right sided	LOINC	
LA18261-0	Aphagia	LOINC	
LA18262-8	Aphasia	LOINC	
LA18263-6	Decerebrate posturing	LOINC	
LA18264-4	Decorticate posturing	LOINC	
LA18265-1	Strength-asymmetric	LOINC	
LA6630-3	Not done	LOINC	

Organ System

Value Set	OrganSystem - 2.16.840.1.113883.17.3.5.77
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA16968-2	Gastrointestinal	LOINC	
LA18114-1	General/global	LOINC	
LA18277-6	Cardiovascular	LOINC	
LA18278-4	CNS/neuro	LOINC	
LA18279-2	Endocrine/metabolic	LOINC	
LA18281-8	Lymphatic/immune	LOINC	
LA18282-6	Musculoskeletal/skin	LOINC	
LA18283-4	Pulmonary	LOINC	
LA18284-2	Renal	LOINC	
LA18285-9	Reproductive	LOINC	
LA9534-4	Behavioral / psychiatric disorder	LOINC	

Patient Condition Change

Value Set	PatientConditionChange - 2.16.840.1.113883.17.3.5.59
Code System	LOINC - 2.16.840.1.113883.6.1

Patient Status

Value Set	PatientStatus - 2.16.840.1.113883.17.3.5.78
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17694-3	Lower acuity (green)	LOINC	
LA17695-0	Emergent (yellow)	LOINC	
LA17696-8	Critical (red)	LOINC	
LA17697-6	Dead without resuscitation efforts (black)	LOINC	

Patient Status Change

Value Set	Patient Status Change - 2.16.840.1.113883.17.3.5.67
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA11011-6	Worse	LOINC	

Concept Code	Concept Name	Code System	Description
LA11011-6	Worse	LOINC	
LA17181-1	Unchanged	LOINC	
LA17181-1	Unchanged	LOINC	
LA65-8	Improved	LOINC	
LA65-8	Improved	LOINC	

Pelvis Genitourinary Assessment

Value Set	PelvisGenitourinaryAssessment - 2.16.840.1.113883.17.3.5.33
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA14123-6	Unstable	LOINC	
LA17208-2	Bleeding controlled	LOINC	
LA17209-0	Bleeding uncontrolled	LOINC	
LA17213-2	Mass/lesion	LOINC	
LA17214-0	Puncture/stab wound	LOINC	
LA17215-7	Swelling/bruising/ contusion with pain	LOINC	
LA17220-7	Swelling/bruising/ contusion without pain	LOINC	
LA17244-7	Gunshot wound-entry	LOINC	
LA17245-4	Gunshot wound-exit	LOINC	
LA17248-8	Bleeding-rectal	LOINC	
LA17249-6	Bleeding-urethral	LOINC	
LA17250-4	Bleeding-vaginal	LOINC	
LA17251-2	Genital injury	LOINC	
LA17252-0	Pelvic fracture	LOINC	
LA17253-8	Pelvic instability	LOINC	
LA17254-6	Penile priapism/erection	LOINC	
LA17255-3	Pregnant-crowning	LOINC	
LA17709-9	Tenderness	LOINC	
LA18220-6	Avulsion	LOINC	
LA18221-4	Burn, blistering	LOINC	
LA18222-2	Burn, charring	LOINC	
LA18223-0	Burn, redness	LOINC	
LA18224-8	Burn, white/waxy	LOINC	

Concept Code	Concept Name	Code System	Description
LA18225-5	Deformity	LOINC	
LA18226-3	Foreign body	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	
LA7410-9	Abrasion	LOINC	
LA7452-1	Laceration	LOINC	
LA7460-4	Pain	LOINC	

Pregnancy

Value Set	Pregnancy - 2.16.840.1.113883.17.3.5.42
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17329-6	Yes, confirmed less than 12 weeks	LOINC	
LA17330-4	Yes, confirmed 12 to 20 weeks	LOINC	
LA17331-2	Yes, confirmed greater than 20 weeks	LOINC	
LA17332-0	Possible, unconfirmed	LOINC	
LA32-8	No	LOINC	

Prior Care Provider Role

Value Set	PriorCareProviderRole - 2.16.840.1.113883.17.3.5.12
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18016-8	First responder-fire, law, EMS	LOINC	
LA18017-6	Healthcare professional-non-EMS	LOINC	
LA18018-4	Lay person-non-family	LOINC	
LA18019-2	Other EMS professional - not part of dispatched response	LOINC	
LA9277-0	Family member	LOINC	

Procedure Complication Type

Value Set	ProcedureComplicationType - 2.16.840.1.113883.17.3.5.58
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA15098-9	Nausea	LOINC	
LA15099-7	Vomiting	LOINC	
LA15424-7	Diarrhea	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17392-4	Altered mental status	LOINC	
LA17393-2	Apnea	LOINC	
LA17394-0	Bradycardia	LOINC	
LA17396-5	Hypoxia	LOINC	
LA17397-3	Itching/urticaria	LOINC	
LA17489-8	Esophageal intubation-immediately	LOINC	
LA17490-6	Esophageal intubation-other	LOINC	
LA17713-1	Injury	LOINC	
LA17714-9	Tachycardia	LOINC	
LA18267-7	Tachypnea	LOINC	
LA18268-5	Portacath	LOINC	
LA7418-2	Bleeding	LOINC	
LA7434-9	Extravasation	LOINC	
LA7443-0	Hypotension	LOINC	
LA7444-8	Hypertension	LOINC	
LA9540-1	Hyperthermia	LOINC	
LA9541-9	Hypothermia	LOINC	
LA9548-4	Respiratory distress	LOINC	

Protocol

Value Set	Protocol - 2.16.840.1.113883.17.3.5.73
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17398-1	Airway	LOINC	
LA17491-4	Airway-failed	LOINC	
LA17492-2	Airway-obstruction/ foreign body	LOINC	
LA17494-8	Airway-Rapid Sequence Induction (RSI-Paralytic)	LOINC	
LA17495-5	Airway-sedation assisted (nonparalytic)	LOINC	
LA17496-3	Cardiac arrest- asystole	LOINC	
LA17497-1	Cardiac arrest- pulseless electrical activity	LOINC	
LA17498-9	Cardiac arrest- ventricular fibrillation/ pulseless ventricular tachycardia	LOINC	
LA17499-7	Cardiac arrest- hypothermia-therapeutic	LOINC	
LA17500-2	Cardiac arrest-post resuscitation care	LOINC	
LA17501-0	Environmental-altitude sickness	LOINC	
LA17502-8	Environmental-cold exposure	LOINC	
LA17503-6	Environmental-frostbite/ cold Injury	LOINC	
LA17504-4	Environmental-heat exposure/exhaustion	LOINC	
LA17505-1	Environmental-heat stroke/hyperthermia	LOINC	
LA17506-9	Environmental- hypothermia	LOINC	
LA17507-7	Exposure-airway/ inhalation irritants	LOINC	
LA17508-5	Exposure-biological/ infectious	LOINC	
LA17509-3	Exposure-blistering agents	LOINC	
LA17510-1	Exposure-carbon monoxide/smoke inhalation	LOINC	
LA17511-9	Exposure-chemicals to eye	LOINC	

Concept Code	Concept Name	Code System	Description
LA17512-7	Exposure-cyanide	LOINC	
LA17513-5	Exposure-explosive/blast injury	LOINC	
LA17514-3	Exposure-nerve agents	LOINC	
LA17515-0	Exposure-radiologic agents	LOINC	
LA17516-8	General-back pain	LOINC	
LA17517-6	General-behavioral/ patient restraint	LOINC	
LA17518-4	General-dental problems	LOINC	
LA17519-2	General-epistaxis	LOINC	
LA17520-0	General-fever	LOINC	
LA17521-8	General-individualized patient protocol	LOINC	
LA17522-6	General-indwelling medical devices/ equipment	LOINC	
LA17523-4	General-IV access	LOINC	
LA17524-2	General-medical device malfunction	LOINC	
LA17525-9	General-pain control	LOINC	
LA17526-7	General-spinal immobilization/clearance	LOINC	
LA17527-5	General-universal patient care/initial patient contact	LOINC	
LA17528-3	Injury-amputation	LOINC	
LA17529-1	Injury-bites and envenomations-land	LOINC	
LA17530-9	Injury-bites and envenomations-marine	LOINC	
LA17531-7	Injury-bleeding/ hemorrhage control	LOINC	
LA17532-5	Injury-burns-thermal	LOINC	
LA17533-3	Injury-cardiac arrest	LOINC	
LA17534-1	Injury-crush syndrome	LOINC	
LA17535-8	Injury-diving emergencies	LOINC	
LA17536-6	Injury-drowning/near drowning	LOINC	
LA17537-4	Injury-electrical injuries	LOINC	

Concept Code	Concept Name	Code System	Description
LA17538-2	Injury-extremity	LOINC	
LA17539-0	Injury-eye	LOINC	
LA17540-8	Injury-head	LOINC	
LA17541-6	Injury-impaled object	LOINC	
LA17542-4	Injury-multisystem	LOINC	
LA17543-2	Injury-spinal cord	LOINC	
LA17544-0	Medical-abdominal pain	LOINC	
LA17545-7	Medical-allergic reaction/ anaphylaxis	LOINC	
LA17546-5	Medical-altered mental status	LOINC	
LA17547-3	Medical-bradycardia	LOINC	
LA17548-1	Medical-cardiac chest pain	LOINC	
LA17549-9	Medical-diarrhea	LOINC	
LA17550-7	Medical-hyperglycemia	LOINC	
LA17551-5	Medical-hypertension	LOINC	
LA17552-3	Medical-hypoglycemia/ diabetic emergency	LOINC	
LA17553-1	Medical-hypotension/ shock (non-trauma)	LOINC	
LA17554-9	Medical-influenza-like Illness/ upper respiratory infection	LOINC	
LA17555-6	Medical-nausea/vomiting	LOINC	
LA17556-4	Medical-newborn/ neonatal resuscitation	LOINC	
LA17557-2	Medical-overdose/ poisoning/toxic ingestion	LOINC	
LA17558-0	Medical-pulmonary edema/CHF	LOINC	
LA17559-8	Medical-respiratory distress/asthma/COPD/ croup/reactive airway disease	LOINC	
LA17560-6	Medical-seizure	LOINC	
LA17561-4	Medical-ST-elevation myocardial infarction (STEMI)	LOINC	
LA17562-2	Medical-stroke/TIA	LOINC	

Concept Code	Concept Name	Code System	Description
LA17563-0	Medical-supraventricular tachycardia (including atrial fibrillation)	LOINC	
LA17564-8	Medical-syncope	LOINC	
LA17565-5	Medical-ventricular tachycardia (with pulse)	LOINC	
LA17566-3	OB/GYN-childbirth/ labor/delivery	LOINC	
LA17567-1	OB/GYN-eclampsia	LOINC	
LA17568-9	OB/GYN-gynecologic emergencies	LOINC	
LA17569-7	OB/GYN-pregnancy related emergencies	LOINC	
LA17570-5	OB/GYN-post-partum hemorrhage	LOINC	
LA18269-3	General-cardiac arrest	LOINC	
LA46-8	Other	LOINC	
LA6630-3	Not done	LOINC	

Protocol Age Category

Value Set	ProtocolAgeCategory - 2.16.840.1.113883.17.3.5.86
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17571-3	General	LOINC	
LA17572-1	Adult only	LOINC	
LA17573-9	Pediatric only	LOINC	

Provider Adverse Event Type

Value Set	ProviderAdverseEventType - 2.16.840.1.113883.17.3.5.72
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17402-1	Death-cardiac arrest	LOINC	
LA17403-9	Death-injury related	LOINC	

Concept Code	Concept Name	Code System	Description
LA17404-7	Death-other (not listed)	LOINC	
LA17405-4	Exposure-airborne respiratory/biological/ aerosolized secretions	LOINC	
LA17406-2	Exposure-body fluid contact to broken skin	LOINC	
LA17407-0	Exposure-body fluid contact with eye	LOINC	
LA17408-8	Exposure-body fluid contact with intact skin	LOINC	
LA17409-6	Exposure-body fluid contact with mucosal surface	LOINC	
LA17410-4	Exposure-needle stick with body fluid injection	LOINC	
LA17411-2	Exposure-needle stick without body fluid injection	LOINC	
LA17412-0	Exposure-toxin/chemical/ hazmat	LOINC	
LA17413-8	Injury-lifting/back/ musculoskeletal	LOINC	
LA17414-6	Injury-other (not listed)	LOINC	

Provider Response Role

Value Set	ProviderResponseRole - 2.16.840.1.113883.17.3.5.80
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA18707-2	Driver/pilot-response	LOINC	
LA18708-0	Driver/pilot-transport	LOINC	
LA18709-8	Other crew member response role	LOINC	
LA18710-6	Other patient caregiver-at scene	LOINC	
LA18711-4	Other patient caregiver-transport	LOINC	
LA18712-2	Primary patient caregiver-at scene	LOINC	
LA18713-0	Primary patient caregiver-transport	LOINC	

Provider Role

Value Set	ProviderRole - 2.16.840.1.113883.17.3.5.46
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15276-1	Student	LOINC	
LA18695-9	Critical care paramedic	LOINC	
LA18696-7	2009 advanced emergency medical technician (AEMT)	LOINC	
LA18697-5	2009 emergency medical responder (EMR)	LOINC	
LA18698-3	2009 emergency medical technician (EMT)	LOINC	
LA18699-1	2009 paramedic	LOINC	
LA18700-7	First responder	LOINC	
LA18701-5	EMT-basic	LOINC	
LA18702-3	EMT-intermediate	LOINC	
LA18703-1	EMT-paramedic	LOINC	
LA18704-9	Other healthcare professional	LOINC	
LA18705-6	Other non-healthcare professional	LOINC	
LA18706-4	Community paramedicine	LOINC	
LA18714-8	Patient/lay person	LOINC	
LA4687-5	Physician	LOINC	
LA9297-8	Respiratory therapist	LOINC	
LA9401-6	Nurse	LOINC	

Provider Role Level

Value Set	ProviderRoleLevel - 2.16.840.1.113883.17.3.5.81
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15276-1	Student	LOINC	
LA18695-9	Critical care paramedic	LOINC	

Concept Code	Concept Name	Code System	Description
LA18696-7	2009 advanced emergency medical technician (AEMT)	LOINC	
LA18697-5	2009 emergency medical responder (EMR)	LOINC	
LA18698-3	2009 emergency medical technician (EMT)	LOINC	
LA18699-1	2009 paramedic	LOINC	
LA18700-7	First responder	LOINC	
LA18701-5	EMT-basic	LOINC	
LA18702-3	EMT-intermediate	LOINC	
LA18703-1	EMT-paramedic	LOINC	
LA18704-9	Other healthcare professional	LOINC	
LA18705-6	Other non-healthcare professional	LOINC	
LA18706-4	Community paramedicine	LOINC	
LA4687-5	Physician	LOINC	
LA9297-8	Respiratory therapist	LOINC	
LA9401-6	Nurse	LOINC	

Race

Value Set	Race - 2.16.840.1.113883.1.11.14914
Code System	Race and Ethnicity - CDC - 2.16.840.1.113883.6.238

Race and Ethnicity

Value Set	Race and Ethnicity

Reason Procedure not Performed

Value Set	Reason Procedure not Performed - 2.16.840.1.113883.17.3.5.95
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15185-4	Unable to complete	LOINC	
LA18925-0	Denied by order	LOINC	
LA4216-3	Contraindicated	LOINC	

Concept Code	Concept Name	Code System	Description
LA4389-8	Refused	LOINC	

Registry Type

Value Set	RegistryType - 2.16.840.1.113883.17.3.5.74
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17057-3	Drowning	LOINC	
LA17058-1	Trauma	LOINC	
LA17059-9	Other (not listed)	LOINC	
LA17398-1	Airway	LOINC	
LA17399-9	Spinal cord injury	LOINC	
LA17400-5	STEMI/acute cardiac	LOINC	
LA17401-3	Traumatic brain injury	LOINC	
LA7318-4	Burn	LOINC	
LA9535-1	Cardiac arrest	LOINC	
LA9553-4	Stroke/CVA	LOINC	

Response Delay Type

Value Set	ResponseDelayType - 2.16.840.1.113883.17.3.5.51
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	
LA17583-8	Scene safety (not secure for EMS)	LOINC	
LA17585-3	Crowd	LOINC	
LA17586-1	Directions/unable to locate	LOINC	
LA17587-9	Distance	LOINC	
LA17588-7	HazMat	LOINC	
LA17590-3	Staff delay	LOINC	
LA17591-1	Traffic	LOINC	
LA17592-9	Vehicle crash involving this unit	LOINC	

Concept Code	Concept Name	Code System	Description
LA17593-7	Vehicle failure of this unit	LOINC	
LA17594-5	Weather	LOINC	
LA18081-2	None/no delay	LOINC	
LA18270-1	Rendezvous transport unavailable	LOINC	
LA18271-9	Route obstruction (e.g., train)	LOINC	
LA18301-4	Diversion	LOINC	

Resuscitation Attempt

Value Set	Resuscitation Attempt - 2.16.840.1.113883.17.3.5.97
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17060-7	Attempted defibrillation	LOINC	
LA17061-5	Attempted ventilation	LOINC	
LA17062-3	Initiated chest compressions	LOINC	

Resuscitation Not Attempted Reason

Value Set	ResuscitationNotAttemptedReason - 2.16.840.1.113883.17.3.5.90

Concept Code	Concept Name	Code System	Description
LA17063-1	Considered futile		
LA17064-9	DNR orders		
LA17065-6	Signs of circulation		

Resusctitation Discontinue Reason

Value Set	ResusctitationDiscontinueReason - 2.16.840.1.113883.17.3.5.62
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17078-9	DNR	LOINC	
LA17079-7	Medical control order	LOINC	

Concept Code	Concept Name	Code System	Description
LA17080-5	Obvious signs of death	LOINC	
LA17081-3	Protocol/policy requirements completed	LOINC	
LA17082-1	Return of spontaneous circulation (pulse or BP noted)	LOINC	
LA18204-0	Physically unable to perform	LOINC	

Return Of Spontaneous Circulation

Value Set	ReturnOfSpontaneousCirculation - 2.16.840.1.113883.17.3.5.15
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17075-5	Yes, prior to arrival at the ED	LOINC	
LA17076-3	Yes, at arrival at the ED	LOINC	
LA17077-1	Yes, sustained for 20 consecutive minutes	LOINC	
LA32-8	No	LOINC	

Safety Equipment Type

Value Set	SafetyEquipmentType - 2.16.840.1.113883.17.3.5.7
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA137-2	None	LOINC	
LA17375-9	Child booster seat	LOINC	
LA17376-7	Helmet worn	LOINC	
LA17377-5	Infant car seat forward facing	LOINC	
LA17378-3	Infant car seat rear facing	LOINC	
LA17379-1	Lap belt with shoulder belt	LOINC	
LA17380-9	Lap belt without shoulder belt	LOINC	
LA17382-5	Protective non-clothing gear	LOINC	

Concept Code	Concept Name	Code System	Description
LA46-8	Other	LOINC	
LA9381-0	Shoulder belt	LOINC	
LA9391-9	Eye protection	LOINC	
LA9392-7	Protective clothing	LOINC	
LA9393-5	Personal flotation device	LOINC	

Scene Delay Type

Value Set	SceneDelayType - 2.16.840.1.113883.17.3.5.52
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	
LA17585-3	Crowd	LOINC	
LA17586-1	Directions/unable to locate	LOINC	
LA17587-9	Distance	LOINC	
LA17588-7	HazMat	LOINC	
LA17590-3	Staff delay	LOINC	
LA17591-1	Traffic	LOINC	
LA17592-9	Vehicle crash involving this unit	LOINC	
LA17593-7	Vehicle failure of this unit	LOINC	
LA17594-5	Weather	LOINC	
LA17595-2	Extrication	LOINC	
LA17596-0	Safety-crew/staging	LOINC	
LA17597-8	Safety-patient	LOINC	
LA18081-2	None/no delay	LOINC	
LA18272-7	Awaiting air unit	LOINC	
LA18273-5	Awaiting ground unit	LOINC	
LA18275-0	Patient access	LOINC	
LA18276-8	Triage/multiple patients	LOINC	
LA7540-3	Language barrier	LOINC	

Service Level

Value Set	ServiceLevel - 2.16.840.1.113883.17.3.5.70
Code System	LOINC - 2.16.840.1.113883.6.1

Service Type

Value Set	ServiceType - 2.16.840.1.113883.17.3.5.79
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17150-6	Standby	LOINC	
LA18715-5	911 response (scene)	LOINC	
LA18716-3	Intercept	LOINC	
LA18717-1	Interfacility transport	LOINC	
LA18718-9	Medical transport	LOINC	
LA18719-7	Mutual aid	LOINC	
LA18720-5	Public assistance/other not listed	LOINC	

Skin Assessment

Value Set	SkinAssessment - 2.16.840.1.113883.17.3.5.25
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA15475-9	Cold	LOINC	
LA17197-7	Clammy	LOINC	
LA17198-5	Cyanotic	LOINC	
LA17199-3	Dry	LOINC	
LA17200-9	Red (erythematous)	LOINC	
LA17201-7	Flushed	LOINC	
LA17202-5	Hot	LOINC	
LA17203-3	Jaundiced	LOINC	
LA17204-1	Lividity	LOINC	
LA17205-8	Mottled	LOINC	
LA17206-6	Pale	LOINC	
LA17207-4	Warm	LOINC	

Concept Code	Concept Name	Code System	Description
LA18217-2	Diaphoretic	LOINC	
LA18218-0	Poor turgor	LOINC	
LA18219-8	Tenting	LOINC	
LA6626-1	Normal	LOINC	
LA6630-3	Not done	LOINC	

Stroke Scale

Value Set	StrokeScale - 2.16.840.1.113883.17.3.5.88
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17110-0	Cincinnati	LOINC	
LA17111-8	Los Angeles	LOINC	
LA17112-6	Miami emergency neurologic deficit (MEND)	LOINC	
LA17113-4	NIH	LOINC	
LA18300-6	Other stoke scale type	LOINC	
LA3774-2	Massachusetts	LOINC	

Stroke Scale Score

Value Set	Stroke Scale Score - 2.16.840.1.113883.17.3.5.93
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17109-2	Non-conclusive	LOINC	
LA6576-8	Positive	LOINC	
LA6577-6	Negative	LOINC	

Transport Delay Type

Value Set	TransportDelayType - 2.16.840.1.113883.17.3.5.53
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	

Concept Code	Concept Name	Code System	Description
LA17585-3	Crowd	LOINC	
LA17586-1	Directions/unable to locate	LOINC	
LA17587-9	Distance	LOINC	
LA17588-7	HazMat	LOINC	
LA17589-5	Safety	LOINC	
LA17590-3	Staff delay	LOINC	
LA17591-1	Traffic	LOINC	
LA17592-9	Vehicle crash involving this unit	LOINC	
LA17593-7	Vehicle failure of this unit	LOINC	
LA17594-5	Weather	LOINC	
LA18081-2	None/no delay	LOINC	
LA18270-1	Rendezvous transport unavailable	LOINC	
LA18271-9	Route obstruction (e.g., train)	LOINC	
LA18301-4	Diversion	LOINC	

Transport Method

Value Set	TransportMethod - 2.16.840.1.113883.17.3.5.65
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17168-8	Ground-ambulance	LOINC	
LA17169-6	Air medical-fixed wing	LOINC	
LA17170-4	Air medical-rotor craft	LOINC	
LA17171-2	Ground-ATV or rescue vehicle	LOINC	
LA17172-0	Ground-bariatric	LOINC	
LA17173-8	Ground-mass casualty bus/vehicle	LOINC	
LA17174-6	Ground-wheelchair van	LOINC	
LA17175-3	Ground-other not listed	LOINC	
LA17176-1	Water-boat	LOINC	

Transport Mode

Value Set	TransportMode - 2.16.840.1.113883.17.3.5.66
Code System	LOINC - 2.16.840.1.113883.6.1

Transportation Mode

Value Set	TransportationMode - 2.16.840.1.113883.17.3.5.66
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17177-9	Emergent (immediate response)	LOINC	
LA17177-9	Emergent (immediate response)	LOINC	
LA17178-7	Emergent downgraded to non-emergent	LOINC	
LA17178-7	Emergent downgraded to non-emergent	LOINC	
LA17179-5	Non-emergent upgraded to emergent	LOINC	
LA17179-5	Non-emergent upgraded to emergent	LOINC	
LA17180-3	Non-emergent	LOINC	
LA17180-3	Non-emergent	LOINC	

Trauma Center Criteria

Value Set	TraumaCenterCriteria - 2.16.840.1.113883.17.3.5.3
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17337-9	Glasgow Coma Score less than 14	LOINC	
LA17338-7	Respiratory rate < 10 or >29 or (<20 in infant < one year)	LOINC	
LA17339-5	Systolic blood pressure less than 90	LOINC	
LA17340-3	Amputation proximal to wrist and ankle	LOINC	

Concept Code	Concept Name	Code System	Description
LA17341-1	Crushed, degloved, or mangled extremity	LOINC	
LA17342-9	Flail chest	LOINC	
LA17343-7	Open or depressed skull fracture	LOINC	
LA17344-5	Paralysis	LOINC	
LA17345-2	Pelvic fracture(s)	LOINC	
LA17346-0	Penetrating injury to head, neck, torso, and extremities proximal to elbow and knee	LOINC	
LA17347-8	Two or more proximal long-bone fractures	LOINC	

Turn Around Delay Type

Value Set	TurnAroundDelayType - 2.16.840.1.113883.17.3.5.54
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17059-9	Other (not listed)	LOINC	
LA17587-9	Distance	LOINC	
LA17590-3	Staff delay	LOINC	
LA17592-9	Vehicle crash involving this unit	LOINC	
LA17593-7	Vehicle failure of this unit	LOINC	
LA17594-5	Weather	LOINC	
LA17598-6	Clean-up	LOINC	
LA17599-4	Decontamination	LOINC	
LA17600-0	Documentation	LOINC	
LA17601-8	ED overcrowding/ transfer of care	LOINC	
LA17602-6	Equipment/supply replenishment	LOINC	
LA17603-4	Transport unavailable	LOINC	
LA18081-2	None/no delay	LOINC	
LA18270-1	Rendezvous transport unavailable	LOINC	

Concept Code	Concept Name	Code System	Description
LA18271-9	Route obstruction (e.g., train)	LOINC	
LA7497-6	Equipment failure	LOINC	

Unit Response Role

Value Set	UnitResponseRole - 2.16.840.1.113883.17.3.5.82
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17574-7	Air transport	LOINC	
LA17575-4	Ground transport	LOINC	
LA17576-2	Non-transport (care or assistance)	LOINC	
LA17577-0	Rescue	LOINC	
LA17578-8	Supervisor (administrative only)	LOINC	

Vehicle Impact Area

Value Set	VehicleImpactArea - 2.16.840.1.113883.17.3.5.5
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA10137-0	5	LOINC	
LA10138-8	6	LOINC	
LA10139-6	7	LOINC	
LA10140-4	8	LOINC	
LA10141-2	9	LOINC	
LA13942-0	10	LOINC	
LA14557-5	11	LOINC	
LA14558-3	12	LOINC	
LA6112-2	1	LOINC	
LA6113-0	2	LOINC	
LA6114-8	3	LOINC	
LA6115-5	4	LOINC	

Vehicle Passenger Location

Value Set	VehiclePassengerLocation - 2.16.840.1.113883.17.3.5.6
Code System	LOINC - 2.16.840.1.113883.6.1

Concept Code	Concept Name	Code System	Description
LA17361-9	Front seat-left side (or motorcycle driver)	LOINC	
LA17362-7	Front seat-right side	LOINC	
LA17363-5	Front seat-middle	LOINC	
LA17364-3	Second seat-left side (or motorcycle passenger)	LOINC	
LA17365-0	Second seat-middle	LOINC	
LA17366-8	Second seat-right side	LOINC	
LA17367-6	Third row-left side (or motorcycle passenger)	LOINC	
LA17368-4	Third row-right side	LOINC	
LA17369-2	Third row-middle	LOINC	
LA17370-0	Sleeper section of cab (truck)	LOINC	
LA17371-8	Passenger in other enclosed passenger or cargo area (non-trailing unit such as a bus, etc.)	LOINC	
LA17372-6	Passenger in unenclosed passenger or cargo area (non-trailing unit such as a pickup, etc.)	LOINC	
LA17373-4	Trailing unit	LOINC	
LA17374-2	Riding on vehicle exterior (non-trailing unit)	LOINC	
LA4489-6	Unknown	LOINC	

Chapter

7

Appendices

Topics:

- *Object Identifiers for US State Departments of Motor Vehicles*
- *Nulls and Negative Action Values*
- *UCUM Unit Mapping*

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 NEMSIS null and negative action values to the appropriate values and structures in the HL7 CDA specification.

	NEMSIS Negative Action Values	Type	NullFlavor	Case	Solution
1	Unable to Complete	null	NI	observation	Observation.value = null (NI); obs.text = "unable to complete"
2	Unable to Complete	null	NI	medication	Add Boolean observation; put null value in observation.text = "unable to complete"
3	Unable to Complete	null	NI	procedure	Add Boolean observation; put null value in observation.text = "unable to complete"
4	Refused	null	ASKU (NT)	observation	Observation.value = null (ASKU)
5	Refused	neg		observation	Observation.value = null (ASKU); with a relationship to an act with this code
6	Refused	null	ASKU (NT)	medication history	Add Boolean observation; Observation.value = null (ASKU)

7	Refused	neg		medication given	negate specific medication with a relationship to an act with this code (refused)
8	Refused	null	ASKU (NT)	procedure history	Add Boolean observation; Observation.value = null (ASKU)
9	Refused	neg		procedure performed	negate specific procedure with a relationship to an act with this code
10	Exam finding not present	null	NAV	observation	Observation.value = null (NAV)
11	No known drug allergies	none		observation: negation value	q= allergy; negate; a="no known drug allergies"
12	None reported	none		observation: alcohol	q= alcohol/drug ind; a="none"
13	None reported	none		observation: history (condition)	Add Boolean observation; observation.value = "none"
14	None reported	none		medication	Add Boolean observation; observation.value = "none"
15	None reported	none		procedure	Add Boolean observation; observation.value = "none"
16	No anticoagulants or bleeding disorder	none		medication	Negate med code = 372862008 anticoagulant (Type:= substance) or 81839001 anticoagulant (Type:= pharmaceutical / biologic product)
17	No anticoagulants or bleeding disorder	none		observation	Negate observation value = 64779008 bleeding disorder (Type:= clinical finding). There is no single coherent IDC-10 code for bleeding disorder
18	Contraindication noted	neg		medication, procedure	negate specific procedure or medication with a relationship to an act with this code
19	Denied by order	neg		medication, procedure	negate specific procedure or medication with a relationship to an act with this code
20	Medication allergy	neg		medication	negate specific medication with a relationship to an act with this code
21	Medication already taken	neg		medication	negate specific medication with a relationship to an act with this code
	Null Values				
22	Not Applicable	null	NA		null: NA
23	Not Recorded	null	NI		null: NI; add detail to obs.text or proc.text
24	Not Reported	null	NI		null: NI; add detail to obs.text or proc.text

UCUM Unit Mapping

This appendix provides UCUM codes for units provided by NEMSIS specifications.

NEMSIS Question	NEMSIS Code	Description	PQ QTY	PQ Units (UCUM)	Supporting values
emedications.06	3706001	Grams	Yes	g	
emedications.06	3706003	Inches	Yes	[IN_I]	
emedications.06	3706005	International Units	Yes	[iU]	
emedications.06	3706007	Keep Vein Open (To Keep Open)	No		substanceAdministration.value.nullFlavor = QS (sufficient quantity); codeSystem = 2.16.840.1.113883.5.1008
emedications.06	3706009	Liters	Yes	L	
emedications.06	3706011	Liters Per Minute	Yes	L/min	
emedications.06	3706013	MDI Puffs	Yes	1	substanceAdministration.administrationUnitCode = PUFF; codeSystem =2.16.840.1.113883.1.11.14570
emedications.06	3706015	Micrograms	Yes	ug	
emedications.06	3706017	Micrograms per Kilogram per Minute	Yes	ug/kg/min	
emedications.06	3706019	Milliequivalents	Yes	meq	
emedications.06	3706021	Milligrams	Yes	mg	
emedications.06	3706023	Milligrams Per Kilogram Per Minute	Yes	mg/kg/min	
emedications.06	3706025	Milliliters	Yes	mL	
emedications.06	3706027	Milliliters Per Hour	Yes	mL/h	
emedications.06	3706029	Other	Yes	1	substanceAdministration.value.units = OTH; codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	3114001	cm	Yes	cm	
ehistory.14	3114003	gms	Yes	g	
ehistory.14	3114005	gtts (drops)	Yes	1	substanceAdministration.administrationUnitCode = DROP; codeSystem = 2.16.840.1.113883.1.11.14420
ehistory.14	3114007	inches	Yes	[IN_I]	

ehistory.14	3114009	iu	Yes	[iU]	
ehistory.14	3114011	kvo (keep vein open)	No		substanceAdministration.value.nullFlavor = QS (sufficient quantity); codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	3114013	l/min (fluid administration)	Yes	L/ min	
ehistory.14	3114015	liters	Yes	L	
ehistory.14	3114017	LPM (gas administration)	Yes	L/ min	
ehistory.14	3114019	mcg	Yes	ug	
ehistory.14	3114021	mcg/kg/ min	Yes	ug/ kg/ min	
ehistory.14	3114023	mcg/min	Yes	ug/ min	
ehistory.14	3114025	meq	Yes	meq	
ehistory.14	3114027	metered dose	Yes	1	substanceAdministration.value.units = OTH; codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	3114029	mg	Yes	mg	
ehistory.14	3114031	mg/kg	Yes	mg/ kg	
ehistory.14	3114033	mg/kg/min	Yes	mg/ kg/ min	
ehistory.14	3114035	mg/min	Yes	mg/ min	
ehistory.14	3114037	ml	Yes	mL	
ehistory.14	3114039	ml/hr	Yes	mL/ h	
ehistory.14	3114041	other (Not Listed)	Yes	1	substanceAdministration.value.units = OTH; codeSystem = 2.16.840.1.113883.5.1008
ehistory.14	3114043	puffs	Yes	1	substanceAdministration.administrationUnitCode = PUFF; codeSystem =2.16.840.1.113883.1.11.14570
ehistory.14	3114045	units/hr	Yes	1/h	
epatient.16	2516001	Days	Yes	d	
epatient.16	2516003	Hours	Yes	h	
epatient.16	2516005	Minutes	Yes	min	
epatient.16	2516007	Months	Yes	mo	
epatient.16	2516009	Years	Yes	a	
esituation.06	2806001	Seconds	Yes	s	

esituation.06	2806003	Minutes	Yes	min
esituation.06	2806005	Hours	Yes	h
esituation.06	2806007	Days	Yes	d
esituation.06	2806009	Weeks	Yes	wk
esituation.06	2806011	Months	Yes	mo
esituation.06	2806013	Years	Yes	a

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