

Implementation Guide for CDA Release 2

EMS Patient Care Report

Optional Subtitle



**PROTOTYPE: FOR DISCUSSION
AND DEMONSTRATION USE ONLY**

Contents

Acknowledgments.....	5
Revision History.....	7
 Chapter 1: INTRODUCTION.....	 9
Overview.....	10
Approach.....	10
Scope.....	10
Audience.....	10
Organization of This Guide.....	10
Templates.....	10
Vocabulary and Value Sets.....	10
Use of Templates.....	11
Originator Responsibilities.....	11
Recipient Responsibilities.....	11
Conventions Used in This Guide.....	11
Conformance Requirements.....	11
Keywords.....	12
XML Examples.....	12
 Chapter 2: DOCUMENT TEMPLATES.....	 13
Emergency Run Report.....	14
 Chapter 3: SECTION TEMPLATES.....	 17
EMS Billing.....	18
EMS Transport.....	18
 Chapter 4: CLINICAL STATEMENT TEMPLATES.....	 21
 Chapter 5: OTHER CLASSES.....	 23
EMS Billing Entry.....	24
EMS Patient.....	24
EMS Patient Blood Pressure Organizer.....	26
EMS Patient Body Temperature.....	26
EMS Patient Diastolic Blood Pressure.....	26
EMS Patient Heart Rate.....	26
EMS Patient Respiratory Rate.....	27
EMS Patient Role.....	27
EMS Patient Systolic Blood Pressure.....	27
EMS Record Target.....	27
EMS Vital Signs Organizer.....	28
 Chapter 6: VALUE SETS.....	 29
My Problem Types.....	30
My Problem Values.....	30

REFERENCES.....31

Acknowledgments

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Revision History

Rev	Date	By Whom	Changes
New	July 2010	Dave Carlson	
First draft for posting	December 2010	Dave Carlson	Updated model content and publication format

Chapter 1

INTRODUCTION

Topics:

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

Overview

This implementation guide 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.

Approach

Working with specifications generated from formal UML models provides the opportunity to work with the data from the perspective of the underlying model and electronic format and to explore many design issues thoroughly. Taking this as an initial step ensures that the data set developers and standards community can reach consensus prior to the larger commitment of time that would be required to bring the full data set into standard format.

This project supports reusability and ease of data collection through a standard data representation harmonized with work developed through Health Information Technology Expert Panel (HITEP), balloted through Health Level Seven (HL7) and/or recognized by the Health Information Technology Standards Panel (HITSP).

This implementation guide (IG) specifies a standard for electronic submission of NCRs in a Clinical Document Architecture (CDA), Release 2 format.

Scope

TODO: scope of this implementation guide.

Audience

The audience for this document includes software developers and implementers who wish to develop...

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. See Templates by Containment for a listing of the higher level templates by containment; the appendix Templates Used in This Guide includes a table of all of the templates Organized Hierarchically.

Vocabulary and Value Sets

Vocabularies recommended in this guide are from standard vocabularies. When SNOMED codes are used, rules defined in Using SNOMED CT in HL7 Version 3 are adhered to. In many cases, these vocabularies are further constrained into value sets for use within this guide. Value set names and OIDs are summarized in the table Summary of Value Sets. Each named value set in this summary table is stored in a template database that will be maintained by CHCA.

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

Figure 4: ClinicalDocument example

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

Chapter

2

DOCUMENT TEMPLATES

Topics:

- [Emergency Run Report](#)

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

Emergency Run Report

[ClinicalDocument: templateId 2.16.840.1.113883.17.3.10.1]

1. **SHALL** conform to *CDT General Header Constraints* template (templateId: 2.16.840.1.113883.10.20.3)
2. **SHALL** contain exactly one [1..1] **code/@code**= "EMSPCR" *EMS Patient Care Report* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-HP-21)
3. **SHALL** contain exactly one [1..1] **id** (CONF-HP-17)
 - The patient care report identifier assigned by the EMS agency or agency software (NEMESIS ERecord.01). A way to ensure future revisions have a valid group number is to assign a new document a unique group id and a version of 1, and then to concatenate or assemble in dot notation for the id.
4. **SHALL** contain exactly one [1..1] **title** (CONF-HP-22)
5. **SHALL** contain exactly one [1..1] **typeId** (CONF-HP-16)
6. **SHOULD** contain zero or one [0..1] **setId** (CONF-EMSPatientCareReport-115)
7. **SHOULD** contain zero or one [0..1] **versionNumber** (CONF-EMSPatientCareReport-116)
8. **SHOULD** contain exactly one [1..1] **recordTarget** (CONF-EMSPatientCareReport-117), such that
 - a. Contains exactly one [1..1] *EMS Record Target*
9. **SHOULD** contain exactly one [1..1] **documentationOf** (CONF-EMSPatientCareReport-120), such that
10. **SHOULD** contain exactly one [1..1] **component** (CONF-EMSPatientCareReport-121), such that
 - a. Contains exactly one [1..1] *CCD Vital Signs Section* (templateId: 2.16.840.1.113883.10.20.1.16)
11. **SHOULD** contain exactly one [1..1] **component**, such that
 - a. Contains exactly one [1..1] *EMS Billing*
12. **SHOULD** contain exactly one [1..1] **component**, such that
 - a. Contains exactly one [1..1] *EMS Transport*

emspatientcarereport::EmergencyRunReport							
cda::clinicaldocument[cda:templateId/@root = 2.16.840.1.113883.17.3.10.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
classCode	@classCode	0..1		NO	ActClinicalDocument		DOCCLIN
moodCode	@moodCode	0..1		NO	ActMood		EVN
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	YES	CE	CONF-HP-21	LOINC 2.16.840.1.113883.6.1 EMSPCR
confidentialityCode	confidentialityCode	1..1		YES	CE		
copyTime	copyTime	0..1		YES	TS		
effectiveTime	effectiveTime	1..1	SHALL	YES	TS	CONF-HP-23	
id	id	1..1	SHALL	YES	II	CONF-HP-17	
languageCode	languageCode	1..1	SHALL	YES	CS	CONF-HP-24	
realmCode	realmCode	1..1	SHALL	YES	CS	CONF-HP-15	null null US
setId	setId	0..1	SHOULD	YES	II	CONF-EMSPatientCareReport-115	

emspatientcarereport::EmergencyRunReport							
cda::clinicaldocument[cda:templateId/@root = 2.16.840.1.113883.17.3.10.1]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
templateId	templateId	0..*		YES	II		2.16.840.1.113883.17.3.10.1
title	title	1..1	SHALL	YES	ST	CONF-HP-22	
versionNumber	versionNumber	0..1	SHOULD	YES	INT	CONF-EMSPatientCareReport-116	
authenticator	authenticator	0..*		YES	Authenticator		
author	author	1..*		YES	Author		
authorization	authorization	0..*		YES	Authorization		
billingSection	billingSection	1..1	SHOULD	YES	EMSBilling		
component	component	1..1		YES	Component2		
componentOf	componentOf	0..1		YES	Component1		
custodian	custodian	1..1		YES	Custodian		
dataEnterer	dataEnterer	0..1		YES	DataEnterer		
documentationOf	documentationOf	1..1	SHOULD	YES	DocumentationOf	CONF-EMSPatientCareReport-120	
informant	informant	0..*		YES	Informant12		
informationRecipient	informationRecipient	0..*		YES	InformationRecipient		
inFulfillmentOf	inFulfillmentOf	0..*		YES	InFulfillmentOf		
legalAuthenticator	legalAuthenticator	0..1		YES	LegalAuthenticator		
participant	participant	0..*		YES	Participant1		
recordTarget	recordTarget	1..1	SHOULD	YES	EMSRecordTarget	CONF-EMSPatientCareReport-117	
relatedDocument	relatedDocument	0..*		YES	RelatedDocument		
transportSection	transportSection	1..1	SHOULD	YES	EMSTransport		
typeId	typeId	1..1	SHALL	YES	InfrastructureRootType	CONF-HP-16	
vitalSignsSection	vitalSignsSection	1..1	SHOULD	YES	VitalSignsSection	CONF-EMSPatientCareReport-121	

Emergency Run Report example

```
<?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">
  <realmCode code="US"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.3"/>
  <templateId root="2.16.840.1.113883.17.3.10.1"/>
  <id root="384026307"/>
  <code code="EMSPCR" codeSystem="2.16.840.1.113883.6.1"
    codeSystemName="LOINC" displayName="EMS Patient Care Report"/>
  <title/>
```

```

<effectiveTime/>
<confidentialityCode code="Value"/>
<languageCode/>
<setId root="3decd2ff-0615-4331-b40e-21e44677bbd8"/>
<versionNumber/>
<recordTarget/>
<author/>
<custodian/>
<component>
  <structuredBody>
    <component>
      <section>
        <realmCode/>
        <typeId root="2.16.840.1.113883.1.3"/>
        <id root="1290717559"/>
        <code code="Value"/>
        <title/>
        <languageCode/>
        <entry>
          <act/>
        </entry>
        <entry>
          <encounter/>
        </entry>
        <entry>
          <observation/>
        </entry>
        <entry>
          <observationMedia/>
        </entry>
        <entry>
          <organizer/>
        </entry>
        <entry>
          <procedure/>
        </entry>
        <entry>
          <regionOfInterest classCode="ROIOVL" moodCode="EVN"/>
        </entry>
        <entry>
          <substanceAdministration classCode="SBADM"/>
        </entry>
        <entry>
          <supply classCode="SPLY"/>
        </entry>
      </section>
    </component>
    <component>
      <section/>
    </component>
  </structuredBody>
</component>
</ClinicalDocument>

```

Chapter

3

SECTION TEMPLATES

Topics:

- *EMS Billing*
 - *EMS Transport*
-

EMS Billing

[Section: templateId null]

1.

emspatientcarereport::EMSBilling							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
classCode	@classCode	0..1		NO	ActClass		DOCSECT
moodCode	@moodCode	0..1		NO	ActMood		EVN
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
sectionId	@sectionId	0..1		NO	String		
code	code	0..1		YES	CE		
confidentialityCode	confidentialityCode	0..1		YES	CE		
id	id	0..1		YES	II		
languageCode	languageCode	0..1		YES	CS		
realmCode	realmCode	0..*		YES	CS		
templateId	templateId	0..*		YES	II		
title	title	0..1		YES	ST		
author	author	0..*		YES	Author		
component	component	0..*		YES	Component5		
entry	entry	0..*		YES	Entry		
informant	informant	0..*		YES	Informant12		
subject	subject	0..1		YES	Subject		
text	text	0..1		YES	StrucDocText		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

EMS Billing example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="DOCSECT"
moodCode="EVN">
  <id root="1905775952"/>
  <title/>
</section>
```

EMS Transport

[Section: templateId null]

1.

emspatientcarereport::EMSTransport							
/cda:ClinicalDocument/cda:component/cda:structuredBody/cda:component/cda:section/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
classCode	@classCode	0..1		NO	ActClass		DOCSECT
moodCode	@moodCode	0..1		NO	ActMood		EVN
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
sectionId	@sectionId	0..1		NO	String		
code	code	0..1		YES	CE		
confidentialityCode	confidentialityCode	0..1		YES	CE		
id	id	0..1		YES	II		
languageCode	languageCode	0..1		YES	CS		
realmCode	realmCode	0..*		YES	CS		
templateId	templateId	0..*		YES	II		
title	title	0..1		YES	ST		
author	author	0..*		YES	Author		
component	component	0..*		YES	Component5		
entry	entry	0..*		YES	Entry		
informant	informant	0..*		YES	Informant12		
subject	subject	0..1		YES	Subject		
text	text	0..1		YES	StrucDocText		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

EMS Transport example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="DOCSECT"
moodCode="EVN">
  <id root="862235499"/>
  <title/>
</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:

- [*EMS Billing Entry*](#)
- [*EMS Patient*](#)
- [*EMS Patient Blood Pressure Organizer*](#)
- [*EMS Patient Body Temperature*](#)
- [*EMS Patient Diastolic Blood Pressure*](#)
- [*EMS Patient Heart Rate*](#)
- [*EMS Patient Respiratory Rate*](#)
- [*EMS Patient Role*](#)
- [*EMS Patient Systolic Blood Pressure*](#)
- [*EMS Record Target*](#)
- [*EMS Vital Signs Organizer*](#)

This section of the Implementation Guide describes other classes that are not CDA Clinical Documents, Sections, or Clinical Statements.

EMS Billing Entry

[Entry: templateId null]

1.

emspatientcarereport::EMSBillingEntry							
cda::entry[cda:templateId/@root =]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
contextConductIndicator	@contextConductIndicator	0..1		NO	Boolean		true
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
typeCode	@typeCode	0..1		NO	x_ActRelationshipEntry		COMP
realmCode	realmCode	0..*		YES	CS		
templateId	templateId	0..*		YES	II		
act	act	0..1		YES	Act		
encounter	encounter	0..1		YES	Encounter		
observation	observation	0..1		YES	Observation		
observationMedia	observationMedia	0..1		YES	ObservationMedia		
organizer	organizer	0..1		YES	Organizer		
procedure	procedure	0..1		YES	Procedure		
regionOfInterest	regionOfInterest	0..1		YES	RegionOfInterest		
substanceAdministration	substanceAdministration	0..1		YES	SubstanceAdministration		
supply	supply	0..1		YES	Supply		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

EMS Billing Entry example

```
<?xml version="1.0" encoding="UTF-8"?>
<entry xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"/>
```

EMS Patient

[Patient: templateId null]

1. **SHALL** contain zero or one [0..1] **administrativeGenderCode**, which **SHALL** be selected from ValueSet 2.16.840.1.113883.1.11.1 Administrative Gender (HL7 V3) **STATIC 1**
 - Patient's gender (NEMESIS EPatient.13)
2. Contains zero or one [0..1] **birthTime**
 - Patient's birth date (NEMESIS EPatient.17)
3. **SHALL** contain zero or one [0..1] **ethnicGroupCode**, which **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.837 Ethnicity Group **STATIC**

- Patient's ethnicity (derived from NEMESIS EPatient.14, patient race. NEMESIS uses the one-question format for this question, per OMB "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, January, 2003.)
4. Contains exactly one [1..1] **id**
 - An identifier for the patient (NEMESIS EPatient.12)
 5. Contains zero or more [0..*] **name**
 - Patient name (NEMESIS EPatient.02-04)
 6. **SHALL** contain zero or one [0..1] **raceCode**, which **SHALL** be selected from ValueSet 2.16.840.1.114222.4.11.836 Race Category **STATIC**
 - Patient race (derived from EPatient.14; see note on ethnicity)

emspatientcarereport::EMSPatient							
cda::patient[cda:templateId/@root =]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
classCode	@classCode	0..1		NO	EntityClass		PSN
determinerCode	@determinerCode	0..1		NO	EntityDeterminer		INSTANCE
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
administrativeGenderCode	administrativeGenderCode	0..1	SHALL	YES	CE		null
birthTime	birthTime	0..1		YES	TS		
ethnicGroupCode	ethnicGroupCode	0..1	SHALL	YES	CE		
id	id	1..1		YES	II		
maritalStatusCode	maritalStatusCode	0..1		YES	CE		
name	name	0..*		YES	PN		
raceCode	raceCode	0..1	SHALL	YES	CE		
realmCode	realmCode	0..*		YES	CS		
religiousAffiliationCode	religiousAffiliationCode	0..1		YES	CE		
sDTCRaceCode	sDTCRaceCode	0..*		YES	CE		
templateId	templateId	0..*		YES	II		
birthplace	birthplace	0..1		YES	Birthplace		
guardian	guardian	0..*		YES	Guardian		
languageCommunicationCode	languageCommunicationCode	0..1		YES	LanguageCommunication		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

EMS Patient example

```
<?xml version="1.0" encoding="UTF-8"?>
<patient xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="918472122"/>
  <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
codeSystemName="AdministrativeGenderCode"/>
  <raceCode code="Value"/>
  <ethnicGroupCode code="Value"/>
</patient>
```

```
</patient>
```

EMS Patient Blood Pressure Organizer

1. **SHALL** contain exactly one [1..1] **code** (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-EmergencyRunReport-112)
2. Contains zero or one [0..1] **eMSPatientDiastolicBloodPressure**, where its type is *EMS Patient Diastolic Blood Pressure*
 - a. Contains exactly one [1..1] *EMS Patient Diastolic Blood Pressure*
3. Contains zero or one [0..1] **eMSPatientSystolicBloodPressure**, where its type is *EMS Patient Systolic Blood Pressure*
 - a. Contains exactly one [1..1] *EMS Patient Systolic Blood Pressure*

EMS Patient Blood Pressure Organizer example

Unable to create XML Snippet

EMS Patient Body Temperature

1. **SHALL** contain exactly one [1..1] **code**, which **SHALL** be selected from ValueSet 2.16.840.1.113883.6.1 LOINC **STATIC** (CONF-EmergencyRunReport-104)
2. **MAY** contain zero or more [0..*] **methodCode**, which **MAY** be selected from ValueSet EMSTEMPVS_013 NEMESIS **STATIC** (CONF-EmergencyRunReport-105)

EMS Patient Body Temperature example

Unable to create XML Snippet

EMS Patient Diastolic Blood Pressure

1. **SHALL** contain exactly one [1..1] **code** (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-EmergencyRunReport-110)
2. **MAY** contain zero or more [0..*] **methodCode**, which **MAY** be selected from ValueSet EMSTEMPVS_015 NEMESIS **STATIC** (CONF-EmergencyRunReport-111)

EMS Patient Diastolic Blood Pressure example

Unable to create XML Snippet

EMS Patient Heart Rate

1. **SHALL** contain exactly one [1..1] **code** (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-EmergencyRunReport-106)
2. **SHALL** contain zero or more [0..*] **methodCode**, which **SHALL** be selected from ValueSet EMSTEMPVS_014 NEMESIS **STATIC** (CONF-EmergencyRunReport-107)

EMS Patient Heart Rate example

Unable to create XML Snippet

EMS Patient Respiratory Rate

1. **SHALL** contain exactly one [1..1] **code** (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-EmergencyRunReport-114)

EMS Patient Respiratory Rate example

Unable to create XML Snippet

EMS Patient Role

1. Contains zero or more [0..*] **addr**
 - Patient address (NEMESIS EPatient.05-10)
2. Contains zero or more [0..*] **telecom**
 - Patient telephone (NEMESIS EPatient.18)
3. Contains zero or one [0..1] **patient**, where its type is *EMS Patient*
 - a. Contains exactly one [1..1] *EMS Patient*

EMS Patient Role example

Unable to create XML Snippet

EMS Patient Systolic Blood Pressure

1. **SHALL** contain exactly one [1..1] **code** (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-EmergencyRunReport-108)
2. **MAY** contain zero or more [0..*] **methodCode** (CodeSystem: EMSTEMPVS_015 NEMESIS) (CONF-EmergencyRunReport-109)

EMS Patient Systolic Blood Pressure example

Unable to create XML Snippet

EMS Record Target

[RecordTarget: templateId null]

1. Contains zero or one [0..1] **patientRole**, where its type is *EMS Patient Role*
 - a. Contains exactly one [1..1] *EMS Patient Role*

emspatientcarereport::EMSRecordTarget							
cda::recordtarget[cda:templateId/@root =]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
contextControlCode	@contextControlCode	1		NO	ContextControl		OP

emspatientcarereport::EMSRecordTarget							
cda::recordtarget[cda:templateId/@root =]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
typeCode	@typeCode	0..1		NO	ParticipationType		RCT
realmCode	realmCode	0..*		YES	CS		
templateId	templateId	0..*		YES	II		
patientRole	patientRole	0..1		YES	EMSPatientRole		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

EMS Record Target example

```
<?xml version="1.0" encoding="UTF-8"?>
<recordtarget xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <patientRole/>
</recordtarget>
```

EMS Vital Signs Organizer

1. **SHALL** contain exactly one [1..1] **code** (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF-EmergencyRunReport-113)
2. Contains zero or one [0..1] **eMSPatientBloodPressureOrganizer**, where its type is *EMS Patient Blood Pressure Organizer*
 - a. Contains exactly one [1..1] *EMS Patient Blood Pressure Organizer*
3. Contains zero or one [0..1] **eMSPatientBodyTemperature**, where its type is *EMS Patient Body Temperature*
 - a. Contains exactly one [1..1] *EMS Patient Body Temperature*
4. Contains zero or one [0..1] **eMSPatientHeartRate**, where its type is *EMS Patient Heart Rate*
 - a. Contains exactly one [1..1] *EMS Patient Heart Rate*
5. Contains zero or one [0..1] **eMSPatientRespiratoryRate**, where its type is *EMS Patient Respiratory Rate*
 - a. Contains exactly one [1..1] *EMS Patient Respiratory Rate*

EMS Vital Signs Organizer example

Unable to create XML Snippet

Chapter

6

VALUE SETS

Topics:

- [My Problem Types](#)
- [My Problem Values](#)

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

My Problem Types

Value Set	My Problem Types - 1.2.3.4.100.1
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Definition	The SNOMED CT has been limited to a value set that indicates the level of medical judgment used to determine the existence of a problem.

Concept Code	Concept Name	Code System	Description
404684003	Finding	SNOMEDCT	
409586006	Complaint	SNOMEDCT	
282291009	Diagnosis	SNOMEDCT	
64572001	Condition	SNOMEDCT	
248536006	Functional limitation	SNOMEDCT	
418799008	Symptom	SNOMEDCT	
55607006	Problem	SNOMEDCT	

My Problem Values

Value Set	My Problem Values - 1.2.3.4.100.2
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Source	Veterans Administration/Kaiser Permanente (VA/KP)
Source URL	http://evs.nci.nih.gov/ftp1/FDA/ProblemList/
Definition	This describes the problem. Diagnosis/Problem List is broadly defined as a series of brief statements that catalog a patient s medical, nursing, dental, social, preventative and psychiatric events and issues that are relevant to that patient s healthcare (e.g., signs, symptoms, and defined conditions).

REFERENCES

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- HL7 Implementation Guide for CDA Release 2 Quality Reporting Document Architecture (QRDA) Draft Standard for Trial Use March 2009. Available at: [Quality Reporting Document Architecture \(QRDA\)](#)
- HL7 Implementation Guide for CDA Release 2 CDA for Public Health Case Reports (PHCR) Informative Standard October 2009. Available through [HL7](#) .
- HL7 Implementation Guide for CDA Release 2: NHSN Healthcare Associated Infection (HAI) Reports, Release 2 Draft Standard for Trial Use January 2009 Available at: [NHSN Healthcare Associated Infection \(HAI\) Reports](#)
- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A, (Editors). HL7 Clinical Document Architecture, Release 2.0. ANSI-approved HL7 Standard; May 2005. Ann Arbor, Mich.: Health Level Seven, Inc. Available through [HL7](#) or if an HL7 member with the following link: [CDA Release 2 Normative Web Edition](#).
- [LOINC®](#) : Logical Observation Identifiers Names and Codes, Regenstrief Institute.
- [SNOMED CT®](#) : SNOMED Clinical Terms SNOMED International Organization.
- Extensible Markup Language, www.w3.org/XML .
- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A., HL7 Clinical Document Architecture, Release 2. J Am Med Inform Assoc. 2006;13:30-39. Available at: <http://www.jamia.org/cgi/reprint/13/1/30> .
- Using SNOMED CT in HL7 Version 3; Implementation Guide, Release 1.5. Available through [HL7](#) or if an HL7 member with the following link: [Using SNOMED CT in HL7 Version 3](#)

