HL7 Implementation Guide
for CDA ® Release 2:
Emergency Medical
Services; Patient Care Report
(Universal Realm)
HL7 Draft Standard For Trial Use
February 2013

Contents

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INTRODUCTION

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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 `templateIds` are required for conformance.

Recipient Responsibilities

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

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

Conventions Used in This Guide

Conformance Requirements

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

Template name

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

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

1. Conforms to <The template name> Template (templateId: XXXX<XX>XXX>YYY).
2. **SHALL** contain [1..1] @classCode = <AAA> <code display name> (CodeSystem: 123.456.789 <XXX> Class) **STATIC** (CONF:<number>).

3. ....

Figure 1: Template name and "conforms to" appearance

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

The following cardinality indicators may be interpreted as follows:

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

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

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

1. **SHALL** contain [1..1] component/structuredBody (CONF:4082).

    a. This component/structuredBody **SHOULD** contain [0..1] component (CONF:4130) such that it

        a. **SHALL** contain [1..1] Reporting Parameters section (templateId:2.16.840.1.113883.10.20.17.2.1) (CONF:4131).

    b. This component/structuredBody **SHALL** contain [1..1] component (CONF:4132) such that it

        a. **SHALL** contain [1..1] Patient data section - NCR (templateId:2.16.840.1.113883.10.20.17.2.5) (CONF:4133).

Figure 2: Template-based conformance statements example

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:h17-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 `2.16.840.1.113883.17.3.10.2`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.2"

2. **SHALL** conform to *Consol General Header Constraints* template (templateId: `2.16.840.1.113883.10.20.22.1.1`)

3. **SHALL** contain exactly one [1..1] **@classCode**=`"DOCCLIN"` (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass) (CONF:10000)

4. **SHALL** contain exactly one [1..1] **@moodCode**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001` HL7ActMood) (CONF:10001)

5. **SHALL** contain 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)

6. **SHALL** contain exactly one [1..1] **title** and **SHALL** equal "EMS Patient Care Report" (CONF:5254)

7. **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.*

8. **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

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** conform to *Consol Patient Role*
      b. 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

      c. 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.

      d. This patientRole Contains zero or more [0..*] **telecom**

         NEMSIS Trace: EPatient.18

      e. This patientRole **SHALL** contain exactly one [1..1] **patient**

         a. This patient **SHALL** conform to *Consol Patient*
         b. This patient **SHOULD** contain zero or one [0..1] **birthTime**

            NEMSIS Trace
            EPatient.17

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

        NEMSIS Trace: EPatient.14

    d. 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.

    e. This patient **SHALL** contain zero or one [0..1] **`raceCode`**, where the @code **SHALL** be selected from ValueSet *RaceCategory* `2.16.840.1.114222.4.11.836` **STATIC** (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.

    f. This patient **SHALL** contain zero or more [0..*] **`sDTCRaceCode`**, where the @code **SHALL** be selected from ValueSet *RaceCategory* `2.16.840.1.114222.4.11.836` **STATIC** (CONF:10034)

        NEMSIS Trace: EPatient.14

    g. 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. **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`)

11. **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`)

12. **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`)

13. **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`)

14. **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`)

15. **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`)

16. **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)

17. **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)

18. **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)

19. **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)

20. **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)

21. **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)

22. **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)

23. **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

24. **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)

25. **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)

26. **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)

27. **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)

28. **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)

29. **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)

30. **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)

31. **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)

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

    a. This author **SHALL** conform to *Consol Author*

    b. This author **SHALL** contain at least one [1..*] **assignedAuthor**

        a. Such assignedAuthors **SHALL** conform to *Consol Assigned Author*

        b. Such assignedAuthors **SHALL** contain zero or one [0..1] **id** (CONF:10039)

        NEMSIS Trace: EOther.08 for human author

        c. Such assignedAuthors **SHALL** contain zero or one [0..1] **addr** (CONF:10040)

        Required for human author, not for device
        NEMSIS Trace
        DPersonnel.04. . . / AssignedAuthor/addr/streetAddressLine
        DPersonnel.05 . . . / AssignedAuthor/addr/city
        DPersonnel.06. . . / AssignedAuthor/addr/state
        DPersonnel.07. . . / AssignedAuthor/addr/postalCode
        DPersonnel.08. . . / AssignedAuthor/addr/country

        d. Such assignedAuthors **SHALL** contain zero or one [0..1] **telecom** (CONF:10041)

        Required for human author, not for device
        NEMSIS Trace: DPersonnel.09

        e. Such assignedAuthors **SHALL** contain zero or more [0..*] **assignedPerson**

            a. Such assignedPersons **SHALL** conform to *Consol Person*

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

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

        f. Such assignedAuthors **SHALL** contain exactly one [1..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 ("^")

33. **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

34. 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
                DPersonnel.04 . . . / assignedentity /addr/streetAddressLine
                DPersonnel.05. . . / assignedentity /addr/city
                DPersonnel.06 . . . / assignedentity /addr/state
                DPersonnel.07 . . . / assignedentity /addr/postalCode
                DPersonnel.08 . . . / assignedentity /addr/country

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

                NEMSIS Trace: DPersonnel.09

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

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

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

35. **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

36. **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

37. **SHALL** contain exactly one [1..1] **confidentialityCode**, where the @code **SHALL** be selected from ValueSet HL7 BasicConfidentialityKind 2.16.840.1.113883.1.11.16926 **STATIC** (CONF:5259)

    • *Default value is "N" (normal)*

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" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <typeId root="2.16.840.1.113883.1.3"/>
  <id root="MDHT" extension="1546414786"/>
  <code code="1784653153"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="1300576553"/>
  <setId root="MDHT" extension="fae78101-1bf1-4ea5-a135-51d82f8c8776"/>
  <versionNumber value="1"/>
  <recordTarget>
    <patientRole>
      <id root="MDHT" extension="1267824431"/>
      <addr/>
      <telecom/>
      <patient>
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
 codeSystemName="AdministrativeGenderCode"/>
      </patient>
    </patientRole>
  </recordTarget>
```

```
<author>
  <time/>
  <assignedAuthor>
    <id root="MDHT" extension="1763933579"/>
    <code code="1699318669"/>
    <addr/>
    <telecom/>
    <assignedPerson/>
    <assignedAuthoringDevice/>
  </assignedAuthor>
</author>
<custodian>
  <assignedCustodian>
    <representedCustodianOrganization/>
  </assignedCustodian>
</custodian>
<participant typeCode="DST">
  <associatedEntity>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
    <addr/>
    <scopingOrganization/>
  </associatedEntity>
</participant>
<documentationOf>
  <serviceEvent>
    <id root="MDHT" extension="1960443674"/>
    <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
    <performer>
      <functionCode codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
    </performer>
  </serviceEvent>
</documentationOf>
<relatedDocument typeCode="RPLC">
  <parentDocument>
    <id root="MDHT" extension="908720695"/>
  </parentDocument>
</relatedDocument>
<componentOf typeCode="COMP">
  <encompassingEncounter>
    <effectiveTime>
      <low value="2013"/>
      <high value="2013"/>
    </effectiveTime>
    <location/>
  </encompassingEncounter>
</componentOf>
<component>
  <structuredBody>
    <component>
      <section>
        <typeId root="2.16.840.1.113883.1.3"/>
        <id root="MDHT" extension="228237951"/>
        <code code="145002812"/>
        <title>TEXT FOR TITLE</title>
        <entry>
          <observation>
            <code code="67556-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Billing condition"/>
          </observation>
        </entry>
        <entry>
          <observation>
```

```xml
                <code code="69464-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS level of service"/>
              </observation>
            </entry>
          </section>
        </component>
        <component>
          <section>
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="617376382"/>
            <code code="1516017935"/>
            <title>TEXT FOR TITLE</title>
            <entry>
              <observation>
                <code code="69543-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury Cause"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67494-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury Mechanism"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67495-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Trauma Center Critieria"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67496-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Other injury risk factors"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67497-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Location of impact on the vehicle"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67498-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Location of patient in vehicle"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67499-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Safety equipment"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67500-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Airbag deployment"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67501-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Height of fall"/>
```

```
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="69463-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Suspected intentional or unintentional
disaster"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1242162253"/>
          <code code="645187115"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="67791-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Currently on medication"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="69749-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Patient on anticoagulants"/>
            </observation>
          </entry>
          <entry>
            <substanceAdministration classCode="SBADM">
              <routeCode codeSystem="2.16.840.1.113883.3.26.1.1.1"
codeSystemName="FDA Route of Administration"/>
            </substanceAdministration>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="810637136"/>
          <code code="249710570"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
codeSystemName="HL7ActCode" displayName="ASSERTION"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1109330507"/>
          <code code="1051496461"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <templateId root="null"/>
              <code code="67516-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Advanced directive"/>
            </observation>
          </entry>
```

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```
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="2122069172"/>
          <code code="140410866"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="67850-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Drug allergy"/>
            </observation>
          </entry>
          <entry>
            <organizer/>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1823130225"/>
          <code code="1615108051"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="68487-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS History of Condition"/>
            </observation>
          </entry>
          <entry>
            <organizer/>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="910048015"/>
          <code code="2000131542"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="67669-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Alcohol - drug use"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="950795184"/>
          <code code="1468163973"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <organizer/>
          </entry>
          <entry>
            <observation>
              <code code="67471-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Patient Pregnancy"/>
            </observation>
```

```xml
            </entry>
            <entry>
              <observation>
                <code code="67517-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Last oral intake"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="30525-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Patient age"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67523-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Contraindications to thrombolytic use"/
>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67523-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Barriers to patient care"/>
              </observation>
            </entry>
          </section>
        </component>
        <component>
          <section>
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="108828917"/>
            <code code="348677545"/>
            <title>TEXT FOR TITLE</title>
            <entry>
              <substanceAdministration classCode="SBADM">
                <routeCode codeSystem="2.16.840.1.113883.3.26.1.1.1"
codeSystemName="FDA Route of Administration"/>
                <approachSiteCode code="15562006"
codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"
displayName="structure of respiratory region of nose"/>
              </substanceAdministration>
            </entry>
          </section>
        </component>
        <component>
          <section>
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="173053856"/>
            <code code="1561453995"/>
            <title>TEXT FOR TITLE</title>
            <entry>
              <procedure>
                <templateId root="null"/>
                <statusCode code="Aborted"/>
                <approachSiteCode codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
              </procedure>
            </entry>
          </section>
        </component>
        <component>
          <section>
            <typeId root="2.16.840.1.113883.1.3"/>
```

```xml
                <id root="MDHT" extension="222071278"/>
                <code code="473281112"/>
                <title>TEXT FOR TITLE</title>
            </section>
        </component>
        <component>
            <section>
                <typeId root="2.16.840.1.113883.1.3"/>
                <id root="MDHT" extension="936134797"/>
                <code code="1046129754"/>
                <title>TEXT FOR TITLE</title>
                <entry>
                    <observation>
                        <code code="67481-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Name of first unit on scene"/>
                    </observation>
                </entry>
                <entry>
                    <observation>
                        <code code="67490-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Mass Casualty Incident Indicator"/>
                    </observation>
                </entry>
            </section>
        </component>
        <component>
            <section>
                <typeId root="2.16.840.1.113883.1.3"/>
                <id root="MDHT" extension="413494347"/>
                <code code="219874588"/>
                <title>TEXT FOR TITLE</title>
                <entry>
                    <observation>
                        <code code="67488-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMDPerformed"/>
                    </observation>
                </entry>
                <entry>
                    <observation>
                        <code code="67570-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Complaint reported by dispatch"/>
                    </observation>
                </entry>
            </section>
        </component>
        <component>
            <section>
                <typeId root="2.16.840.1.113883.1.3"/>
                <id root="MDHT" extension="12433087"/>
                <code code="2048655629"/>
                <title>TEXT FOR TITLE</title>
                <entry>
                    <observation>
                        <code code="67547-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS Number of patients"/>
                    </observation>
                </entry>
                <entry>
                    <observation>
                        <code code="67548-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS incident disposition"/>
                    </observation>
                </entry>
                <entry>
```

```
            <observation>
              <code code="67550-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS transport mode"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="67552-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS reason for choosing destination"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="69462-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS prearrival activation performed"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="67551-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS patient condition change at
destination"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1765507783"/>
          <code code="471646064"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="67554-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS personnel exposed or injured"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="67555-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS personnel adverse event type"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="492881989"/>
          <code code="777093173"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="67537-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS protocol"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="67553-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS candidate patient registry"/>
            </observation>
          </entry>
```

```
          </section>
        </component>
        <component>
          <section>
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="681640496"/>
            <code code="279859201"/>
            <title>TEXT FOR TITLE</title>
            <entry>
              <organizer/>
            </entry>
            <entry>
              <organizer/>
            </entry>
            <entry>
              <organizer/>
            </entry>
            <entry>
              <observation>
                <code code="67482-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Response mode to scene"/>
              </observation>
            </entry>
          </section>
        </component>
        <component>
          <section>
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="269410619"/>
            <code code="23405522"/>
            <title>TEXT FOR TITLE</title>
            <entry>
              <observation>
                <code code="10154-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS complaint"/>
                <targetSiteCode codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="69467-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Possible injury"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67774-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS Primary Symptom"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Other symptoms"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <code code="67492-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Provider Primary Impression"/>
              </observation>
            </entry>
            <entry>
```

```xml
            <observation>
              <code code="69542-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Provider Secondary Impressions"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <code code="67493-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Initial Patient Acuity"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="681843947"/>
          <code code="412408855"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="69470-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Dispatch notified time"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1732735436"/>
          <code code="1100771146"/>
          <title>TEXT FOR TITLE</title>
          <entry>
            <observation>
              <code code="67518-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Obtained prior to units EMS care"/>
            </observation>
            <organizer/>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

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Chapter

3

SECTION TEMPLATES

Topics:

- *EMS Advance Directives Section*
- *EMS Allergies And Adverse Reactions Section*
- *EMS Billing Section*
- *EMS Cardiac Arrest Event Section*
- *EMS Current Medication Section*
- *EMS Dispatch Section*
- *EMS Disposition Section*
- *EMS Injury Incident Description Section*
- *EMS Medications Administered Section*
- *EMS Past Medical History Section*
- *EMS Patient Care Narrative Section*
- *EMS Personnel Adverse Event Section*
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- *EMS Response Section*
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EMS Advance Directives Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.12`]

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

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.12"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Advance Directives Section"

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

5. Contains zero or more [0..*] **entry**

    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 zero or more [0..*] **observation**

        a. Such observations **SHALL** contain exactly one [1..1] **code/@code**="`67516-5`" *Advanced directive* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10194)

            NEMSIS Trace: EHistory.05

        b. Such observations **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**

EMS Advance Directives Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1140179560"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <templateId root="null"/>
      <code code="67516-5" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Advanced directive"/>
      <value xsi:type="CD" code="556879911"/>
    </observation>
  </entry>
</section>
```

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] templateId ( ) such that it

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.13"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Allergies and Adverse Reactions"

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

5. **SHALL** contain exactly one [1..1] **entry** (CONF:10198)

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    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**`="67794-8"` *Existence of drug allergy* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10203)

        b. This observation **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.

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

        a. This observation **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. This observation **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. This observation **SHALL** contain 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

6. **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)

            Required if Existence is True

            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)

EMS Allergies And Adverse Reactions Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="293951053"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67850-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Drug allergy"/>
      <participant/>
```

```
        </observation>
      </entry>
      <entry>
        <organizer>
          <statusCode code="completed"/>
        </organizer>
      </entry>
  </section>
```

EMS Billing Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.5`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.5"
2. **SHALL** contain exactly one [1..1] **code/@code**="`67659-3`" *EMS Billing Section* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10080)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Billing Section"
4. **SHALL** contain exactly one [1..1] **text**
5. **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 (CodeSystem: `2.16.840.1.113883.6.90 ICD-10 CM`)

         NEMSIS Trace: EPayment.51
6. **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)

EMS Billing Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1484485317"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67556-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Billing condition"/>
      <value xsi:type="CD" code="124462000"/>
    </observation>
  </entry>
```

```
  <entry>
    <observation>
      <code code="69464-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS level of service"/>
      <value xsi:type="CD" code="1305690095"/>
    </observation>
  </entry>
</section>
```

EMS Cardiac Arrest Event Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.14`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.14"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Cardiac Arrest Event"

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

5. **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)

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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)

NEMSIS Trace: eArrest.06

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)

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     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

6. 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)

EMS Cardiac Arrest Event Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1701482742"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
```

```
        <code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"
  codeSystemName="HL7ActCode" displayName="ASSERTION"/>
        <effectiveTime>
          <low value="2013"/>
          <high value="2013"/>
        </effectiveTime>
        <informant typeCode="INF"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
        <entryRelationship typeCode="SUBJ" inversionInd="true"/>
      </observation>
    </entry>
 </section>
```

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] templateId ( ) such that it

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.15"
2. **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)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Current Medications Section" (CONF:10219)
4. **SHALL** contain exactly one [1..1] **text**
5. **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.
6. **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)

      NEMSIS Trace: If EHistory.12 has the value "No anticoagulants," the value is False
7. **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 *MedicationAdministrationRoute* 2.16.840.1.113883.17.3.5.43 **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)

            NEMSIS Trace: EHistory.12
            Note: all of RxNorm is legal in this field, but NEMSIS provides a selected list at http://www.nemsis.org/v3/resources.html

EMS Current Medication Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1622667930"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67791-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Currently on medication"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="69749-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Patient on anticoagulants"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
  <entry>
    <substanceAdministration>
      <routeCode codeSystem="2.16.840.1.113883.3.26.1.1.1"
codeSystemName="FDA Route of Administration"/>
```

```
            <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] templateId ( ) such that it

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.2"
2. **SHALL** contain exactly one [1..1] **code/@code**="`67660-1`" *EMS Dispatch Section* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:10556)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Dispatch" (CONF:10558)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10557)
5. **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)

        NEMSIS Trace: EDispatch.02
6. **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)

EMS Dispatch Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1092460047"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67488-7" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMDPerformed"/>
      <value xsi:type="CD" code="515563383"/>
    </observation>
  </entry>
  <entry>
    <observation>
```

```
        <code code="67570-2" codeSystem="2.16.840.1.113883.6.1"
  codeSystemName="LOINC" displayName="Complaint reported by dispatch"/>
        <value xsi:type="CD" code="58057246"/>
      </observation>
    </entry>
 </section>
```

EMS Disposition Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.4`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.4"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Disposition" (CONF:10654)

4. **SHALL** contain exactly one [1..1] **text** (CONF:10653)

5. **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)

      NEMSIS Trace: eScene.06

6. **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)

      NEMSIS Trace: EDisposition.12

7. **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 **STATIC** (CONF:10676)

      NEMSIS Trace: EDisposition.17

8. **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`)

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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)

    NEMSIS Trace: EDisposition.20

9. **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)

        NEMSIS Trace: EDisposition.24

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

        NEMSIS Trace: EDisposition.25
        Required if value is TRUE

10. **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)

        NEMSIS Trace: EDisposition.19

11. **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)

    NEMSIS Trace: EDisposition.16

EMS Disposition Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1339410950"/>
  <code code="1659826780"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67547-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS Number of patients"/>
      <value xsi:type="INT" value="1"/>
```

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```
        </observation>
      </entry>
      <entry>
        <observation>
          <code code="67548-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS incident disposition"/>
          <value xsi:type="CD" code="1300704590"/>
        </observation>
      </entry>
      <entry>
        <observation>
          <code code="67550-4" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS transport mode"/>
          <value xsi:type="CD" code="1553167553"/>
        </observation>
      </entry>
      <entry>
        <observation>
          <code code="67552-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS reason for choosing destination"/>
          <value xsi:type="CD" code="238530634"/>
        </observation>
      </entry>
      <entry>
        <observation>
          <code code="69462-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS prearrival activation performed"/>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
          <value xsi:type="BL"/>
        </observation>
      </entry>
      <entry>
        <observation>
          <code code="67551-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS patient condition change at
 destination"/>
          <value xsi:type="CD" code="41931341"/>
        </observation>
      </entry>
 </section>
```

EMS Injury Incident Description Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.17`]

Known Subclasses:

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.17"
2. **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)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "Injury Incident Description Section"
4. **SHALL** contain exactly one [1..1] **text**
5. **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)

        NEMSIS Trace: EInjury.01
        Causes are in ICD-10 chapter XX

6. **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)

7. **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)

        NEMSIS Trace: EInjury.03

8. **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)

        NEMSIS Trace: EInjury.04

9. **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)

        NEMSIS Trace: EInjury.05

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

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   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)

      NEMSIS Trace: EInjury.06

11. 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)

      NEMSIS Trace: EInjury.07

12. 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)

      NEMSIS Trace: EInjury.08

13. 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

      NEMSIS Trace: EInjury.09

14. 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)

NEMSIS Trace: EOther.07

EMS Injury Incident Description Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="913256034"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="69543-7" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Injury Cause"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67494-5" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Injury Mechanism"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67495-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Trauma Center Critieria"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67496-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Other injury risk factors"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67497-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Location of impact on the vehicle"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67498-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Location of patient in vehicle"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67499-4" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Safety equipment"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67500-9" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Airbag deployment"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67501-7" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Height of fall"/>
      <value xsi:type="PQ"/>
```

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```
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="69463-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Suspected intentional or unintentional
disaster"/>
    </observation>
  </entry>
</section>
```

EMS Medications Administered Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.18`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.18"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "Medications Administered Section" (CONF:10442)

4. **SHALL** contain exactly one [1..1] **text** (CONF:10441)

5. **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 **MAY** contain zero or more [0..*] **substanceAdministration** (CONF:10444)

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

      b. Such substanceAdministrations **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. Such substanceAdministrations **SHALL** contain exactly one [1..1] **doseQuantity** (CONF:10446)

         NEMSIS Trace: EMedications.05, 06

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

         NEMSIS Trace: EMedications.01

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

         NEMSIS Trace: EMedications.04

         See appendix for mapping NEMSIS values to FDA values and for postcoordination of device information.

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

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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)

    EMedications.03

g. Such substanceAdministrations **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
            Note: all of RxNorm is legal in this field, but NEMSIS provides a selected list at http:// www.nemsis.org/v3/resources.html

h. Such substanceAdministrations **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)

        NEMSIS Trace: EMedications.07

i. Such substanceAdministrations **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)

        NEMSIS Trace: EMedications.08

j. Such substanceAdministrations **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

NEMSIS Trace: EMedications.02

k. Such substanceAdministrations **MAY** contain zero or one [0..1] **performer** (CONF:10456)

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

- **a.** This performer **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:10481)

  - **a.** This assignedEntity **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 assignedEntity **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. Such substanceAdministrations **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)

    NEMSIS Trace: EMedications.11

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

m. Such substanceAdministrations **MAY** contain zero or one [0..1] **approachSiteCode/ @code**="15562006" *structure of respiratory region of nose* (CodeSystem: 2.16.840.1.113883.6.96 SNOMEDCT)

If route is "endotracheal," to be used to specify nasal approach for "nasotracheal tube"

n. Such substanceAdministrations **MAY** contain zero or one [0..1] **participant**

- **a.** This participant **SHALL** contain exactly one [1..1] **@typeCode**="DEV"
- **b.** This participant **SHALL** contain zero or one [0..1] **participantRole**

  - **a.** This participantRole **SHALL** contain zero or one [0..1] **@classCode**="MANU"
  - **b.** This participantRole Contains zero or one [0..1] **playingDevice**

    - **a.** This playingDevice **SHALL** contain zero or one [0..1] **code**, where the @code **SHALL** be selected from

      For NEMSIS codes that imply devices:
      @ value = "39849001" @codeSystem = "2.16.840.1.113883.6.5" @displayName="nasal oxygen cannula"
      @ value = "427591007" @codeSystem = "2.16.840.1.113883.6.5" @displayName="nonrebreather oxygen mask"
      @ value = "425926003" @codeSystem = "2.16.840.1.113883.6.5" @displayName="partial rebreather oxygen mask"

@ value = "428285009" @codeSystem = "2.16.840.1.113883.6.5" @displayName="Venturi mask"

EMS Medications Administered Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="870085680"/>
  <code code="987154407"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <substanceAdministration classCode="SBADM">
      <effectiveTime value="20130502"/>
      <routeCode codeSystem="2.16.840.1.113883.3.26.1.1.1"
 codeSystemName="FDA Route of Administration"/>
      <approachSiteCode code="15562006" codeSystem="2.16.840.1.113883.6.96"
 codeSystemName="SNOMEDCT" displayName="structure of respiratory region of
 nose"/>
      <doseQuantity/>
      <consumable/>
      <performer/>
      <participant typeCode="DEV"/>
      <entryRelationship typeCode="RSON" inversionInd="true"/>
      <entryRelationship/>
      <entryRelationship/>
      <entryRelationship/>
      <entryRelationship/>
    </substanceAdministration>
  </entry>
</section>
```

EMS Past Medical History Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.19`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.19"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Past Medical History" (CONF:10060)

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

5. **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 **SHALL** contain exactly one [1..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.

   c. This entry **MAY** contain zero or more [0..*] **observation**

      a. Such observations **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. Such observations **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)

      NEMSIS Trace: EHistory. 08
      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.

6. **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 exactly one [1..1] **organizer**

      a. This organizer **SHALL** contain zero or one [0..1] **component** (CONF:10073)

        a. This component **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)

          NEMSIS Trace: EHistory. 08

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

        a. Such components **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)

          NEMSIS Trace: EHistory. 08

EMS Past Medical History Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1888055134"/>
  <code code="668211223"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="68487-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS History of Condition"/>
      <value xsi:type="CD" code="1140936396"/>
    </observation>
  </entry>
  <entry>
    <organizer>
      <statusCode code="completed"/>
      <component/>
      <component/>
    </organizer>
  </entry>
</section>
```

EMS Patient Care Narrative Section

[Section: templateId 2.16.840.1.113883.17.3.10.1.1]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.1"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Patient Care Report Narrative" (CONF:10554)

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

   • *NEMSIS Trace: ENarrative.01*

EMS Patient Care Narrative Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1889327525"/>
  <code code="1814434950"/>
  <title>TEXT FOR TITLE</title>
  <text/>
</section>
```

EMS Personnel Adverse Event Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.6`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.6"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "Exposures or Injuries of EMS Personnel" (CONF:10700)

4. **SHALL** contain exactly one [1..1] **text** (CONF:10699)

5. **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)

      NEMSIS Trace: EOther.05

6. **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)

      NEMSIS Trace: EOther.06

EMS Personnel Adverse Event Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1297456935"/>
  <code code="195089681"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67554-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS personnel exposed or injured"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67555-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS personnel adverse event type"/>
      <value xsi:type="CD" code="568895825"/>
    </observation>
  </entry>
</section>
```

EMS Physical Assessment Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.20`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.20"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Physical Assessment Section" (CONF:10339)

4. **SHALL** contain exactly one [1..1] **text** (CONF:10338)

5. **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

6. **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)

      NEMSIS Trace: EHistory.18

7. **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)

        NEMSIS Trace: EHistory.19

8. **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)

        NEMSIS Trace: EPatient.15, 16
        UCUM units SHOULD be 'a'

9. **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)

        NEMSIS Trace: EVitals.31

10. **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)

        NEMSIS Trace: EHistory.01

EMS Physical Assessment Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1683153515"/>
  <code code="562645542"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <organizer>
      <statusCode code="completed"/>
```

```
        <effectiveTime>
          <low value="2013"/>
          <high value="2013"/>
        </effectiveTime>
      </organizer>
   </entry>
   <entry>
      <observation>
        <code code="67471-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Patient Pregnancy"/>
        <value xsi:type="CD" code="1211517441"/>
      </observation>
   </entry>
   <entry>
      <observation>
        <code code="67517-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Last oral intake"/>
        <value xsi:type="TS"/>
      </observation>
   </entry>
   <entry>
      <observation>
        <code code="30525-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Patient age"/>
        <value xsi:type="PQ"/>
      </observation>
   </entry>
   <entry>
      <observation>
        <code code="67523-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Contraindications to thrombolytic use"/
 >
      </observation>
   </entry>
   <entry>
      <observation>
        <code code="67523-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Barriers to patient care"/>
        <value xsi:type="CD" code="1560432995"/>
      </observation>
   </entry>
 </section>
```

EMS Procedures Performed Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.21`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.21"
2. **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)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Procedures Performed" (CONF:10492)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10491)
5. **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)

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a. Such procedures **MAY** contain zero or one [0..1] **@negationInd**

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

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

NEMSIS Trace: EProcedures.03
If EArrest.10 (therapeutic hypothermia) = true, include here as ICD-10 PCS "6A4"
For EArrest.03, use either ICD-10 procedure codes listed below or more granular 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; procedure negation = True;
ReasonNotAttempted required
3003009 Not Attempted-DNR Orders = Assistance 5A0; procedure negation = True; ReasonNotAttempted
required
3003011 Not Attempted-Signs of Circulation = Assistance 5A0; procedure negation = True;
ReasonNotAttempted required

c. 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

d. 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)

        NEMSIS Trace: EArrest.16

e. 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

f. 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)

g. 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)

        NEMSIS Trace: EProcedures.02

h. 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

    NEMSIS Trace: EProcedures.05

i. 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)

        NEMSIS Trace: EProcedures.06

j. 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)

        NEMSIS Trace: EProcedures.07

k. 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)

        NEMSIS Trace: EProcedures.08

l. Such procedures **SHALL** contain at least one [1..*] **performer** (CONF:10508)

    a. Such performers **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

m. 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**="71576-3" (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)

      NEMSIS Trace: EAirway.04

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

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

     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.03

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

n. Such procedures **MAY** contain zero or one [0..1] **eMSReasonProcedureNotAttemptedRelationship**

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

        a. This observation **SHALL** contain exactly one [1..1] **code/@code**="67504-1" *Reason Not Attempted* (CodeSystem: `2.16.840.1.113883.6.1` LOINC)

        b. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *Reason Procedure not Performed Superset* `2.16.840.1.113883.17.3.5.100` **STATIC**

EMS Procedures Performed Section example

```xml
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="922102309"/>
  <code code="538167173"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <procedure>
      <templateId root="null"/>
      <code code="663830862"/>
      <statusCode code="Aborted"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <approachSiteCode codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
      <performer/>
      <entryRelationship/>
      <entryRelationship/>
      <entryRelationship/>
      <entryRelationship/>
      <entryRelationship/>
```

```
        <entryRelationship/>
        <entryRelationship/>
      </procedure>
    </entry>
  </section>
```

EMS Protocol Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.7`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.7"

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

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Protocol Section"

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

5. **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)

         NEMSIS Trace: EProtocols.01

      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)

               NEMSIS Trace: EProtocols.02

6. **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)

         NEMSIS Trace: EOther.02

EMS Protocol Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1133876282"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67537-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS protocol"/>
      <value xsi:type="CD" code="1937253507"/>
      <entryRelationship/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67553-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS candidate patient registry"/>
      <value xsi:type="CD" code="989108329"/>
    </observation>
  </entry>
</section>
```

EMS Response Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.3`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.3"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Response" (CONF:10575)

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

5. **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

            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)

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      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)

        NEMSIS Trace: EResponse.09

  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)

        NEMSIS Trace: EResponse.10

  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)

        NEMSIS Trace: EResponse.11

  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)

        NEMSIS Trace: EResponse.12

6. 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)

          NEMSIS Trace: EResponse.16

    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)

NEMSIS Trace: EResponse.17
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)

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

7. 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)

                NEMSIS Trace: EResponse.19
                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)

                NEMSIS Trace: EResponse.20
                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)

                NEMSIS Trace: EResponse.21
                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)

NEMSIS Trace: EResponse.22
UCUM units SHOULD be "[mi_i]"

8. **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)

        NEMSIS Trace: EResponse.23

EMS Response Section example

```xml
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="571785630"/>
  <code code="626217426"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <organizer>
      <statusCode code="completed"/>
      <component/>
      <component/>
      <component/>
      <component/>
      <component/>
    </organizer>
  </entry>
  <entry>
    <organizer>
      <statusCode code="completed"/>
      <component>
        <templateId root="null"/>
      </component>
      <component>
        <templateId root="null"/>
      </component>
      <component>
        <templateId root="null"/>
      </component>
    </organizer>
  </entry>
  <entry>
    <organizer>
      <statusCode code="completed"/>
      <component/>
      <component/>
      <component/>
      <component/>
    </organizer>
  </entry>
  <entry>
    <observation>
      <code code="67482-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Response mode to scene"/>
```

```
        <value xsi:type="CD" code="468335156"/>
      </observation>
    </entry>
  </section>
```

EMS Scene Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.8`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.8"

2. **SHALL** contain exactly one [1..1] **code/@code**="`67665-0`" *EMS Scene Section* (CodeSystem: 2.16.840.1.113883.6.1 `LOINC`) (CONF:10732)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Scene" (CONF:10734)

4. **SHALL** contain exactly one [1..1] **text** (CONF:10733)

5. **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**="`67481-2`" *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)

      NEMSIS Trace: EScene.01

   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)

      NEMSIS Trace: EScene.02

6. **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)

      NEMSIS Trace: EScene.06

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

      a. This observation **SHALL** contain exactly one [1..1] **code** (CONF:10753)**/@code**="`67490-3`" *Mass Casualty Incident Indicator* (CodeSystem: 2.16.840.1.113883.6.1 `LOINC`)

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

      NEMSIS Trace: EScene.07

EMS Scene Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1754857011"/>
```

```
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67481-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Name of first unit on scene"/>
      <value xsi:type="ST">TEXT FOR VALUE</value>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67490-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Mass Casualty Incident Indicator"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
</section>
```

EMS Situation Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.9`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.9"
2. **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)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Situation Section" (CONF:10758)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10757)
5. **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)

         NEMSIS Trace: ESituation.04
      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)

               NEMSIS Trace: ESituation.05, 06
               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)**/@code**="`72114-2`" *Complaint type* (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), where the @code **SHALL** be selected from ValueSet *Complaint Type* `2.16.840.1.113883.17.3.5.94` **STATIC**

NEMSIS Trace: ESituation.03

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)

      NEMSIS Trace: ESituation.08

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

g. Such observations **SHALL** contain zero or one [0..1] **effectiveTime**

effectiveTime.low = NEMSIS Trace: ESituation.01

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)

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), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.90 ICD-10 CM`) (CONF:10804)

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)

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), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.90 ICD-10 CM`) (CONF:10799)

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), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.90 ICD-10 CM`) (CONF:10814)

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)

EMS Situation Section example

```xml
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="564598012"/>
  <code code="1184056816"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="10154-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="EMS complaint"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <value xsi:type="ST">TEXT FOR VALUE</value>
      <targetSiteCode codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
      <entryRelationship/>
      <entryRelationship/>
      <entryRelationship/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="69467-9" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Possible injury"/>
      <value xsi:type="BL"/>
    </observation>
  </entry>
```

```
  <entry>
    <observation>
      <code code="67774-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="EMS Primary Symptom"/>
      <value xsi:type="CD" code="2060588415"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67776-5" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Other symptoms"/>
      <value xsi:type="CD" code="414983007"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67492-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Provider Primary Impression"/>
      <value xsi:type="CD" code="1878442440"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="69542-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Provider Secondary Impressions"/>
      <value xsi:type="CD" code="263829287"/>
    </observation>
  </entry>
  <entry>
    <observation>
      <code code="67493-7" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Initial Patient Acuity"/>
      <value xsi:type="CD" code="379281667"/>
    </observation>
  </entry>
</section>
```

EMS Social History Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.22`]

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.22"

2. **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)

3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Social History" (CONF:10243)

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

5. **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

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

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

Required if Existence of Drug Use Indicator (10246) is TRUE

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)

NEMSIS Trace: EHistory.17, proper values

Required if Existence of Drug Use Indicator (10246) is TRUE

EMS Social History Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1418056895"/>
  <code code="792945524"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67669-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Alcohol - drug use"/>
    </observation>
  </entry>
</section>
```

EMS Times Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.10`]

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

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.10"
2. **SHALL** contain exactly one [1..1] **code/@code**="`67667-6`" *EMS Times Section* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10820)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Times" (CONF:10822)
4. **SHALL** contain exactly one [1..1] **text** (CONF:10821)
5. **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)

        NEMSIS Trace: ETimes.01
    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)

NEMSIS Trace: ETimes.03
This is the value represented in the header for the encompassing encounter

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)

NEMSIS Trace: ETimes.05

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)

NEMSIS Trace: ETimes.06

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)

NEMSIS Trace: ETimes.07

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)

NEMSIS Trace: ETimes.09

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)

NEMSIS Trace: ETimes.11

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)

NEMSIS Trace: ETimes.13

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)

NEMSIS Trace: ETimes.02

EMS Times Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="494935565"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
```

```
    <observation>
      <code code="69470-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Dispatch notified time"/>
      <value xsi:type="TS"/>
    </observation>
  </entry>
</section>
```

EMS Vital Signs Section

[Section: templateId `2.16.840.1.113883.17.3.10.1.23`]

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

    a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.17.3.10.1.23"
2. **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)
3. **SHALL** contain exactly one [1..1] **title** and **SHOULD** equal "EMS Vital Signs" (CONF:10254)
4. **SHALL** contain exactly one [1..1] **text**
5. **SHALL** contain at least one [1..*] **entry** (CONF:10255)

    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] **organizer** (CONF:10256)

        a. This organizer **SHALL** conform to *Consol Vital Signs Organizer* template (templateId: `2.16.840.1.113883.10.20.22.4.26`)
        b. This organizer **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:10257)

            NEMSIS Trace: EVitals.01
        c. This organizer **SHOULD** contain zero or one [0..1] **component**

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

                a. This observation **SHALL** conform to *Consol Vital Sign Observation* template (templateId: `2.16.840.1.113883.10.20.22.4.27`)
                b. This observation **SHALL** contain exactly one [1..1] **code/@code**="`8480-6`" *Intravascular systolic* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10280)
                c. This observation **SHALL** contain exactly one [1..1] **value** (CONF:10281)

                    NEMSIS Trace: EVitals.06
                    UCUM units SHOULD be "mm[Hg]".
                d. This observation **MAY** contain zero or one [0..1] **effectiveTime** (CONF:7304)

                    NEMSIS Trace: EVitals.01
        d. This organizer **SHOULD** contain zero or one [0..1] **component**

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

                a. This observation **SHALL** conform to *Consol Vital Sign Observation* template (templateId: `2.16.840.1.113883.10.20.22.4.27`)
                b. This observation **SHALL** contain exactly one [1..1] **code/@code**="`8462-4`" *Intravascular diastolic* (CodeSystem: `2.16.840.1.113883.6.1` LOINC) (CONF:10282)
                c. This observation **SHALL** contain exactly one [1..1] **value** (CONF:10283)

                    NEMSIS Trace: EVitals.07
                    UCUM units SHOULD be "mm[Hg]".
                d. This observation **MAY** contain zero or one [0..1] **effectiveTime**

NEMSIS Trace: EVitals.01

e. This organizer **SHOULD** contain zero or one [0..1] `component`

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

        a. This observation **SHALL** conform to *Consol Vital Sign Observation* template (templateId: `2.16.840.1.113883.10.20.22.4.27`)

        b. This observation **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)

        c. This observation **SHALL** contain zero or more [0..*] `value` (CONF:10286)

          NEMSIS Trace: EVitals.10
          UCUM units SHOULD be "/min".

        d. This observation **MAY** contain zero or one [0..1] `effectiveTime`

          NEMSIS Trace: EVitals.01

f. This organizer **SHOULD** contain zero or one [0..1] `component`

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

        a. This observation **SHALL** conform to *Consol Vital Sign Observation* template (templateId: `2.16.840.1.113883.10.20.22.4.27`)

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

        c. This observation **SHALL** contain exactly one [1..1] `value` (CONF:10288)

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

        d. This observation **MAY** contain zero or one [0..1] `effectiveTime`

          NEMSIS Trace: EVitals.01

g. This organizer **SHOULD** contain zero or one [0..1] `component`

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

        a. This observation **SHALL** conform to *Consol Vital Sign Observation* template (templateId: `2.16.840.1.113883.10.20.22.4.27`)

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

        c. This observation **SHALL** contain exactly one [1..1] `value` (CONF:10290)

          NEMSIS Trace: EVitals.24
          UCUM units SHOULD be "Cel".

        d. This observation **MAY** contain zero or one [0..1] `effectiveTime`

          NEMSIS Trace: EVitals.01

h. This organizer **SHOULD** contain zero or one [0..1] `component`

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

        a. This observation **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 observation **SHALL** contain exactly one [1..1] `value` (CONF:10292)

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

        c. This observation Contains zero or one [0..1] `effectiveTime`

c. Such entrys **MAY** contain zero or one [0..1] `observation`

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

NEMSIS Trace: EVitals.02

EMS Vital Signs Section example

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1036728377"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <code code="67518-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Obtained prior to units EMS care"/>
      <value xsi:type="BL"/>
    </observation>
    <organizer>
      <id root="MDHT" extension="1153562645"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <component/>
      <component/>
      <component/>
      <component/>
      <component/>
      <component/>
    </organizer>
  </entry>
</section>
```

Chapter

4

CLINICAL STATEMENT TEMPLATES

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.

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.

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Derived Entry

[Entry: templateId `2.16.840.1.1133883.17.3.10.1.24`]

Known Subclasses:

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] templateId ( ) such that it

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.1133883.17.3.10.1.24"
2. **SHALL** contain exactly one [1..1] **@typeCode**="DRIV"   (CONF:10869)

Derived Entry example

```
<entry xmlns="urn:hl7-org:v3"/>
```

Chapter

6

VALUE SETS

Topics:

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

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- *Ethnicity*
- *Existence Of Contraindications To Thrombolytic Use*
- *Extremities Assessment Finding*
- *Extremity Finding Location*
- *Eye Assessment Finding*
- *Eye Finding Location*
- *FDA Route of Administration*
- *Face Assessment Finding*
- *First Monitored Rhythm*
- *Glasgow Coma Score Eye Response*
- *Glasgow Coma Score Motor Response*
- *Glasgow Coma Score Qualifier*
- *Glasgow Coma Score Verbal Response*
- *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 Weight Class*
- *Level Of Responsiveness*
- *Mechanism Of Injury*
- *Medication Administration 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*
- *Pelvis Genitourinary Assessment*

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- *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*
- *Race Category*
- *Reason Procedure not Performed*
- *Reason Procedure not Performed Superset*
- *Registry Type*
- *Response Delay Type*
- *Resuscitation Not Attempted Reason*
- *Resusctitation Discontinue Reason*
- *Return Of Spontaneous Circulation*
- *Rx Norm*
- *Safety Equipment Type*
- *Scene Delay Type*
- *Service Level*
- *Service Type*
- *Skin Assessment*
- *Stroke Scale*
- *Stroke Scale Interpretation*
- *Transport Delay Type*
- *Transport Method*
- *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
Definition	Use of automated elecronic defibrillator, with or without defibrillation

Code	Code System	Print Name
LA17066-4	LOINC	Yes, with defibrillation
LA17067-2	LOINC	Yes, applied without defibrillation
LA32-8	LOINC	No

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
Definition	Finding resulting from EMS abdominal assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17242-1	LOINC	Distention
LA17243-9	LOINC	Guarding
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA17246-2	LOINC	Mass-pulsating
LA17247-0	LOINC	Pregnant-palpable uterus
LA17709-9	LOINC	Tenderness
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18226-3	LOINC	Foreign body
LA18247-9	LOINC	Bowel sounds-absent

Code	Code System	Print Name
LA18248-7	LOINC	Bowel sounds-present
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

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
Definition	Location of finding resulting from EMS abdominal assessment

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

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
Definition	Gender of the patient for administrative purposes

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
Definition	Type of advance directive documentation

Code	Code System	Print Name
LA137-2	LOINC	None
LA17059-9	LOINC	Other (not listed)
LA17319-7	LOINC	State EMS DNR or medical order form
LA17320-5	LOINC	Other healthcare advanced directive form

Code	Code System	Print Name
LA17321-3	LOINC	Living will
LA17322-1	LOINC	Family/guardian request DNR (but no documentation)

Airbag Status

Value Set	AirbagStatus - 2.16.840.1.113883.17.3.5.8
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Configuration of airbag deployment

Code	Code System	Print Name
LA17384-1	LOINC	Airbag deployed front
LA17385-8	LOINC	Airbag deployed side
LA17386-6	LOINC	Airbag deployed other (knee, airbelt, etc.)
LA17387-4	LOINC	No airbag deployed
LA17388-2	LOINC	No airbag present
LA46-8	LOINC	Other

Airway Device Confirmation Method

Value Set	AirwayDeviceConfirmationMethod - 2.16.840.1.113883.17.3.5.60
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Procedure for confirming airway device placement

Code	Code System	Print Name
LA18672-8	LOINC	Auscultation
LA18673-6	LOINC	Bulb syringe aspiration
LA18674-4	LOINC	Colorimetric ETCO2
LA18675-1	LOINC	Condensation in tube
LA18676-9	LOINC	Digital (numeric) ETCO2
LA18677-7	LOINC	Direct re-visualization of tube in place
LA18678-5	LOINC	Endotracheal tube whistle (BAAM, etc)
LA18679-3	LOINC	Other airway device placement confirmation
LA18680-1	LOINC	Visualization of vocal cords
LA18681-9	LOINC	Waveform ETCO2

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
Definition	Kind of airway device

Code	Code System	Print Name
LA18004-4	LOINC	Tracheostomy tube
LA18657-9	LOINC	Cricothyrotomy tube
LA18658-7	LOINC	Endotrachial tube
LA18659-5	LOINC	Other invasive airway
LA18660-3	LOINC	Supraglottic airway device-combitube
LA18661-1	LOINC	Supraglottic airway device-king
LA18662-9	LOINC	Supraglottic airway device-LMA
LA18663-7	LOINC	Supraglottic airway device-other

Alcohol Drug Use Indicator

Value Set	AlcoholDrugUseIndicator - 2.16.840.1.113883.17.3.5.18
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Indications that a patient may have engaged in alcohol or drug use

Code	Code System	Print Name
LA17323-9	LOINC	Alcohol containers/paraphernalia at scene
LA17324-7	LOINC	Drug paraphernalia at scene
LA17325-4	LOINC	Patient admits to alcohol use
LA17326-2	LOINC	Patient admits to drug use
LA17327-0	LOINC	Positive level known from law enforcement or hospital record
LA17328-8	LOINC	Smell of alcohol on breath

Anatomic Location

Value Set	AnatomicLocation - 2.16.840.1.113883.17.3.5.76
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Part of the patient body

Code	Code System	Print Name
LA12703-7	LOINC	Neck
LA12705-2	LOINC	Back
LA12706-0	LOINC	Abdomen
LA18111-7	LOINC	Chest

Code	Code System	Print Name
LA18112-5	LOINC	Extremity-lower
LA18113-3	LOINC	Extremity-upper
LA18114-1	LOINC	General/global
LA18115-8	LOINC	Genitalia
LA18116-6	LOINC	Head

Back Spine Assessment Finding

Value Set	BackSpineAssessmentFinding - 2.16.840.1.113883.17.3.5.34
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS back and spine assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA17256-1	LOINC	Pain with range of motion
LA17257-9	LOINC	Tenderness costovertebral angle (CVA)
LA17258-7	LOINC	Tenderness midline spinous process
LA17259-5	LOINC	Tenderness paraspinous
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

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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
Definition	Location of finding resulting from EMS back and spine assessment

Code	Code System	Print Name
LA18726-2	LOINC	Back-general
LA18727-0	LOINC	Cervical-left
LA18728-8	LOINC	Cervical-midline
LA18729-6	LOINC	Cervical-right
LA18730-4	LOINC	Lumbar-left
LA18731-2	LOINC	Lumbar-right
LA18732-0	LOINC	Sacral-right
LA18733-8	LOINC	Sacral-left
LA18734-6	LOINC	Sacral-midline
LA18735-3	LOINC	Lumbar-midline
LA18736-1	LOINC	Thoracic-midline
LA18737-9	LOINC	Thoracic-left
LA18738-7	LOINC	Thoracic-right

Barrier To Care

Value Set	BarrierToCare - 2.16.840.1.113883.17.3.5.85
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Circumstances limiting one's ability to provide care to a patient

Code	Code System	Print Name
LA17306-4	LOINC	Cultural, custom, religious
LA17307-2	LOINC	Developmentally impaired
LA17308-0	LOINC	Hearing impaired
LA17309-8	LOINC	Language
LA17310-6	LOINC	Physical barrier (unable to access patient)
LA17311-4	LOINC	Physically impaired
LA17312-2	LOINC	Physically restrained
LA17313-0	LOINC	Psychologically impaired
LA17314-8	LOINC	Sight impaired
LA17315-5	LOINC	Speech impaired

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Code	Code System	Print Name
LA17316-3	LOINC	Unattended or unsupervised (including minors)
LA17317-1	LOINC	Uncooperative
LA17318-9	LOINC	None noted
LA17711-5	LOINC	Unconscious
LA6301-1	LOINC	Obesity

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
Definition	Etiology of a cardiac arrest

Code	Code System	Print Name
LA17056-5	LOINC	Cardiac (presumed)
LA17058-1	LOINC	Trauma
LA17059-9	LOINC	Other (not listed)
LA17977-2	LOINC	Drowning/submersion
LA17978-0	LOINC	Drug overdose
LA17979-8	LOINC	Exsanguination
LA17980-6	LOINC	Respiratory/asphyxia
LA9539-3	LOINC	Electrocution

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
Definition	Whether cardiac arrest occurred before or after arrival of emergency medical service team

Code	Code System	Print Name
LA17054-0	LOINC	Yes, prior to EMS arrival
LA17055-7	LOINC	Yes, after EMS arrival
LA32-8	LOINC	No

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
Definition	Kind of person who witnessed a cardiac arrest

Code	Code System	Print Name
LA18020-0	LOINC	Witnessed by family member
LA18021-8	LOINC	Witnessed by healthcare provider
LA18022-6	LOINC	Witnessed by lay person
LA18023-4	LOINC	Not witnessed

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
Definition	Kind of rhythm found in a cardiac arrest patient

Code	Code System	Print Name
LA12904-1	LOINC	Artifact
LA12904-1	LOINC	Artifact
LA17059-9	LOINC	Other (not listed)
LA17059-9	LOINC	Other (not listed)
LA17068-0	LOINC	Asystole
LA17068-0	LOINC	Asystole
LA17070-6	LOINC	PEA
LA17070-6	LOINC	PEA
LA17071-4	LOINC	Unknown AED non-shockable rhythm
LA17071-4	LOINC	Unknown AED non-shockable rhythm
LA17072-2	LOINC	Unknown AED shockable rhythm
LA17072-2	LOINC	Unknown AED shockable rhythm
LA17073-0	LOINC	Ventricular fibrillation
LA17073-0	LOINC	Ventricular fibrillation
LA17074-8	LOINC	Ventricular tachycardia-pulseless
LA17074-8	LOINC	Ventricular tachycardia-pulseless
LA17083-9	LOINC	Agonal/idioventricular
LA17083-9	LOINC	Agonal/idioventricular
LA17084-7	LOINC	Atrial fibrillation
LA17084-7	LOINC	Atrial fibrillation
LA17085-4	LOINC	Atrial flutter
LA17085-4	LOINC	Atrial flutter
LA17086-2	LOINC	AV block-1st degree
LA17086-2	LOINC	AV block-1st degree
LA17087-0	LOINC	AV block-2nd degree-type 1

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Code	Code System	Print Name
LA17087-0	LOINC	AV block-2nd degree-type 1
LA17088-8	LOINC	AV block-2nd degree-type 2
LA17088-8	LOINC	AV block-2nd degree-type 2
LA17089-6	LOINC	AV block-3rd degree
LA17089-6	LOINC	AV block-3rd degree
LA17090-4	LOINC	Junctional
LA17090-4	LOINC	Junctional
LA17091-2	LOINC	Left bundle branch block
LA17091-2	LOINC	Left bundle branch block
LA17093-8	LOINC	Paced rhythm
LA17093-8	LOINC	Paced rhythm
LA17094-6	LOINC	Premature atrial contractions
LA17094-6	LOINC	Premature atrial contractions
LA17095-3	LOINC	Premature ventricular contractions
LA17095-3	LOINC	Premature ventricular contractions
LA17096-1	LOINC	Right bundle branch block
LA17096-1	LOINC	Right bundle branch block
LA17097-9	LOINC	Sinus arrhythmia
LA17097-9	LOINC	Sinus arrhythmia
LA17098-7	LOINC	Sinus bradycardia
LA17098-7	LOINC	Sinus bradycardia
LA17099-5	LOINC	Sinus tachycardia
LA17099-5	LOINC	Sinus tachycardia
LA17100-1	LOINC	Supraventricular tachycardia
LA17100-1	LOINC	Supraventricular tachycardia
LA17101-9	LOINC	Torsades de points
LA17101-9	LOINC	Torsades de points
LA17703-2	LOINC	STEMI-anterior ischemia
LA17703-2	LOINC	STEMI-anterior ischemia
LA17704-0	LOINC	STEMI-inferior ischemia
LA17704-0	LOINC	STEMI-inferior ischemia
LA17705-7	LOINC	STEMI-lateral ischemia
LA17705-7	LOINC	STEMI-lateral ischemia
LA17706-5	LOINC	STEMI-posterior ischemia
LA17706-5	LOINC	STEMI-posterior ischemia
LA17708-1	LOINC	Ventricular tachycardia with pulse

Code	Code System	Print Name
LA17708-1	LOINC	Ventricular tachycardia with pulse
LA17718-0	LOINC	Sinus rhythm
LA17718-0	LOINC	Sinus rhythm
LA18205-7	LOINC	Non-STEMI anterior ischemia
LA18205-7	LOINC	Non-STEMI anterior ischemia
LA18206-5	LOINC	Non-STEMI inferior ischemia
LA18206-5	LOINC	Non-STEMI inferior ischemia
LA18207-3	LOINC	Non-STEMI lateral ischemia
LA18207-3	LOINC	Non-STEMI lateral ischemia
LA18208-1	LOINC	Non-STEMI posterior ischemia
LA18208-1	LOINC	Non-STEMI posterior ischemia

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
Definition	Kind of procedure used for cardiopulmonary resuscitation

Code	Code System	Print Name
LA17749-5	LOINC	Compressions-continuous
LA17750-3	LOINC	Compressions-external band type device
LA17751-1	LOINC	Compressions-external plunger type device
LA17752-9	LOINC	Compressions-external thumper type device
LA17753-7	LOINC	Compressions-intermittant with ventilation
LA17754-5	LOINC	Compressions-other device (not listed)
LA17755-2	LOINC	Ventilation-bag valve mask
LA17756-0	LOINC	Ventilation-impedence threshold device
LA17757-8	LOINC	Ventilation-mouth to mouth
LA17758-6	LOINC	Ventilation-pocket mask

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
Definition	Finding resulting from EMS chest and lung assessment

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Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17222-3	LOINC	Accessory muscles used with breathing
LA17223-1	LOINC	Breath sounds-absent-left
LA17224-9	LOINC	Breath sounds-absent-right
LA17225-6	LOINC	Breath sounds-decreased-left
LA17226-4	LOINC	Breath sounds-decreased-right
LA17227-2	LOINC	Breath sounds-normal-left
LA17228-0	LOINC	Breath sounds-normal-right
LA17229-8	LOINC	Crush injury
LA17230-6	LOINC	Flail segment-left
LA17231-4	LOINC	Flail segment-right
LA17232-2	LOINC	Increased respiratory effort
LA17233-0	LOINC	Pain with inspiration/expiration-left
LA17234-8	LOINC	Pain with inspiration/expiration-right
LA17236-3	LOINC	Rhonchi/wheezing
LA17237-1	LOINC	Tenderness-left
LA17238-9	LOINC	Tenderness-right
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA18229-7	LOINC	Rales-left
LA18230-5	LOINC	Rales-right
LA18231-3	LOINC	Retraction
LA18232-1	LOINC	Rhonchi-left
LA18233-9	LOINC	Rhonchi-right
LA18234-7	LOINC	Stridor-left

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Code	Code System	Print Name
LA18235-4	LOINC	Stridor-right
LA18236-2	LOINC	Implanted device
LA18237-0	LOINC	Wheezing-expiratory-right
LA18238-8	LOINC	Wheezing-expiratory-left
LA18239-6	LOINC	Wheezing-inspiratory-left
LA18240-4	LOINC	Wheezing-inspiratory-right
LA18402-0	LOINC	Breath sounds-equal
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

Complaint

Value Set	Complaint - 2.16.840.1.113883.17.3.5.49
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of medical problem or incident reported

Code	Code System	Print Name
LA15468-4	LOINC	Abdominal pain
LA15903-0	LOINC	Headache
LA17117-5	LOINC	Allergic reaction/stings
LA17118-3	LOINC	Animal bite
LA17119-1	LOINC	Assault
LA17120-9	LOINC	Automated crash notification
LA17121-7	LOINC	Back pain (non-traumatic)
LA17122-5	LOINC	Breathing problems
LA17123-3	LOINC	Burns/explosion
LA17124-1	LOINC	Carbon monoxide poisoning/hazmat/inhalation/chemical/ biological/radiological/nuclear
LA17125-8	LOINC	Cardiac arrest/death
LA17126-6	LOINC	Chest pain (non-traumatic)
LA17127-4	LOINC	Choking
LA17128-2	LOINC	Convulsions/seizure
LA17129-0	LOINC	Diabetic problem
LA17131-6	LOINC	Electrocution/lightning

Code	Code System	Print Name
LA17132-4	LOINC	Eye problem/injury
LA17133-2	LOINC	Falls
LA17134-0	LOINC	Healthcare professional/admission
LA17135-7	LOINC	Heart problems/AICD
LA17136-5	LOINC	Heat/cold exposure
LA17137-3	LOINC	Hemorrhage/lacerations
LA17138-1	LOINC	Industrial accident/inaccessible incident/other entrapments (non-vehicle)
LA17140-7	LOINC	Overdose/poisoning/ingestion
LA17141-5	LOINC	Pandemic/epidemic/outbreak
LA17142-3	LOINC	Pregnancy/childbirth/miscarriage
LA17143-1	LOINC	Psychiatric problem/abnormal behavior/suicide attempt
LA17144-9	LOINC	Sick person
LA17145-6	LOINC	Stab/gunshot wound/penetrating trauma
LA17146-4	LOINC	Traffic/transportation incident
LA17147-2	LOINC	Transfer/interfacility/palliative Care
LA17148-0	LOINC	Unconscious/fainting/near-fainting
LA17149-8	LOINC	Unknown problem person down
LA17150-6	LOINC	Standby
LA18093-7	LOINC	Fire
LA18209-9	LOINC	No other appropriate choice
LA18210-7	LOINC	Medical alarm
LA18211-5	LOINC	Well person check
LA9553-4	LOINC	Stroke/CVA
LA9555-9	LOINC	Traumatic injury

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
Definition	Relative primacy of complaint

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA18923-5	LOINC	Chief - primary
LA18924-3	LOINC	Secondary

Confidentiality

Value Set	Confidentiality - 2.16.840.1.113883.1.11.10228
Code System	HL7 Confidentiality - 2.16.840.1.113883.5.25
Definition	Appropriateness for disclosure of information

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
Definition	Kind of rationale for selecting a patient destination

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17182-9	LOINC	Closest facility
LA17184-5	LOINC	Family choice
LA17185-2	LOINC	Insurance status/requirement
LA17186-0	LOINC	Law enforcement choice
LA17187-8	LOINC	On-line medical direction
LA17188-6	LOINC	Patient's choice
LA17189-4	LOINC	Patient's physician's choice
LA17190-2	LOINC	Protocol
LA17191-0	LOINC	Regional specialty center
LA18301-4	LOINC	Diversion

Destination Prearrival Activation

Value Set	DestinationPrearrivalActivation - 2.16.840.1.113883.17.3.5.87
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of preparation requested at destination prior to patient arrival

Code	Code System	Print Name
LA18117-4	LOINC	Yes, adult trauma
LA18118-2	LOINC	Yes, cardiac arrest
LA18119-0	LOINC	Yes, obstetrics
LA18120-8	LOINC	Yes, other
LA18121-6	LOINC	Yes, pediatric trauma
LA18122-4	LOINC	Yes, STEMI

Code	Code System	Print Name
LA18123-2	LOINC	Yes, stroke
LA32-8	LOINC	No

Destination Type

Value Set	DestinationType - 2.16.840.1.113883.17.3.5.69
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of facility

Code	Code System	Print Name
LA11504-0	LOINC	Hospital emergency department
LA14084-0	LOINC	Home
LA18686-8	LOINC	Hospital non-emergency department bed
LA18687-6	LOINC	Medical office/clinic
LA18688-4	LOINC	Morgue/mortuary
LA18689-2	LOINC	Nursing home/assisted living facility
LA18690-0	LOINC	Other destination
LA18691-8	LOINC	Other EMS responder (air)
LA18692-6	LOINC	Other EMS responder (ground)
LA18693-4	LOINC	Police/jail

Disaster Type

Value Set	DisasterType - 2.16.840.1.113883.17.3.5.9
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of incident resulting in or likely to result in injuries or clinically adverse events

Code	Code System	Print Name
LA17594-5	LOINC	Weather
LA18089-5	LOINC	Biologic agent
LA18090-3	LOINC	Building failure
LA18091-1	LOINC	Chemical agent
LA18092-9	LOINC	Explosive device
LA18093-7	LOINC	Fire
LA18094-5	LOINC	Hostage event
LA18095-2	LOINC	Mass gathering
LA18096-0	LOINC	Mass illness

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Code	Code System	Print Name
LA18097-8	LOINC	Nuclear agent
LA18098-6	LOINC	Radioactive device
LA18099-4	LOINC	Secondary destructive device
LA18100-0	LOINC	Shooting/sniper
LA18101-8	LOINC	Vehicular

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
Definition	Kind of circumstance delaying an EMS dispatch

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17183-7	LOINC	Diversion/failure (of previous unit)
LA17579-6	LOINC	Caller (uncooperative)
LA17580-4	LOINC	High call volume
LA17581-2	LOINC	Location (inability to obtain)
LA17582-0	LOINC	No EMS vehicles (units) available
LA17584-6	LOINC	Technical failure (computer, phone etc.)
LA18081-2	LOINC	None/no delay
LA7540-3	LOINC	Language barrier

ECG Type

Value Set	ECGType - 2.16.840.1.113883.17.3.5.19
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of electrocardiogram equipment

Code	Code System	Print Name
LA18664-5	LOINC	3 lead
LA18665-2	LOINC	4 lead
LA18666-0	LOINC	5 lead
LA18667-8	LOINC	12 lead-left sided (normal)
LA18668-6	LOINC	12 lead-right sided
LA18669-4	LOINC	15 lead
LA18670-2	LOINC	18 lead

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Code	Code System	Print Name
LA18671-0	LOINC	Other ECG device

EMD Performed

Value Set	EMDPerformed - 2.16.840.1.113883.17.3.5.48
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Manner of performing emergency medical dispatch

Code	Code System	Print Name
LA17151-4	LOINC	Yes, with pre-arrival instructions
LA17152-2	LOINC	Yes, without pre-arrival instructions
LA17153-0	LOINC	Yes, unknown if pre-arrival instructions given
LA32-8	LOINC	No

EMS Level Of Service

Value Set	EMSLevelOfService - 2.16.840.1.113883.17.3.5.70
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Level of service provided for an encounter (as defined by CMS)

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

EMS Medication Administration Device

Value Set	EMSMedicationAdministrationDevice - 2.16.840.1.113883.17.3.5.100
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Definition	Kind of device used to administer a substance to a patient

Code	Code System	Print Name
39849001	SNOMEDCT	Nasal Oxygen Cannula
427591007	SNOMEDCT	Non-Rebreather Oxygen Mask
425926003	SNOMEDCT	Partial Rebreather Oxygen Mask
428285009	SNOMEDCT	Venturi Mask

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
Definition	Kinds of environmental allergens

Code	Code System	Print Name
LA137-2	LOINC	None
LA17059-9	LOINC	Other (not listed)
LA18356-8	LOINC	Chemical
LA18357-6	LOINC	Dander/dust/mold/pollen
LA18358-4	LOINC	Food allergy
LA18359-2	LOINC	Insect sting
LA18360-0	LOINC	Latex
LA18361-8	LOINC	Plant

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
Definition	Person's ethnic background

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
Definition	Confidence that contraindication to thrombolytic use exist

Code	Code System	Print Name
LA17114-2	LOINC	Definite contraindications to thrombolytic use
LA17115-9	LOINC	Possible contraindications to thrombolytic Use
LA17116-7	LOINC	No contraindications to thrombolytic Use

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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
Definition	Finding resulting from EMS extremity assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17229-8	LOINC	Crush injury
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA17260-3	LOINC	Amputation-acute
LA17261-1	LOINC	Amputation-previous
LA17262-9	LOINC	Dislocation
LA17263-7	LOINC	Edema
LA17264-5	LOINC	Fracture-closed
LA17265-2	LOINC	Fracture-open
LA17266-0	LOINC	Motor function-abnormal/weakness
LA17267-8	LOINC	Motor function-absent
LA17268-6	LOINC	Motor function-normal
LA17269-4	LOINC	Pulse-abnormal
LA17270-2	LOINC	Pulse-absent
LA17271-0	LOINC	Pulse-normal
LA17272-8	LOINC	Sensation-abnormal
LA17273-6	LOINC	Sensation-absent
LA17274-4	LOINC	Sensation-normal
LA17344-5	LOINC	Paralysis
LA17709-9	LOINC	Tenderness
LA18220-6	LOINC	Avulsion
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body

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Code	Code System	Print Name
LA18249-5	LOINC	Clubbing of fingers
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

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
Definition	Location of finding resulting from EMS extremity assessment

Code	Code System	Print Name
LA18739-5	LOINC	Ankle-left
LA18740-3	LOINC	Ankle-right
LA18741-1	LOINC	Arm-upper-left
LA18742-9	LOINC	Arm-upper-right
LA18743-7	LOINC	Elbow-left
LA18744-5	LOINC	Elbow-right
LA18745-2	LOINC	Finger-2nd (index)-left
LA18746-0	LOINC	Finger-2nd (index)-right
LA18747-8	LOINC	Finger-3rd (middle)-left
LA18748-6	LOINC	Finger-3rd (middle)-right
LA18749-4	LOINC	Finger-4th (ring)-left
LA18750-2	LOINC	Finger-4th (ring)-right
LA18751-0	LOINC	Finger-5th (smallest)-left
LA18752-8	LOINC	Finger-5th (smallest)-right
LA18753-6	LOINC	Foot-dorsal-left
LA18754-4	LOINC	Foot-dorsal-right
LA18755-1	LOINC	Foot-plantar-right
LA18756-9	LOINC	Foot-plantar-left
LA18757-7	LOINC	Forearm-left
LA18758-5	LOINC	Forearm-right
LA18759-3	LOINC	Hand-dorsal-left
LA18760-1	LOINC	Hand-dorsal-right
LA18761-9	LOINC	Hand-palm-right

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Code	Code System	Print Name
LA18762-7	LOINC	Hand-palm-left
LA18763-5	LOINC	Hip-left
LA18764-3	LOINC	Hip-right
LA18765-0	LOINC	Wrist-right
LA18766-8	LOINC	Wrist-left
LA18767-6	LOINC	Knee-left
LA18768-4	LOINC	Knee-right
LA18769-2	LOINC	Leg-lower-left
LA18770-0	LOINC	Leg-lower-right
LA18771-8	LOINC	Leg-upper-right
LA18772-6	LOINC	Leg-upper-left
LA18773-4	LOINC	Shoulder-left
LA18774-2	LOINC	Shoulder-right
LA18775-9	LOINC	Thumb-left
LA18776-7	LOINC	Thumb-right
LA18777-5	LOINC	Toe-1st (big)-left
LA18778-3	LOINC	Toe-1st (big)-right
LA18779-1	LOINC	Toe-2nd-left
LA18780-9	LOINC	Toe-2nd-right
LA18781-7	LOINC	Toe-3rd-left
LA18782-5	LOINC	Toe-3rd-right
LA18783-3	LOINC	Toe-4th-left
LA18784-1	LOINC	Toe-4th-right
LA18785-8	LOINC	Toe-5th (smallest)-left
LA18786-6	LOINC	Toe-5th (smallest)-right

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
Definition	Finding resulting from EMS eye assessment

Code	Code System	Print Name
LA14698-7	LOINC	Missing
LA15255-5	LOINC	Reactive
LA15256-3	LOINC	Nonreactive
LA17275-1	LOINC	1 mm

Code	Code System	Print Name
LA17276-9	LOINC	2 mm
LA17277-7	LOINC	3 mm
LA17278-5	LOINC	4 mm
LA17279-3	LOINC	5 mm
LA17280-1	LOINC	6 mm
LA17281-9	LOINC	7 mm
LA17282-7	LOINC	Clouded
LA17283-5	LOINC	Hyphema
LA17284-3	LOINC	Open globe
LA17285-0	LOINC	Pupil-irregular/teardrop
LA17710-7	LOINC	Blind
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA18250-3	LOINC	Cataract present
LA18251-1	LOINC	Dysconjugate gaze
LA18253-7	LOINC	Jaundiced sclera
LA18254-5	LOINC	Nonreactive prosthetic
LA18255-2	LOINC	Nystagmus noted
LA18256-0	LOINC	PERRL
LA18257-8	LOINC	Sluggish
LA18258-6	LOINC	8 mm or >
LA6630-3	LOINC	Not done

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
Definition	Location of finding resulting from EMS eye assessment

Code	Code System	Print Name
LA18787-4	LOINC	Eyes-bilateral
LA18788-2	LOINC	Eye-left
LA18789-0	LOINC	Eye-right

FDA Route of Administration

Value Set	FDA Route of Administration

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
Definition	Finding resulting from EMS face assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17210-8	LOINC	Decapitation
LA17211-6	LOINC	Drainage
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17216-5	LOINC	Asymmetric smile or droop
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

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
Definition	Kind of rhythm found in a cardiac arrest patient on initial field examination

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Code	Code System	Print Name
LA17068-0	LOINC	Asystole
LA17070-6	LOINC	PEA
LA17071-4	LOINC	Unknown AED non-shockable rhythm
LA17072-2	LOINC	Unknown AED shockable rhythm
LA17073-0	LOINC	Ventricular fibrillation
LA17074-8	LOINC	Ventricular tachycardia-pulseless
LA17394-0	LOINC	Bradycardia

Glasgow Coma Score Eye Response

Value Set	GlasgowComaScoreEyeResponse - 2.16.840.1.113883.17.3.5.99
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient's ocular response to stimulation

Code	Code System	Print Name
LA17798-2	LOINC	No eye movement when assessed
LA9345-5	LOINC	Opens eyes in response to painful stimulation
LA9346-3	LOINC	Opens eyes in response to verbal stimulation
LA9347-1	LOINC	Opens eyes spontaneously

Glasgow Coma Score Motor Response

Value Set	GlasgowComaScoreMotorResponse - 2.16.840.1.113883.17.3.5.96
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient's motor response to stimulation

Code	Code System	Print Name
LA17727-1	LOINC	Withdrawal from pain
LA17797-4	LOINC	Obeys commands (>2 yrs); Appropriate response to stimulation (<=2 yrs)
LA6562-8	LOINC	No motor response
LA6563-6	LOINC	Extension to pain
LA6564-4	LOINC	Flexion to pain
LA6566-9	LOINC	Localizing pain

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
Definition	Circumstance confounding the assessment of one or more Glasgow Coma Scale observations

Code	Code System	Print Name
LA17102-7	LOINC	Initial GCS has legitimate values without interventions such as intubation and sedation
LA17103-5	LOINC	Eye obstruction prevents eye assessment
LA17104-3	LOINC	Patient chemically sedated
LA17105-0	LOINC	Patient chemically paralyzed
LA17106-8	LOINC	Patient intubated

Glasgow Coma Score Verbal Response

Value Set	GlasgowComaScoreVerbalResponse - 2.16.840.1.113883.17.3.5.98
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient's vocal response to stimulation

Code	Code System	Print Name
LA17793-3	LOINC	Incomprehensible sounds (>2 yrs); Inconsolable, agitated (<=2 yrs)
LA17794-1	LOINC	Inappropriate words (>2 yrs); Inconsistently consolable, moaning (<=2 yrs)
LA17795-8	LOINC	Confused (>2 yrs); Cries but is consolable, inappropriate interactions (<=2 yrs)
LA17796-6	LOINC	Oriented (>2 yrs); Smiles, oriented to sounds, follows objects, interacts (<=2 yrs)
LA6557-8	LOINC	No verbal response (>2 yrs); no vocal response (<=2 yrs)

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
Definition	Finding resulting from EMS head assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17210-8	LOINC	Decapitation
LA17211-6	LOINC	Drainage
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

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
Definition	Finding resulting from EMS heart assessment

Code	Code System	Print Name
LA17239-7	LOINC	Heart sounds decreased

Code	Code System	Print Name
LA17240-5	LOINC	Murmur-diastolic
LA17241-3	LOINC	Murmur-systolic
LA18241-2	LOINC	Clicks
LA18242-0	LOINC	S1
LA18243-8	LOINC	S2
LA18244-6	LOINC	S3
LA18245-3	LOINC	S4
LA18246-1	LOINC	Rubs
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done

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
Definition	Body location of puncture for intravenous substance administration

Code	Code System	Print Name
LA18112-5	LOINC	Extremity-lower
LA18113-3	LOINC	Extremity-upper
LA18757-7	LOINC	Forearm-left

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Code	Code System	Print Name
LA18758-5	LOINC	Forearm-right
LA18790-8	LOINC	Antecubital-left
LA18791-6	LOINC	Antecubital-right
LA18792-4	LOINC	External jugular-left
LA18793-2	LOINC	External jugular-right
LA18794-0	LOINC	Femoral-left
LA18795-7	LOINC	Femoral-right
LA18796-5	LOINC	Foot-left
LA18797-3	LOINC	Foot-right
LA18798-1	LOINC	Hand-right
LA18799-9	LOINC	Hand-left
LA18800-5	LOINC	Internal jugular-left
LA18801-3	LOINC	Internal jugular-right
LA18802-1	LOINC	IO-femur-left distal
LA18803-9	LOINC	IO-femur-right distal
LA18804-7	LOINC	IO-humerus-left
LA18805-4	LOINC	IO-humerus-right
LA18806-2	LOINC	IO-iliac crest-left
LA18807-0	LOINC	IO-iliac crest-right
LA18808-8	LOINC	IO-sternum
LA18809-6	LOINC	IO-tibia-left distal
LA18810-4	LOINC	IO-tibia-right distal
LA18811-2	LOINC	IO-tibia-left proximal
LA18812-0	LOINC	IO-tibia-right proximal
LA18813-8	LOINC	Other central access (PICC, portacath, not listed)
LA18814-6	LOINC	Other peripheral access (not listed)
LA18815-3	LOINC	Scalp
LA18816-1	LOINC	Subclavian-left
LA18817-9	LOINC	Subclavian-right
LA18818-7	LOINC	Umbilical

Incident Outcome

Value Set	IncidentOutcome - 2.16.840.1.113883.17.3.5.64
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Outcome of an emergency medical services encounter

Code	Code System	Print Name
LA17154-8	LOINC	Patient treated, transported by EMS
LA17155-5	LOINC	Canceled (prior to arrival at scene)
LA17156-3	LOINC	No patient found (canceled on scene)
LA17157-1	LOINC	Patient dead at scene-no EMS transport
LA17158-9	LOINC	Patient dead at scene-transported by EMS
LA17159-7	LOINC	Patient evaluated, no treatment/transport required
LA17160-5	LOINC	Patient refused evaluation/care (with transport)
LA17161-3	LOINC	Patient treated, released (AMA)
LA17162-1	LOINC	Patient treated, transferred care to another EMS professional
LA17163-9	LOINC	Patient treated, transported by law enforcement
LA17164-7	LOINC	Patient treated, transported by private vehicle
LA17165-4	LOINC	Standby-no services or support provided
LA17166-2	LOINC	Standby-public safety, fire, or EMS operational support provided
LA17167-0	LOINC	Transport of body parts or organs only
LA18080-4	LOINC	Patient treated, released (per protocol)
LA18212-3	LOINC	Assist, agency
LA18213-1	LOINC	Assist, public
LA18214-9	LOINC	Assist, unit
LA18215-6	LOINC	No patient contact (canceled on scene)
LA18216-4	LOINC	Patient refused evaluation/care (without transport)

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
Definition	Circumstance affecting likelihood of injury

Code	Code System	Print Name
LA17348-6	LOINC	Fall adults: > 20 ft. (one story is equal to 10 ft.)
LA17349-4	LOINC	Fall children: > 10 ft. or 2-3 times the height of the child
LA17350-2	LOINC	Motorcycle crash > 20 mph
LA17352-8	LOINC	Crash death in same passenger compartment
LA17353-6	LOINC	Crash ejection (partial or complete) from vehicle
LA17357-7	LOINC	Crash intrusion: > 12 in. occupant site; > 18 in. any site
LA17360-1	LOINC	Auto v. pedestrian/bicyclist thrown, run over, or > 20 MPH impact

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Code	Code System	Print Name
LA18124-0	LOINC	Crash vehicle telemetry data (AACN) consistent with high risk of injury

LOINC

Value Set	LOINC

Length Based Weight Class

Value Set	LengthBasedWeightClass - 2.16.840.1.113883.17.3.5.24
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Weight category estimated by length

Code	Code System	Print Name
LA15553-3	LOINC	Blue
LA15554-1	LOINC	Grey
LA15555-8	LOINC	Green
LA17192-8	LOINC	Pink
LA17193-6	LOINC	Red
LA17194-4	LOINC	Purple
LA17195-1	LOINC	Yellow
LA17196-9	LOINC	Orange
LA4457-3	LOINC	White

Level Of Responsiveness

Value Set	LevelOfResponsiveness - 2.16.840.1.113883.17.3.5.21
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of stimulation necessary to elicit a patient reaction

Code	Code System	Print Name
LA17107-6	LOINC	Painful
LA17108-4	LOINC	Verbal
LA9340-6	LOINC	Alert
LA9343-0	LOINC	Unresponsive

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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
Definition	Kind of physical phenomenon causing an injury

Code	Code System	Print Name
LA17335-3	LOINC	Blunt
LA17336-1	LOINC	Penetrating
LA46-8	LOINC	Other
LA7318-4	LOINC	Burn

Medication Administration Route

Value Set	MedicationAdministrationRoute - 2.16.840.1.113883.17.3.5.43
Code System	FDA Route of Administration - 2.16.840.1.113883.3.26.1.1.1
Definition	Physical route for introducing medications into a patient
Description	Subset of FDA routes of administration. Mappings to NEMSIS route codes, including modeling of orthogonal concepts (e.g., devices), is included in implementation guide text appendix.

Code	Code System	Print Name
C38208	FDA Route of Administration	Endotracheal
C38246	FDA Route of Administration	Intragastric
C38216	FDA Route of Administration	Respiratory (Inhalation)
C38222	FDA Route of Administration	Intra-Arterial
C38284	FDA Route of Administration	Nasal
C28161	FDA Route of Administration	Intramuscular
C38255	FDA Route of Administration	Intraocular
C38253	FDA Route of Administration	Intramedullary
C38276	FDA Route of Administration	Intravenous
C38285	FDA Route of Administration	Nasogastric

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Code	Code System	Print Name
C38287	FDA Route of Administration	Ophthamlic
C38288	FDA Route of Administration	Oral
C38290	FDA Route of Administration	Other
C38192	FDA Route of Administration	Auricular (Otic)
C38295	FDA Route of Administration	Rectal
C38299	FDA Route of Administration	Subcutaneous
C38300	FDA Route of Administration	Sublingual
C38304	FDA Route of Administration	Topical
C38308	FDA Route of Administration	Transtracheal
C38305	FDA Route of Administration	Transdermal
C38271	FDA Route of Administration	Urethral
NewCode	FDA Route of Administration	
C38250	FDA Route of Administration	Intralesional

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
Definition	Channel or mode by which a medication administration is authorized by a licensed clinician

Code	Code System	Print Name
LA17187-8	LOINC	On-line medical direction
LA18654-6	LOINC	On-scene
LA18655-3	LOINC	Protocol (standing order)
LA18656-1	LOINC	Written orders (patient specific)

Medication Complication

Value Set	MedicationComplication - 2.16.840.1.113883.17.3.5.45
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of abnormal effect associated with the administration of a medication

Code	Code System	Print Name
LA137-2	LOINC	None
LA15098-9	LOINC	Nausea
LA15099-7	LOINC	Vomiting
LA15424-7	LOINC	Diarrhea
LA17059-9	LOINC	Other (not listed)
LA17392-4	LOINC	Altered mental status
LA17393-2	LOINC	Apnea
LA17394-0	LOINC	Bradycardia
LA17396-5	LOINC	Hypoxia
LA17397-3	LOINC	Itching/urticaria
LA17713-1	LOINC	Injury
LA17714-9	LOINC	Tachycardia
LA18266-9	LOINC	Bradypnea
LA18267-7	LOINC	Tachypnea
LA7418-2	LOINC	Bleeding
LA7434-9	LOINC	Extravasation
LA7443-0	LOINC	Hypotension
LA7444-8	LOINC	Hypertension
LA9540-1	LOINC	Hyperthermia
LA9541-9	LOINC	Hypothermia
LA9548-4	LOINC	Respiratory distress

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
Definition	Rationale for not adminstering an otherwise indicated medication

Code	Code System	Print Name
LA15185-4	LOINC	Unable to complete
LA18921-9	LOINC	Medication already taken

Code	Code System	Print Name
LA18922-7	LOINC	Medication allergy
LA18925-0	LOINC	Denied by order
LA4216-3	LOINC	Contraindicated
LA4389-8	LOINC	Refused

Mental Status Finding

Value Set	MentalStatusFinding - 2.16.840.1.113883.17.3.5.84
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS mental assessment

Code	Code System	Print Name
LA17286-8	LOINC	Normal baseline for patient
LA17287-6	LOINC	Combative
LA17288-4	LOINC	Oriented-person
LA17289-2	LOINC	Oriented-place
LA17290-0	LOINC	Oriented-time
LA18259-4	LOINC	Oriented-event
LA18260-2	LOINC	Pharmacologically sedated/paralyzed
LA6560-2	LOINC	Confused
LA6630-3	LOINC	Not done
LA7438-0	LOINC	Hallucinations
LA9343-0	LOINC	Unresponsive

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
Definition	Method for transforming ECG data into a clinical finding

Code	Code System	Print Name
LA18682-7	LOINC	Computer interpretation
LA18683-5	LOINC	Manual interpretation
LA18684-3	LOINC	Transmission with no interpretation
LA18685-0	LOINC	Transmission with remote interpretation

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
Definition	Finding resulting from EMS neck assessment

Code	Code System	Print Name
LA17208-2	LOINC	Bleeding controlled
LA17209-0	LOINC	Bleeding uncontrolled
LA17210-8	LOINC	Decapitation
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17217-3	LOINC	Jugular vein distention - JVD
LA17219-9	LOINC	Subcutaneous air
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA17612-5	LOINC	Stridor
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18226-3	LOINC	Foreign body
LA18227-1	LOINC	Tracheal deviation-right
LA18228-9	LOINC	Tracheal deviation-left
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

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
Definition	Finding resulting from EMS neurological assessment

Code	Code System	Print Name
LA15899-0	LOINC	Seizures
LA17286-8	LOINC	Normal baseline for patient
LA17291-8	LOINC	Cerebellar function-abnormal
LA17292-6	LOINC	Cerebellar function-normal
LA17293-4	LOINC	Gait-abnormal
LA17294-2	LOINC	Gait-normal
LA17295-9	LOINC	Hemiplegia-left
LA17296-7	LOINC	Hemiplegia-right
LA17297-5	LOINC	Speech-normal
LA17298-3	LOINC	Speech-slurring
LA17299-1	LOINC	Strength-normal
LA17300-7	LOINC	Strength-symmetric
LA17301-5	LOINC	Tremors
LA17302-3	LOINC	Weakness-facial droop-left
LA17303-1	LOINC	Weakness-facial droop-right
LA17304-9	LOINC	Weakness-left sided
LA17305-6	LOINC	Weakness-right sided
LA18261-0	LOINC	Aphagia
LA18262-8	LOINC	Aphasia
LA18263-6	LOINC	Decerebrate posturing
LA18264-4	LOINC	Decorticate posturing
LA18265-1	LOINC	Strength-asymmetric
LA6630-3	LOINC	Not done

Organ System

Value Set	OrganSystem - 2.16.840.1.113883.17.3.5.77
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Biological systems for the classification of disorders

Code	Code System	Print Name
LA16968-2	LOINC	Gastrointestinal
LA18114-1	LOINC	General/global
LA18277-6	LOINC	Cardiovascular
LA18278-4	LOINC	CNS/neuro
LA18279-2	LOINC	Endocrine/metabolic
LA18281-8	LOINC	Lymphatic/immune

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Code	Code System	Print Name
LA18282-6	LOINC	Musculoskeletal/skin
LA18283-4	LOINC	Pulmonary
LA18284-2	LOINC	Renal
LA18285-9	LOINC	Reproductive
LA9534-4	LOINC	Behavioral / psychiatric disorder

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
Definition	Change in acuity of patient condition

Code	Code System	Print Name
LA11011-6	LOINC	Worse
LA17181-1	LOINC	Unchanged
LA65-8	LOINC	Improved

Patient Status

Value Set	PatientStatus - 2.16.840.1.113883.17.3.5.78
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient condition indicating urgency of treatment

Code	Code System	Print Name
LA17694-3	LOINC	Lower acuity (green)
LA17695-0	LOINC	Emergent (yellow)
LA17696-8	LOINC	Critical (red)
LA17697-6	LOINC	Dead without resuscitation efforts (black)

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
Definition	Finding resulting from EMS pelvic and genitourinary assessment

Code	Code System	Print Name
LA14123-6	LOINC	Unstable
LA17208-2	LOINC	Bleeding controlled

Code	Code System	Print Name
LA17209-0	LOINC	Bleeding uncontrolled
LA17213-2	LOINC	Mass/lesion
LA17214-0	LOINC	Puncture/stab wound
LA17215-7	LOINC	Swelling/bruising/contusion with pain
LA17220-7	LOINC	Swelling/bruising/contusion without pain
LA17244-7	LOINC	Gunshot wound-entry
LA17245-4	LOINC	Gunshot wound-exit
LA17248-8	LOINC	Bleeding-rectal
LA17249-6	LOINC	Bleeding-urethral
LA17250-4	LOINC	Bleeding-vaginal
LA17251-2	LOINC	Genital injury
LA17252-0	LOINC	Pelvic fracture
LA17253-8	LOINC	Pelvic instability
LA17254-6	LOINC	Penile priapism/erection
LA17255-3	LOINC	Pregnant-crowning
LA17709-9	LOINC	Tenderness
LA18220-6	LOINC	Avulsion
LA18221-4	LOINC	Burn, blistering
LA18222-2	LOINC	Burn, charring
LA18223-0	LOINC	Burn, redness
LA18224-8	LOINC	Burn, white/waxy
LA18225-5	LOINC	Deformity
LA18226-3	LOINC	Foreign body
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done
LA7410-9	LOINC	Abrasion
LA7452-1	LOINC	Laceration
LA7460-4	LOINC	Pain

Pregnancy

Value Set	Pregnancy - 2.16.840.1.113883.17.3.5.42
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Estimation of patient's pregnant status and maturity

Code	Code System	Print Name
LA17329-6	LOINC	Yes, confirmed less than 12 weeks

Code	Code System	Print Name
LA17330-4	LOINC	Yes, confirmed 12 to 20 weeks
LA17331-2	LOINC	Yes, confirmed greater than 20 weeks
LA17332-0	LOINC	Possible, unconfirmed
LA32-8	LOINC	No

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
Definition	Role of person providing care to a patient before the arrival of EMS personnel

Code	Code System	Print Name
LA18016-8	LOINC	First responder-fire, law, EMS
LA18017-6	LOINC	Healthcare professional-non-EMS
LA18018-4	LOINC	Lay person-non-family
LA18019-2	LOINC	Other EMS professional - not part of dispatched response
LA9277-0	LOINC	Family member

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
Definition	Kind of abnormal effect associated with the performance of a procedure

Code	Code System	Print Name
LA137-2	LOINC	None
LA15098-9	LOINC	Nausea
LA15099-7	LOINC	Vomiting
LA15424-7	LOINC	Diarrhea
LA17059-9	LOINC	Other (not listed)
LA17392-4	LOINC	Altered mental status
LA17393-2	LOINC	Apnea
LA17394-0	LOINC	Bradycardia
LA17396-5	LOINC	Hypoxia
LA17397-3	LOINC	Itching/urticaria
LA17489-8	LOINC	Esophageal intubation-immediately
LA17490-6	LOINC	Esophageal intubation-other

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Code	Code System	Print Name
LA17713-1	LOINC	Injury
LA17714-9	LOINC	Tachycardia
LA18267-7	LOINC	Tachypnea
LA18268-5	LOINC	Portacath
LA7418-2	LOINC	Bleeding
LA7434-9	LOINC	Extravasation
LA7443-0	LOINC	Hypotension
LA7444-8	LOINC	Hypertension
LA9540-1	LOINC	Hyperthermia
LA9541-9	LOINC	Hypothermia
LA9548-4	LOINC	Respiratory distress

Protocol

Value Set	Protocol - 2.16.840.1.113883.17.3.5.73
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Clincal category of formal guideline used to direct care

Code	Code System	Print Name
LA17398-1	LOINC	Airway
LA17491-4	LOINC	Airway-failed
LA17492-2	LOINC	Airway-obstruction/foreign body
LA17494-8	LOINC	Airway-Rapid Sequence Induction (RSI-Paralytic)
LA17495-5	LOINC	Airway-sedation assisted (nonparalytic)
LA17496-3	LOINC	Cardiac arrest- asystole
LA17497-1	LOINC	Cardiac arrest- pulseless electrical activity
LA17498-9	LOINC	Cardiac arrest- ventricular fibrillation/pulseless ventricular tachycardia
LA17499-7	LOINC	Cardiac arrest-hypothermia-therapeutic
LA17500-2	LOINC	Cardiac arrest-post resuscitation care
LA17501-0	LOINC	Environmental-altitude sickness
LA17502-8	LOINC	Environmental-cold exposure
LA17503-6	LOINC	Environmental-frostbite/cold Injury
LA17504-4	LOINC	Environmental-heat exposure/exhaustion
LA17505-1	LOINC	Environmental-heat stroke/hyperthermia
LA17506-9	LOINC	Environmental-hypothermia
LA17507-7	LOINC	Exposure-airway/inhalation irritants

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Code	Code System	Print Name
LA17508-5	LOINC	Exposure-biological/infectious
LA17509-3	LOINC	Exposure-blistering agents
LA17510-1	LOINC	Exposure-carbon monoxide/smoke inhalation
LA17511-9	LOINC	Exposure-chemicals to eye
LA17512-7	LOINC	Exposure-cyanide
LA17513-5	LOINC	Exposure-explosive/blast injury
LA17514-3	LOINC	Exposure-nerve agents
LA17515-0	LOINC	Exposure-radiologic agents
LA17516-8	LOINC	General-back pain
LA17517-6	LOINC	General-behavioral/patient restraint
LA17518-4	LOINC	General-dental problems
LA17519-2	LOINC	General-epistaxis
LA17520-0	LOINC	General-fever
LA17521-8	LOINC	General-individualized patient protocol
LA17522-6	LOINC	General-indwelling medical devices/equipment
LA17523-4	LOINC	General-IV access
LA17524-2	LOINC	General-medical device malfunction
LA17525-9	LOINC	General-pain control
LA17526-7	LOINC	General-spinal immobilization/clearance
LA17527-5	LOINC	General-universal patient care/initial patient contact
LA17528-3	LOINC	Injury-amputation
LA17529-1	LOINC	Injury-bites and envenomations-land
LA17530-9	LOINC	Injury-bites and envenomations-marine
LA17531-7	LOINC	Injury-bleeding/hemorrhage control
LA17532-5	LOINC	Injury-burns-thermal
LA17533-3	LOINC	Injury-cardiac arrest
LA17534-1	LOINC	Injury-crush syndrome
LA17535-8	LOINC	Injury-diving emergencies
LA17536-6	LOINC	Injury-drowning/near drowning
LA17537-4	LOINC	Injury-electrical injuries
LA17538-2	LOINC	Injury-extremity
LA17539-0	LOINC	Injury-eye
LA17540-8	LOINC	Injury-head
LA17541-6	LOINC	Injury-impaled object
LA17542-4	LOINC	Injury-multisystem
LA17543-2	LOINC	Injury-spinal cord

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Code	Code System	Print Name
LA17544-0	LOINC	Medical-abdominal pain
LA17545-7	LOINC	Medical-allergic reaction/anaphylaxis
LA17546-5	LOINC	Medical-altered mental status
LA17547-3	LOINC	Medical-bradycardia
LA17548-1	LOINC	Medical-cardiac chest pain
LA17549-9	LOINC	Medical-diarrhea
LA17550-7	LOINC	Medical-hyperglycemia
LA17551-5	LOINC	Medical-hypertension
LA17552-3	LOINC	Medical-hypoglycemia/diabetic emergency
LA17553-1	LOINC	Medical-hypotension/shock (non-trauma)
LA17554-9	LOINC	Medical-influenza-like Illness/ upper respiratory infection
LA17555-6	LOINC	Medical-nausea/vomiting
LA17556-4	LOINC	Medical-newborn/ neonatal resuscitation
LA17557-2	LOINC	Medical-overdose/poisoning/toxic ingestion
LA17558-0	LOINC	Medical-pulmonary edema/CHF
LA17559-8	LOINC	Medical-respiratory distress/asthma/COPD/croup/ reactive airway disease
LA17560-6	LOINC	Medical-seizure
LA17561-4	LOINC	Medical-ST-elevation myocardial infarction (STEMI)
LA17562-2	LOINC	Medical-stroke/TIA
LA17563-0	LOINC	Medical-supraventricular tachycardia (including atrial fibrillation)
LA17564-8	LOINC	Medical-syncope
LA17565-5	LOINC	Medical-ventricular tachycardia (with pulse)
LA17566-3	LOINC	OB/GYN-childbirth/labor/delivery
LA17567-1	LOINC	OB/GYN-eclampsia
LA17568-9	LOINC	OB/GYN-gynecologic emergencies
LA17569-7	LOINC	OB/GYN-pregnancy related emergencies
LA17570-5	LOINC	OB/GYN-post-partum hemorrhage
LA18269-3	LOINC	General-cardiac arrest
LA46-8	LOINC	Other
LA6630-3	LOINC	Not done

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
Definition	Group of patient ages

Code	Code System	Print Name
LA17571-3	LOINC	General
LA17572-1	LOINC	Adult only
LA17573-9	LOINC	Pediatric only

Provider Adverse Event Type

Value Set	ProviderAdverseEventType - 2.16.840.1.113883.17.3.5.72
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of adverse event affecting a care provider

Code	Code System	Print Name
LA137-2	LOINC	None
LA17059-9	LOINC	Other (not listed)
LA17402-1	LOINC	Death-cardiac arrest
LA17403-9	LOINC	Death-injury related
LA17404-7	LOINC	Death-other (not listed)
LA17405-4	LOINC	Exposure-airborne respiratory/biological/aerosolized secretions
LA17406-2	LOINC	Exposure-body fluid contact to broken skin
LA17407-0	LOINC	Exposure-body fluid contact with eye
LA17408-8	LOINC	Exposure-body fluid contact with intact skin
LA17409-6	LOINC	Exposure-body fluid contact with mucosal surface
LA17410-4	LOINC	Exposure-needle stick with body fluid injection
LA17411-2	LOINC	Exposure-needle stick without body fluid injection
LA17412-0	LOINC	Exposure-toxin/chemical/hazmat
LA17413-8	LOINC	Injury-lifting/back/musculoskeletal
LA17414-6	LOINC	Injury-other (not listed)

Provider Response Role

Value Set	ProviderResponseRole - 2.16.840.1.113883.17.3.5.80
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Role filled by an EMS professional

Code	Code System	Print Name
LA18707-2	LOINC	Driver/pilot-response
LA18708-0	LOINC	Driver/pilot-transport
LA18709-8	LOINC	Other crew member response role
LA18710-6	LOINC	Other patient caregiver-at scene
LA18711-4	LOINC	Other patient caregiver-transport
LA18712-2	LOINC	Primary patient caregiver-at scene
LA18713-0	LOINC	Primary patient caregiver-transport

Provider Role

Value Set	ProviderRole - 2.16.840.1.113883.17.3.5.46
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Class of person providing care to an EMS patient, including the patient

Code	Code System	Print Name
LA15276-1	LOINC	Student
LA18695-9	LOINC	Critical care paramedic
LA18696-7	LOINC	2009 advanced emergency medical technician (AEMT)
LA18697-5	LOINC	2009 emergency medical responder (EMR)
LA18698-3	LOINC	2009 emergency medical technician (EMT)
LA18699-1	LOINC	2009 paramedic
LA18700-7	LOINC	First responder
LA18701-5	LOINC	EMT-basic
LA18702-3	LOINC	EMT-intermediate
LA18703-1	LOINC	EMT-paramedic
LA18704-9	LOINC	Other healthcare professional
LA18705-6	LOINC	Other non-healthcare professional
LA18706-4	LOINC	Community paramedicine
LA18714-8	LOINC	Patient/lay person
LA4687-5	LOINC	Physician
LA9297-8	LOINC	Respiratory therapist
LA9401-6	LOINC	Nurse

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

Definition	Class of person providing care to an EMS patient, excluding the patient

Code	Code System	Print Name
LA15276-1	LOINC	Student
LA18695-9	LOINC	Critical care paramedic
LA18696-7	LOINC	2009 advanced emergency medical technician (AEMT)
LA18697-5	LOINC	2009 emergency medical responder (EMR)
LA18698-3	LOINC	2009 emergency medical technician (EMT)
LA18699-1	LOINC	2009 paramedic
LA18700-7	LOINC	First responder
LA18701-5	LOINC	EMT-basic
LA18702-3	LOINC	EMT-intermediate
LA18703-1	LOINC	EMT-paramedic
LA18704-9	LOINC	Other healthcare professional
LA18705-6	LOINC	Other non-healthcare professional
LA18706-4	LOINC	Community paramedicine
LA4687-5	LOINC	Physician
LA9297-8	LOINC	Respiratory therapist
LA9401-6	LOINC	Nurse

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

Race Category

Value Set	RaceCategory - 2.16.840.1.114222.4.11.836

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

Code	Code System	Print Name
2106-3	Race and Ethnicity - CDC	White

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
Definition	Rationale for not completing an otherwise indicated procedure

Code	Code System	Print Name
LA15185-4	LOINC	Unable to complete
LA18925-0	LOINC	Denied by order
LA4216-3	LOINC	Contraindicated
LA4389-8	LOINC	Refused

Reason Procedure not Performed Superset

Value Set	Reason Procedure not Performed Superset - 2.16.840.1.113883.17.3.5.100
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Rationale for not completing an otherwise indicated procedure, including CPR

Code	Code System	Print Name
LA15185-4	LOINC	Unable to complete
LA18925-0	LOINC	Denied by order
LA4216-3	LOINC	Contraindicated
LA4389-8	LOINC	Refused
LA17063-1	LOINC	Considered futile
LA17064-9	LOINC	DNR orders
LA17065-6	LOINC	Signs of circulation

Registry Type

Value Set	RegistryType - 2.16.840.1.113883.17.3.5.74
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of research repository in which a patient record might be included

Code	Code System	Print Name
LA17057-3	LOINC	Drowning
LA17058-1	LOINC	Trauma

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17398-1	LOINC	Airway
LA17399-9	LOINC	Spinal cord injury
LA17400-5	LOINC	STEMI/acute cardiac
LA17401-3	LOINC	Traumatic brain injury
LA7318-4	LOINC	Burn
LA9535-1	LOINC	Cardiac arrest
LA9553-4	LOINC	Stroke/CVA

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
Definition	Kind of circumstance delaying an EMS response

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17583-8	LOINC	Scene safety (not secure for EMS)
LA17585-3	LOINC	Crowd
LA17586-1	LOINC	Directions/unable to locate
LA17587-9	LOINC	Distance
LA17588-7	LOINC	HazMat
LA17590-3	LOINC	Staff delay
LA17591-1	LOINC	Traffic
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA18081-2	LOINC	None/no delay
LA18270-1	LOINC	Rendezvous transport unavailable
LA18271-9	LOINC	Route obstruction (e.g., train)
LA18301-4	LOINC	Diversion

Resuscitation Not Attempted Reason

Value Set	ResuscitationNotAttemptedReason - 2.16.840.1.113883.17.3.5.90
Definition	Rationale for not attempting to resuscitate a patient

Code	Code System	Print Name
LA17063-1		Considered futile
LA17064-9		DNR orders
LA17065-6		Signs of circulation

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
Definition	Rationale for aborting attempt to resuscitate a patient

Code	Code System	Print Name
LA17078-9	LOINC	DNR
LA17079-7	LOINC	Medical control order
LA17080-5	LOINC	Obvious signs of death
LA17081-3	LOINC	Protocol/policy requirements completed
LA17082-1	LOINC	Return of spontaneous circulation (pulse or BP noted)
LA18204-0	LOINC	Physically unable to perform

Return Of Spontaneous Circulation

Value Set	ReturnOfSpontaneousCirculation - 2.16.840.1.113883.17.3.5.15
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Timeframe for return of circulation to a patient

Code	Code System	Print Name
LA17075-5	LOINC	Yes, prior to arrival at the ED
LA17076-3	LOINC	Yes, at arrival at the ED
LA17077-1	LOINC	Yes, sustained for 20 consecutive minutes
LA32-8	LOINC	No

Rx Norm

Value Set	RxNorm

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

Definition	Kind of safety equipment	

Code	Code System	Print Name
LA137-2	LOINC	None
LA17375-9	LOINC	Child booster seat
LA17376-7	LOINC	Helmet worn
LA17377-5	LOINC	Infant car seat forward facing
LA17378-3	LOINC	Infant car seat rear facing
LA17379-1	LOINC	Lap belt with shoulder belt
LA17380-9	LOINC	Lap belt without shoulder belt
LA17382-5	LOINC	Protective non-clothing gear
LA46-8	LOINC	Other
LA9381-0	LOINC	Shoulder belt
LA9391-9	LOINC	Eye protection
LA9392-7	LOINC	Protective clothing
LA9393-5	LOINC	Personal flotation device

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
Definition	Kind of circumstance delaying EMS operations on scene

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17585-3	LOINC	Crowd
LA17586-1	LOINC	Directions/unable to locate
LA17587-9	LOINC	Distance
LA17588-7	LOINC	HazMat
LA17590-3	LOINC	Staff delay
LA17591-1	LOINC	Traffic
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA17595-2	LOINC	Extrication
LA17596-0	LOINC	Safety-crew/staging
LA17597-8	LOINC	Safety-patient
LA18081-2	LOINC	None/no delay

Code	Code System	Print Name
LA18272-7	LOINC	Awaiting air unit
LA18273-5	LOINC	Awaiting ground unit
LA18275-0	LOINC	Patient access
LA18276-8	LOINC	Triage/multiple patients
LA7540-3	LOINC	Language barrier

Service Level

Value Set	ServiceLevel - 2.16.840.1.113883.17.3.5.70
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Level of EMS service as defined by CMS

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

Service Type

Value Set	ServiceType - 2.16.840.1.113883.17.3.5.79
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Category of service requested of an EMS agency

Code	Code System	Print Name
LA17150-6	LOINC	Standby
LA18715-5	LOINC	911 response (scene)
LA18716-3	LOINC	Intercept
LA18717-1	LOINC	Interfacility transport
LA18718-9	LOINC	Medical transport
LA18719-7	LOINC	Mutual aid
LA18720-5	LOINC	Public assistance/other not listed

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Skin Assessment

Value Set	SkinAssessment - 2.16.840.1.113883.17.3.5.25
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding resulting from EMS skin assessment

Code	Code System	Print Name
LA15475-9	LOINC	Cold
LA17197-7	LOINC	Clammy
LA17198-5	LOINC	Cyanotic
LA17199-3	LOINC	Dry
LA17200-9	LOINC	Red (erythematous)
LA17201-7	LOINC	Flushed
LA17202-5	LOINC	Hot
LA17203-3	LOINC	Jaundiced
LA17204-1	LOINC	Lividity
LA17205-8	LOINC	Mottled
LA17206-6	LOINC	Pale
LA17207-4	LOINC	Warm
LA18217-2	LOINC	Diaphoretic
LA18218-0	LOINC	Poor turgor
LA18219-8	LOINC	Tenting
LA6626-1	LOINC	Normal
LA6630-3	LOINC	Not done

Stroke Scale

Value Set	StrokeScale - 2.16.840.1.113883.17.3.5.88
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Type of instrument used to evaluate for stroke

Code	Code System	Print Name
LA17110-0	LOINC	Cincinnati
LA17111-8	LOINC	Los Angeles
LA17112-6	LOINC	Miami emergency neurologic deficit (MEND)
LA17113-4	LOINC	NIH
LA18300-6	LOINC	Other stoke scale type
LA3774-2	LOINC	Massachusetts

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Stroke Scale Interpretation

Value Set	Stroke Scale Interpretation - 2.16.840.1.113883.17.3.5.93
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Finding based on a stroke scale instrument

Code	Code System	Print Name
LA17109-2	LOINC	Non-conclusive
LA6576-8	LOINC	Positive
LA6577-6	LOINC	Negative

Transport Delay Type

Value Set	TransportDelayType - 2.16.840.1.113883.17.3.5.53
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying EMS transport

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17585-3	LOINC	Crowd
LA17586-1	LOINC	Directions/unable to locate
LA17587-9	LOINC	Distance
LA17588-7	LOINC	HazMat
LA17589-5	LOINC	Safety
LA17590-3	LOINC	Staff delay
LA17591-1	LOINC	Traffic
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA18081-2	LOINC	None/no delay
LA18270-1	LOINC	Rendezvous transport unavailable
LA18271-9	LOINC	Route obstruction (e.g., train)
LA18301-4	LOINC	Diversion

Transport Method

Value Set	TransportMethod - 2.16.840.1.113883.17.3.5.65
Code System	LOINC - 2.16.840.1.113883.6.1

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Definition	Physical mode of patient transport

Code	Code System	Print Name
LA17168-8	LOINC	Ground-ambulance
LA17169-6	LOINC	Air medical-fixed wing
LA17170-4	LOINC	Air medical-rotor craft
LA17171-2	LOINC	Ground-ATV or rescue vehicle
LA17172-0	LOINC	Ground-bariatric
LA17173-8	LOINC	Ground-mass casualty bus/vehicle
LA17174-6	LOINC	Ground-wheelchair van
LA17175-3	LOINC	Ground-other not listed
LA17176-1	LOINC	Water-boat

Transportation Mode

Value Set	TransportationMode - 2.16.840.1.113883.17.3.5.66
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Urgency of transport

Code	Code System	Print Name
LA17177-9	LOINC	Emergent (immediate response)
LA17178-7	LOINC	Emergent downgraded to non-emergent
LA17179-5	LOINC	Non-emergent upgraded to emergent
LA17180-3	LOINC	Non-emergent

Trauma Center Criteria

Value Set	TraumaCenterCriteria - 2.16.840.1.113883.17.3.5.3
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Patient findings used to determine appropriate destination

Code	Code System	Print Name
LA17337-9	LOINC	Glasgow Coma Score less than 14
LA17338-7	LOINC	Respiratory rate < 10 or >29 or (<20 in infant < one year)
LA17339-5	LOINC	Systolic blood pressure less than 90
LA17340-3	LOINC	Amputation proximal to wrist and ankle
LA17341-1	LOINC	Crushed, degloved, or mangled extremity
LA17342-9	LOINC	Flail chest
LA17343-7	LOINC	Open or depressed skull fracture

Code	Code System	Print Name
LA17344-5	LOINC	Paralysis
LA17345-2	LOINC	Pelvic fracture(s)
LA17346-0	LOINC	Penetrating injury to head, neck, torso, and extremities proximal to elbow and knee
LA17347-8	LOINC	Two or more proximal long-bone fractures

Turn Around Delay Type

Value Set	TurnAroundDelayType - 2.16.840.1.113883.17.3.5.54
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Kind of circumstance delaying EMS readiness after an incident

Code	Code System	Print Name
LA17059-9	LOINC	Other (not listed)
LA17587-9	LOINC	Distance
LA17590-3	LOINC	Staff delay
LA17592-9	LOINC	Vehicle crash involving this unit
LA17593-7	LOINC	Vehicle failure of this unit
LA17594-5	LOINC	Weather
LA17598-6	LOINC	Clean-up
LA17599-4	LOINC	Decontamination
LA17600-0	LOINC	Documentation
LA17601-8	LOINC	ED overcrowding/transfer of care
LA17602-6	LOINC	Equipment/supply replenishment
LA17603-4	LOINC	Transport unavailable
LA18081-2	LOINC	None/no delay
LA18270-1	LOINC	Rendezvous transport unavailable
LA18271-9	LOINC	Route obstruction (e.g., train)
LA7497-6	LOINC	Equipment failure

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
Definition	Role unit plays in response to an incident

Code	Code System	Print Name
LA17574-7	LOINC	Air transport

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Code	Code System	Print Name
LA17575-4	LOINC	Ground transport
LA17576-2	LOINC	Non-transport (care or assistance)
LA17577-0	LOINC	Rescue
LA17578-8	LOINC	Supervisor (administrative only)

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
Definition	Direction from which a vehicle is struck

Code	Code System	Print Name
LA10137-0	LOINC	5
LA10138-8	LOINC	6
LA10139-6	LOINC	7
LA10140-4	LOINC	8
LA10141-2	LOINC	9
LA13942-0	LOINC	10
LA14557-5	LOINC	11
LA14558-3	LOINC	12
LA6112-2	LOINC	1
LA6113-0	LOINC	2
LA6114-8	LOINC	3
LA6115-5	LOINC	4

Vehicle Passenger Location

Value Set	VehiclePassengerLocation - 2.16.840.1.113883.17.3.5.6
Code System	LOINC - 2.16.840.1.113883.6.1
Definition	Location of a passenger within a vehicle

Code	Code System	Print Name
LA17361-9	LOINC	Front seat-left side (or motorcycle driver)
LA17362-7	LOINC	Front seat-right side
LA17363-5	LOINC	Front seat-middle
LA17364-3	LOINC	Second seat-left side (or motorcycle passenger)
LA17365-0	LOINC	Second seat-middle

Code	Code System	Print Name
LA17366-8	LOINC	Second seat-right side
LA17367-6	LOINC	Third row-left side (or motorcycle passenger)
LA17368-4	LOINC	Third row-right side
LA17369-2	LOINC	Third row-middle
LA17370-0	LOINC	Sleeper section of cab (truck)
LA17371-8	LOINC	Passenger in other enclosed passenger or cargo area (non-trailing unit such as a bus, etc.)
LA17372-6	LOINC	Passenger in unenclosed passenger or cargo area (non-trailing unit such as a pickup, etc.)
LA17373-4	LOINC	Trailing unit
LA17374-2	LOINC	Riding on vehicle exterior (non-trailing unit)
LA4489-6	LOINC	Unknown

Chapter

7

Appendices

Topics:

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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)

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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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