Reporting Death Information from a Clinical Setting to Vital Records
HL7 Public Health and Emergency Response WG
Structured Documents Work Group

HL7 Draft Standard for Trial Use
Implementation guide: US Realm

Contents

Acknowledgments

Revision History

Rev	Date	By Whom	Changes
New	January 2012	Mead Walker	
First draft for posting	March 2012	Mead Walker	Updated model content and publication format

Chapter

1

INTRODUCTION

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Overview

This US Realm implementation guide (IG) specifies a standard for transmitting death related information from a clinical setting to a vital statistics registry

Approach

The document focuses on the use case describing the communication of that portion of the death record collected by clinicians to appropriate local, state, and territorial vital statistics agencies using the HL7 Clinical Document Architecture. The goal of the implementation guide is to provide safe, reliable delivery of relevant clinical information to vital records. The use case supported by this implementation guide does not cover the data that is reported by funeral directors.

This use case is not intended to cover reporting to national public health agencies (NCHS).

The following assumption is a precondition for the use of this implementation guide: The data requirements for clinician supplied death information for items to be completed by the medical certifier according to the Edit Specifications for the U.S. Standard Certificate of Death. The jurisdiction may have additional data requirements and edit specifications that will be addressed at the jurisdictional level.

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), and balloted through Health Level Seven (HL7).

Scope

This specification covers the provision of death reporting data to the applicable jurisdictional vital reporting agency within the United States. This is a US realm specification.

Audience

This guide is designed for use by analysts and developers who require guidance on how best to use the HL7 Clinical Document Architecture for providing death related information.. Users of this guide must be familiar with the Clinical Document Architecture, and with the HL7 Version 3 models that it relies on. This guide is not intended to be a tutorial on that subject.

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. 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

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. The reader should note that, currently, the examples are based on fixed strings placed within the appropriate location of the XML document. Future releases of this guide are expected to contain a more realistic example.

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

Figure 3: ClinicalDocument example

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

HL7 Modeling Conventions

Participations, Roles and Entities

Recording information about the person or organization that participates in an act is an important feature of the CDA structure. To cite the most salient examples, the CDA document header has information about the document

author, its custodian, and the associated person - the "record target". Some of the other observations or acts within the Implementation Guide, also include participations such as "location". According to the HL7 Reference Information Model, this information is captured in a specific way. For example, a "Person"", playing the role of "Assigned Entity", participates in the document as its "Author". In each case, the relevant information is spread across three implementation guide elements: there is a participation, a role, and an entity. In some cases, the names are very similar, so that it looks as if information is being repeated. template.

Multiplicity within Act Relationships and Participations

A key task for the implementation guide is to convey information about which items are optional and which are required. You can see this information next to the elements within the document by viewing the statements of multiplicity, e.g., 0..1, and by reviewing the conditional expressions, SHALL, SHOULD, MAY. While reviewing the document it is important to keep in mind that much information is captured as an observation. In the typical case, there will be an observation that is associated, as an entry, with the document body. In each case, there is an act relationship class that associates the observation with the document body. The relevant multiplicity is captured within the document body section, and shows whether the observation is required or not, and whether it repeats. However, within each observation, the multipicity indicates that, if the observation is present, it must have a value for code, for value, for class code, for mood code.

Chapter

2

DOCUMENT TEMPLATES

Topics:

- *Reporting Death Information from a clinical setting to Vital Records*

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

Reporting Death Information from a clinical setting to Vital Records

[ClinicalDocument: templateId `2.16.840.1.113883.10.20.26.1`]

1. **SHALL** contain exactly one [1..1] **@classCode**="DOCCLIN" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **SHALL** contain exactly one [1..1] **code/@code**="69409-1" *U.S. standard certificate of death - 2003 revision* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
    *   The .code value indicates that the document contans death information.
4. **SHOULD** contain exactly one [1..1] **confidentialityCode**, where the @code **SHOULD** be selected from (CodeSystem: `2.16.840.1.11.3883.5.25 Confidentiality`)
    *   An indication of the level of confidentiality with which the document needs to be managed.
5. **SHALL** contain exactly one [1..1] **id**
    *   Provide the identifier assigned to the document by the healthcare provider acting as a custodian of the information.
6. **SHOULD** contain exactly one [1..1] **languageCode**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.11.11526 HumanLanguage`)
    *   The language used for text within the document.
7. **SHALL** contain exactly one [1..1] **realmCode**
8. **SHOULD** contain zero or one [0..1] **title**
    *   Provide a title for the death information document.
9. **SHALL** contain exactly one [1..1] **effectiveTime**
    *   The point in time at which the document was completed.
10. **SHALL** contain exactly one [1..1] **custodian**

    The custodian represents the organization that is in charge of maintaining the document. The custodian is the steward that is entrusted with the care of the document. Every CDA document has exactly one custodian.
    a. This custodian **SHALL** contain exactly one [1..1] **assignedCustodian**
        a. This assignedCustodian Contains exactly one [1..1] **representedCustodianOrganization**
            a. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **name**
            b. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **id**
11. **SHALL** contain exactly one [1..1] **component**
    a. Contains exactly one [1..1] *Death Report Document Body* (templateId: `2.16.840.1.113883.10.20.26.1.1`)
12. **SHALL** contain exactly one [1..1] **author**

    The author participation contains information about the person who authored the document.
    a. This author **SHALL** contain exactly one [1..1] **@typeCode**="AUT"
    b. This author **SHALL** contain exactly one [1..1] **time** with data type TS

    The date/time of authorship is required by CDA. It may be set equal to the document creation date/time.
    c. This author **SHALL** contain exactly one [1..1] **assignedAuthor**
        a. This assignedAuthor **SHALL** contain exactly one [1..1] **@classCode**="ASSIGNED"

            INLINE
        b. This assignedAuthor **SHALL** contain exactly one [1..1] **id**
        c. This assignedAuthor **SHALL** contain exactly one [1..1] **assignedPerson**

      a. This assignedPerson **SHALL** contain exactly one [1..1] **@classCode**="PSN"

      b. This assignedPerson **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE"

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

        Provide the name of the clinician authoring the report.

13. **SHALL** contain exactly one [1..1] **recordTarget**

    The recordTarget participation contains nformation that directly refers to the deceased.

    a. This recordTarget **SHALL** contain exactly one [1..1] **@typeCode**="RCT"

    b. This recordTarget **SHALL** contain exactly one [1..1] **patientRole**

      a. This patientRole **SHALL** contain exactly one [1..1] **@classCode**="PAT"

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

        . It is expected that Social Security Number will be provided if it is available. If SSN is not availaible, a null flavor should be provided.

      c. This patientRole **SHOULD** contain exactly one [1..1] **addr**

        Street address, city, state and zip code are expected.

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

        a. This patient **SHALL** contain exactly one [1..1] **@classCode**="PSN"

        b. This patient **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE"

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

        d. This patient **SHOULD** contain exactly one [1..1] **birthTime**

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

    e. This patientRole **SHALL** satisfy: Value patient.id root with 2.16.840.1.113883.4.1 (US Social Security Number)

vsdr::Reporting death information from a clinical setting to vital records							
cda::clinicaldocument[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClinicalDocument		DOCCLIN
moodCode	@moodCode	1..1	SHALL	NO	ActMood		EVN
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	YES	CE		LOINC 2.16.840.1.113883.6.1 null
confidentialityCode	confidentialityCode	1..1	SHOULD	YES	CE		Confidentiality 2.16.840.1.11.3883.5.25
copyTime	copyTime	0..1		YES	TS		
effectiveTime	effectiveTime	1..1	SHALL	YES	TS		
id	id	1..1	SHALL	NO	II		
languageCode	languageCode	1..1	SHOULD	YES	CS		HumanLanguage 2.16.840.1.113883.11.11526
realmCode	realmCode	1..1	SHALL	NO	CS		
setId	setId	0..1		YES	II		

vsdr::Reporting death information from a clinical setting to vital records							
cda::clinicaldocument[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1
title	title	0..1	SHOULD	YES	ST		
versionNumber	versionNumber	0..1		YES	INT		
authenticator	authenticator	0..*		YES	Authenticator		
author	author	1..1	SHALL	YES	Author		
authorization	authorization	0..*		YES	Authorization		
component	component	1..1		YES	Component2		
componentOf	componentOf	0..1		YES	Component1		
custodian	custodian	1..1	SHALL	YES	Custodian		
dataEnterer	dataEnterer	0..1		YES	DataEnterer		
death Report Document Body	death Report Document Body	1..1	SHALL	YES	Death Report Document Body		
documentationOf	documentationOf	0..*		YES	DocumentationOf		
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	SHALL	YES	RecordTarget		
relatedDocument	relatedDocument	0..*		YES	RelatedDocument		
typeId	typeId	1..1		YES	InfrastructureRootTypeId		

Reporting Death Information from a clinical setting to Vital Records 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">
  <realmCode code="Code forrealmCode"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.26.1"/>
  <id root="387478255" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" displayName="U.S. standard
 certificate of death - 2003 revision"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="2062285342"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="1245215820" extension="MDHT"/>
      <addr/>
      <patient classCode="PSN" determinerCode="INSTANCE">
```

```xml
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
codeSystemName="AdministrativeGenderCode"/>
      </patient>
    </patientRole>
 </recordTarget>
 <author typeCode="AUT">
    <time/>
    <assignedAuthor classCode="ASSIGNED">
      <id root="616469913" extension="MDHT"/>
      <assignedPerson classCode="PSN" determinerCode="INSTANCE"/>
    </assignedAuthor>
 </author>
 <custodian>
    <assignedCustodian>
      <representedCustodianOrganization/>
    </assignedCustodian>
 </custodian>
 <component>
    <structuredBody>
      <component>
        <section>
          <realmCode code="Code forrealmCode"/>
          <id root="1657863315" extension="MDHT"/>
          <code code="996088426"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="1624070717"/>
          <languageCode code="Code forlanguageCode"/>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.1.7"/>
              <id root="38378562" extension="MDHT"/>
              <code code="69437-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Death Certifier"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
              <performer typeCode="PRF"/>
            </observation>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.1.12"/>
              <id root="1449030027" extension="MDHT"/>
              <code codeSystem="2.16.840.1.113883.6.1" displayName="Timing of
recent pregancy related to death"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
```

```
            </entry>
            <entry>
              <observation classCode="OBS" moodCode="EVN">
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.14"/>
                <id root="648757211" extension="MDHT"/>
                <code code="69443-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Tobacco Use"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <languageCode code="Code forlanguageCode"/>
              </observation>
            </entry>
            <entry>
              <organizer classCode="CLUSTER" moodCode="EVN">
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.9"/>
                <id root="728125770" extension="MDHT"/>
                <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury Cluster"/>
                <statusCode code="completed"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <component typeCode="COMP"/>
                <component typeCode="COMP"/>
                <component typeCode="COMP"/>
                <component typeCode="COMP"/>
              </organizer>
            </entry>
            <entry>
              <organizer>
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.6"/>
                <id root="1402159748" extension="MDHT"/>
                <code code="69453-9" codeSystem="2.16.840.1.113883.6.1"
displayName="Cause Of Death"/>
                <statusCode code="completed"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <component typeCode="COMP"/>
                <component typeCode="COMP"/>
                <component typeCode="COMP"/>
              </organizer>
            </entry>
            <entry>
              <observation>
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.2"/>
                <id root="1212687199" extension="MDHT"/>
                <code codeSystem="2.16.840.1.113883.6.1" displayName="Autopsy
Status"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <languageCode code="Code forlanguageCode"/>
                <performer typeCode="PRF"/>
              </observation>
```

```xml
            </entry>
            <entry>
              <observation>
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.3"/>
                <id root="2086074661" extension="MDHT"/>
                <code codeSystem="2.16.840.1.113883.6.1" displayName="Autopsy
 results available"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <languageCode code="Code forlanguageCode"/>
              </observation>
            </entry>
            <entry>
              <observation>
                <realmCode code="Code forrealmCode"/>
                <id root="1224801457" extension="MDHT"/>
                <code code="1672608277"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <languageCode code="Code forlanguageCode"/>
              </observation>
            </entry>
            <entry>
              <observation classCode="OBS">
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.4"/>
                <id root="644315241" extension="MDHT"/>
                <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Coroner Assignment"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <languageCode code="Code forlanguageCode"/>
              </observation>
            </entry>
            <entry>
              <observation classCode="OBS" moodCode="EVN">
                <realmCode code="Code forrealmCode"/>
                <templateId root="2.16.840.1.113883.10.20.26.1.8"/>
                <id root="1337679696" extension="MDHT"/>
                <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
                <effectiveTime>
                  <low value="2012"/>
                  <high value="2012"/>
                </effectiveTime>
                <languageCode code="Code forlanguageCode"/>
              </observation>
            </entry>
          </section>
        </component>
      </structuredBody>
  </component>
</ClinicalDocument>
```

Chapter

3

SECTION TEMPLATES

Topics:

- *Death Report Document Body*

Death Report Document Body

[Section: templateId `2.16.840.1.113883.10.20.26.1.1`]

1. **SHALL** contain zero or one [0..1] **code**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - A code to indicate this is the section containing death reporting information.
2. Contains zero or one [0..1] **text**
   - Contains, as text entries that can be rendered using a browser, the content of the structured information from the entries within the section.
3. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Time of Death* (templateId: `2.16.840.1.113883.10.20.26.1.13`)
4. **SHALL** contain exactly one [1..1] **entry**
   - The report is expected to capture information about the physical location of death, either as an address or as a description.
   a. Contains exactly one [1..1] *Location of Death* (templateId: `2.16.840.1.113883.10.20.26.1.10`)
5. **MAY** contain zero or one [0..1] **entry**
   a. Contains exactly one [1..1] *Death Certification* (templateId: `2.16.840.1.113883.10.20.26.1.7`)
6. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Manner of Death* (templateId: `2.16.840.1.113883.10.20.26.1.11`)
7. **MAY** contain zero or one [0..1] **entry**
   a. Contains exactly one [1..1] *Pregnancy Status* (templateId: `2.16.840.1.113883.10.20.26.1.12`)
8. **SHOULD** contain zero or one [0..1] **entry**
   a. Contains exactly one [1..1] *Tobacco Use* (templateId: `2.16.840.1.113883.10.20.26.1.14`)
9. **SHOULD** contain zero or one [0..1] **entry**
   a. Contains exactly one [1..1] *Injury* (templateId: `2.16.840.1.113883.10.20.26.1.9`)
10. **SHALL** contain exactly one [1..1] **entry**
    a. Contains exactly one [1..1] *Death Causal Information* (templateId: `2.16.840.1.113883.10.20.26.1.6`)
11. **SHALL** contain exactly one [1..1] **entry**
    a. Contains exactly one [1..1] *Autopsy Performance* (templateId: `2.16.840.1.113883.10.20.26.1.2`)
12. **MAY** contain zero or one [0..1] **entry**
    a. Contains exactly one [1..1] *Autopsy Results* (templateId: `2.16.840.1.113883.10.20.26.1.3`)
13. **MAY** contain zero or one [0..1] **entry**
    a. Contains exactly one [1..1] *Coroner Referral* (templateId: `2.16.840.1.113883.10.20.26.1.5`)
14. **SHALL** contain exactly one [1..1] **entry**
    a. Contains exactly one [1..1] *Coroner Case Transfer* (templateId: `2.16.840.1.113883.10.20.26.1.4`)
15. **SHALL** contain exactly one [1..1] **entry**
    a. Contains exactly one [1..1] *Death Location Type* (templateId: `2.16.840.1.113883.10.20.26.1.8`)

Death Report Document Body example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="914307331" extension="MDHT"/>
```

```xml
  <code code="1924392694"/>
  <title>TEXT FOR TITLE</title>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <templateId root="2.16.840.1.113883.10.20.26.1.7"/>
      <id root="1528735073" extension="MDHT"/>
      <code code="69437-2" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Death Certifier"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
      <performer typeCode="PRF">
        <assignedEntity classCode="ASSIGNED">
          <code codeSystem="2.16.840.1.114222.4.11.6001"
codeSystemName="Certifier Types"/>
        </assignedEntity>
      </performer>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <templateId root="2.16.840.1.113883.10.20.26.1.12"/>
      <id root="95568158" extension="MDHT"/>
      <code codeSystem="2.16.840.1.113883.6.1" displayName="Timing of recent
pregancy related to death"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.1.14"/>
      <id root="722606563" extension="MDHT"/>
      <code code="69443-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Tobacco Use"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <organizer classCode="CLUSTER" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.1.9"/>
      <id root="906054802" extension="MDHT"/>
      <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury Cluster"/>
      <statusCode code="completed"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
```

```xml
          <component typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
              <code code="11374-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury incident description"/>
            </observation>
          </component>
          <component typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
              <code code="69444-8" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Did death result from injury at work"/>
            </observation>
          </component>
          <component typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
              <code code="69448-9" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Injury leading to death associated with
transportation event"/>
            </observation>
          </component>
          <component typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
              <code code="69451-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Transportation role of decedent"/>
            </observation>
          </component>
        </organizer>
      </entry>
      <entry>
        <organizer>
          <templateId root="2.16.840.1.113883.10.20.26.1.6"/>
          <id root="1693372647" extension="MDHT"/>
          <code code="69453-9" codeSystem="2.16.840.1.113883.6.1"
displayName="Cause Of Death"/>
          <statusCode code="completed"/>
          <effectiveTime>
            <low value="2012"/>
            <high value="2012"/>
          </effectiveTime>
          <component typeCode="COMP">
            <sequenceNumber value="1"/>
            <observation classCode="OBS" moodCode="EVN">
              <code code="21984-0" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Cause of Death"/>
            </observation>
          </component>
          <component typeCode="COMP">
            <observation classCode="OBS" moodCode="EVN">
              <code code="69441-4" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Other Significant Condition"/>
            </observation>
          </component>
          <component typeCode="COMP">
            <sequenceNumber value="1"/>
            <observation classCode="OBS" moodCode="EVN">
              <code code="69440-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Disease onset to death interval"/>
            </observation>
          </component>
        </organizer>
      </entry>
      <entry>
        <observation>
          <templateId root="2.16.840.1.113883.10.20.26.1.2"/>
          <id root="1094519191" extension="MDHT"/>
```

```xml
          <code codeSystem="2.16.840.1.113883.6.1" displayName="Autopsy Status"/>
          <effectiveTime>
            <low value="2012"/>
            <high value="2012"/>
          </effectiveTime>
          <performer typeCode="PRF">
            <assignedEntity classCode="ASSIGNED"/>
          </performer>
        </observation>
      </entry>
      <entry>
        <observation>
          <templateId root="2.16.840.1.113883.10.20.26.1.3"/>
          <id root="489104827" extension="MDHT"/>
          <code codeSystem="2.16.840.1.113883.6.1" displayName="Autopsy results
 available"/>
          <effectiveTime>
            <low value="2012"/>
            <high value="2012"/>
          </effectiveTime>
        </observation>
      </entry>
      <entry>
        <observation>
          <id root="1073194271" extension="MDHT"/>
          <code code="1881855674"/>
          <effectiveTime>
            <low value="2012"/>
            <high value="2012"/>
          </effectiveTime>
        </observation>
      </entry>
      <entry>
        <observation classCode="OBS">
          <templateId root="2.16.840.1.113883.10.20.26.1.4"/>
          <id root="281913885" extension="MDHT"/>
          <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Coroner Assignment"/>
          <effectiveTime>
            <low value="2012"/>
            <high value="2012"/>
          </effectiveTime>
        </observation>
      </entry>
      <entry>
        <observation classCode="OBS" moodCode="EVN">
          <templateId root="2.16.840.1.113883.10.20.26.1.8"/>
          <id root="1844453330" extension="MDHT"/>
          <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
          <effectiveTime>
            <low value="2012"/>
            <high value="2012"/>
          </effectiveTime>
        </observation>
      </entry>
</section>
```

Chapter

4

CLINICAL STATEMENT TEMPLATES

Topics:

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.

Autopsy Performance

[Observation: templateId `2.16.840.1.113883.10.20.26.1.2`]

Information on the performance of an autopsy. Minimally, information on whether or not an autopsy was performed is recorded.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **SHALL** contain exactly one [1..1] **code/@code**="21986-5" *Autopsy Status* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
4. **SHALL** contain exactly one [1..1] **effectiveTime**

    • If an autopsy is performed, this field is valued with the date and time the autopsy was begun and completed.
5. **SHALL** contain exactly one [1..1] **value** with data type BL

    • This field indicates whether an autopsy was performed.
6. **SHALL** contain zero or one [0..1] **performer**

    a. This performer **SHALL** contain zero or one [0..1] **@typeCode**="PRF"
    b. This performer **SHALL** contain zero or one [0..1] **assignedEntity**

        a. This assignedEntity **SHALL** contain zero or one [0..1] **@classCode**="ASSIGNED"
        b. This assignedEntity Contains zero or one [0..1] **assignedPerson**

            a. This assignedPerson **SHALL** contain zero or one [0..1] **@classCode**="PSN"
            b. This assignedPerson **SHALL** contain zero or one [0..1] **@determinerCode**="INSTANCE"
            c. This assignedPerson **SHALL** contain exactly one [1..1] **name**

            This field is valued with the authority who performed the autopsy.

vsdr::Autopsy Performance							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.2]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 null
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	1..1	SHALL	YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		

vsdr::Autopsy Performance							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.2]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.2
text	text	0..1		YES	ED		
value	value	1..1	SHALL	YES	BL		
author	author	0..*		YES	Author		
autopsyPerformer	autopsyPerformer	0..1	SHALL	YES	AutopsyPerformer		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Autopsy Performance example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.26.1.2"/>
  <id root="296282858" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" displayName="Autopsy Status"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="971807657" extension="MDHT"/>
      <assignedPerson classCode="PSN" determinerCode="INSTANCE"/>
    </assignedEntity>
  </performer>
</observation>
```

Autopsy Results

[Observation: templateId `2.16.840.1.113883.10.20.26.1.3`]

The template contains information regarding the availability of results from an autopsy.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001` HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="69436-4" *Autopsy results available* (CodeSystem: `2.16.840.1.113883.6.1` LOINC)
4. **SHALL** contain exactly one [1..1] **value** with data type BL

   • A Boolean indicator (Yes/No) that tells whether an autopsy report is available for the deceased.

vsdr::Autopsy Results							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.3]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 null
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.3
text	text	0..1		YES	ED		
value	value	1..1	SHALL	YES	BL		
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		

vsdr::Autopsy Results							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.3]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Autopsy Results example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.26.1.3"/>
  <id root="1314426952" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" displayName="Autopsy results
 available"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Coroner Case Transfer

[Observation: templateId 2.16.840.1.113883.10.20.26.1.4]

An observation to indicate whether or not the case has been transferred to a coroner or medical examiner for investigative purposes.

1. **SHOULD** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="LOINC TBD" *Coroner Assignment* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
4. **MAY** contain zero or one [0..1] **id**

   • The identifier assigned to a case of death by the coroner or medical examiner.
5. **SHALL** contain exactly one [1..1] **value** with data type BL

   • This field indicates whether the case was transferred to a coroner or medical examiner.

vsdr::Coroner Case Transfer							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.4]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHOULD	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 LOINC TBD
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..1	MAY	YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.4
text	text	0..1		YES	ED		
value	value	1..1	SHALL	YES	BL		
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Coroner Case Transfer example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="OBS">
  <templateId root="2.16.840.1.113883.10.20.26.1.4"/>
  <id root="566640009" extension="MDHT"/>
  <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Coroner Assignment"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Coroner Referral

[Observation: templateId `2.16.840.1.113883.10.20.26.1.5`]

The template contains information regarding the referral of a case to the coroner or medical examiner.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001` HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="69438-0" *Coroner Referral Reason* (CodeSystem: `2.16.840.1.113883.6.1` LOINC)
4. **SHALL** contain exactly one [1..1] **value** with data type ED

   - A note that is intended to record the reason the case was forwarded to a coroner or medical examiner.

vsdr::Coroner Referral							
cda::observation[cda:templateId/@root =]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		

vsdr::Coroner Referral							
cda::observation[cda:templateId/@root =]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		
text	text	0..1		YES	ED		
value	value	1..1	SHALL	YES	ED		
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Coroner Referral example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="593584461" extension="MDHT"/>
  <code code="1213674771"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="ED">Text Value</value>
</observation>
```

Death Causal Information

[Organizer: templateId `2.16.840.1.113883.10.20.26.1.6`]

The template containts information provided by the clinican to indicate the cause or causes behind the person's death. The information includes the chain of events that directly caused the death, and includes other significant conditions contributing to death. There may be up to four causal elements provided, along with a single statement of the other significant conditions.

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

2. **SHALL** contain exactly one [1..1] **@moodCode**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **SHALL** contain exactly one [1..1] **code/@code**=`"69453-9"` *Cause Of Death* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
4. **SHALL** contain exactly one [1..1] **statusCode**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.5.14 HL7ActStatus`)
5. **SHALL** contain [1..4] **component**

   Up to four events - diseases, injuries, or complications may be entered to record the cause of death. These are entered in a defined sequence, and the order of each is recorded using sequence number. In addition, the approximate time interval from onset until death is captured as well. this information is captured in the related Component Death Cause Interval observation. The act relationship sequence number value that is captured is used to associate the time between onset and death with the relevant event. Within the collection of component causes that are provided, the first in the sequence is the immediate cause of death, while the last in the sequence is the underlying cause of death.

   a. Such components **SHALL** contain exactly one [1..1] **@typeCode**=`"COMP"`
   b. Such components **SHALL** contain exactly one [1..1] **sequenceNumber**
   c. Such components **SHALL** contain exactly one [1..1] **observation**

      a. This observation **SHALL** contain exactly one [1..1] **@classCode**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
      b. This observation **SHALL** contain exactly one [1..1] **@moodCode**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
      c. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"21984-0"` *Cause of Death* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
      d. This observation **SHALL** contain at least one [1..*] **value** with data type CD

      Aset of codes that indicates one or more diseases, injuries, or complications that were implicated as a cause of the person's death. Code is optional, and original text is required. In order to comply with NCHS edit specifications, the maximum length of the original text values (combined across the set of concept descriptors) is 120 characters. The immediate cause of death and the underlying cause of death must be reported. Additional causes of death up to two may be recorded. Death causes are ordered sequentially with the immediate cause of death given the sequence number "1", and the underlying cause of death being given the highest sequence number among the set of cited causes. Each cause of death is associated with a numeric observation Death Cause Interval which captures the approximate interval between the onset of the death cause (condition) and death. This linkage is implemented through the use of actRelationship.sequenceNumber.

6. **SHOULD** contain zero or one [0..1] **component**

   a. This component **SHALL** contain exactly one [1..1] **@typeCode**=`"COMP"`
   b. This component **SHALL** contain zero or one [0..1] **observation**

      a. This observation **SHALL** contain exactly one [1..1] **@classCode**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
      b. This observation **SHALL** contain exactly one [1..1] **@moodCode**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
      c. This observation **SHALL** contain exactly one [1..1] **code/@code**=`"69441-4"` *Other Significant Condition* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
      d. This observation **SHALL** contain exactly one [1..1] **value** with data type ED

      Descriptive text that provides information on a significant condition or conditions that contributed to death, but did not result in the underlying cause that is elsewhere described. In order to comply with NCHS edit specifications, the maximum length is 240 characters.

7. **SHALL** contain [1..4] **component**

   Up to four events - diseases, injuries, or complications may be entered to record the cause of death. These are entered in a defined sequence, and the order of each is recorded using sequence number. The act relationship

sequence number value that is captured is used to associate the time between onset and death with the relevant death causal event.

a. Such components **SHALL** contain zero or one [0..1] **@typeCode**="COMP"

b. Such components **SHALL** contain zero or one [0..1] **sequenceNumber**

c. Such components **SHALL** contain zero or one [0..1] **observation**

    a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)

    b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)

    c. This observation **SHALL** contain exactly one [1..1] **code/@code**="69440-6" *Disease onset to death interval* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)

    d. This observation **SHALL** contain zero or more [0..*] **value** with data type ED

A measure of the time interval between the onset of the disease, injury or complication, and the person's death. The data to be included will vary from statements of time intervals to text statements such as "many months", "days", "unknown". Each death cause interval value is associated with a cause of death observation Cause of Death - that identifies the condition associated with the time interval. This linkage is implemented through the use of actRelationship.sequenceNumber.

vsdr::Death Causal Information							
cda::organizer[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.6]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	x_ActClassDocumentEntryOrganizer		BATTERY
moodCode	@moodCode	1..1	SHALL	NO	ActMood		APT
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 69453-9
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
realmCode	realmCode	0..*		YES	CS		
statusCode	statusCode	1..1	SHALL	YES	CS		HL7ActStatus 2.16.840.1.113883.5.14
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.6
author	author	0..*		YES	Author		
component	component	0..*		YES	Component4		
componentCause	componentCause	1..4	SHALL	YES	ComponentCause		
componentDeathCauseInterval	componentDeathCauseInterval	1..4	SHALL	YES	ComponentDeathCauseInterval		
componentOtherSignificantCondition	componentOtherSignificantCondition	0..*	SHOULD	YES	ComponentOtherSignificantCondition		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		

vsdr::Death Causal Information							
cda::organizer[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.6]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
reference	reference	0..*		YES	Reference		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRoot TypeId		

Death Causal Information example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<organizer xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.26.1.6"/>
  <id root="1157720476" extension="MDHT"/>
  <code code="69453-9" codeSystem="2.16.840.1.113883.6.1" displayName="Cause
 Of Death"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <component typeCode="COMP">
    <sequenceNumber value="1"/>
    <observation classCode="OBS" moodCode="EVN">
      <code code="21984-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Cause of Death"/>
      <value xsi:type="CD" code="1792923203"/>
    </observation>
  </component>
  <component typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="69441-4" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Other Significant Condition"/>
      <value xsi:type="ED">Text Value</value>
    </observation>
  </component>
  <component typeCode="COMP">
    <sequenceNumber value="1"/>
    <observation classCode="OBS" moodCode="EVN">
      <code code="69440-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Disease onset to death interval"/>
      <value xsi:type="ED">Text Value</value>
    </observation>
  </component>
</organizer>
```

Death Certification

[Observation: templateId `2.16.840.1.113883.10.20.26.1.7`]

The template contains information on the the signing and identification of the death certificate. This information may not be available if a case has been assigned to the coroner or medical examiner.

1. **SHALL** contain exactly one [1..1] **@classCode**
2. **SHALL** contain exactly one [1..1] **@moodCode**

3. **SHALL** contain exactly one [1..1] **code/@code**="69437-2" *Death Certifier* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
4. **SHALL** contain zero or one [0..1] **effectiveTime**
   - Provide the date and time at which the death certificate was signed. A value is required if the case has not been assigned to a coronor/medical examiner.
5. **SHALL** contain exactly one [1..1] **performer**
   a. This performer **SHALL** contain exactly one [1..1] **@typeCode**="PRF"
   b. This performer **SHALL** contain exactly one [1..1] **assignedEntity**
      a. This assignedEntity **SHALL** contain exactly one [1..1] **@classCode**="ASSIGNED"
      b. This assignedEntity **SHALL** contain exactly one [1..1] **addr**

      The postal address used to locate the clinician or coroner at the time of death certification. The element is required if the death has been certified.

      c. This assignedEntity **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.114222.4.11.6001 Certifier Types)

      A coded value that indicates the role played by the person certifying the death. E.g., coroner, physician.

      d. This assignedEntity **SHALL** contain exactly one [1..1] **assignedPerson**
         a. This assignedPerson **SHALL** contain exactly one [1..1] **@classCode**="PSN"
         b. This assignedPerson **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE"
         c. This assignedPerson **SHALL** contain exactly one [1..1] **name**

         This field is valued with the person who signed the death certificate. The full name of the certifier is required. A value is required if the case has not been assigned to a coroner/medical examiner.

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

      One or more dentifiers for the certifying clinician. The state license number is required.

vsdr::Death Certification							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.7]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 69437-2
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1	SHALL	YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		

vsdr::Death Certification							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.7]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.7
text	text	0..1		YES	ED		
value	value	0..*		YES	ANY		
author	author	0..*		YES	Author		
certificationPerformer	certificationPerformer	1	SHALL	YES	CertificationPerformer		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Death Certification example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.26.1.7"/>
  <id root="949753162" extension="MDHT"/>
  <code code="69437-2" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Death Certifier"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="1133353251" extension="MDHT"/>
      <code codeSystem="2.16.840.1.114222.4.11.6001" codeSystemName="Certifier
 Types"/>
      <addr/>
      <assignedPerson classCode="PSN" determinerCode="INSTANCE"/>
    </assignedEntity>
  </performer>
</observation>
```

Death Location Type

[Observation: templateId `2.16.840.1.113883.10.20.26.1.8`]

This template makes it possible to record the type of location, e.g.,hospital inpatient room, at which the person died.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **SHALL** contain exactly one [1..1] **code/@code**="LOINC TBD" (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
4. **SHALL** contain exactly one [1..1] **value** with data type CE, where the @code **SHALL** be selected from ValueSet *DeathLocationTypeCodes* **STATIC**
   • A code value to indicate the type of location where the patient died.

Death Location Type example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.1.8"/>
  <id root="967693906" extension="MDHT"/>
  <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CE" code="2038150951"/>
</observation>
```

Injury

[Organizer: templateId `2.16.840.1.113883.10.20.26.1.9`]

The template includes information, only provided if relevant, on an injury that contributed to the person's death.

1. **SHALL** contain exactly one [1..1] **@classCode**="CLUSTER" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **SHALL** contain exactly one [1..1] **code/@code**="LOINC TBD" *Injury Cluster* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
4. **SHALL** contain exactly one [1..1] **statusCode**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.5.14 HL7ActStatus`)
5. **SHALL** contain zero or one [0..1] **component**
   a. This component **SHALL** contain zero or one [0..1] **@typeCode**="COMP"
   b. This component Contains zero or one [0..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
      b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
      c. This observation **SHALL** contain exactly one [1..1] **code/@code**="11374-6" *Injury incident description* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)

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

       A text description of how the injury occurred.

    e. This observation **SHALL** contain zero or more [0..*] **value** with data type BL

       A Boolean indicator (Yes/No) that tells whether the death resulted from an injury.

    f. This observation **MAY** contain exactly one [1..1] **participant**

       a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="LOC"

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

          a. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="ISDLOC"

          b. This participantRole **MAY** contain exactly one [1..1] **addr**

            The street address for the place where the injury occurred. Required if the decedent suffered an injury leading to death.

          c. This participantRole **MAY** contain zero or one [0..1] **scopingEntity**

            a. This scopingEntity **SHALL** contain zero or one [0..1] **@classCode**="PLC"

            b. This scopingEntity Contains zero or one [0..1] **@determinerCode**="INSTANCE"

            c. This scopingEntity **MAY** contain zero or one [0..1] **desc**

               A description of the type of place where the injury occurred. Possible entries are "at home", "farm", "factory", "office building", "restaurant". Required if the decedent suffered an injury leading to death.

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

6. **MAY** contain zero or one [0..1] **component**

    a. This component **SHALL** contain zero or one [0..1] **@typeCode**="COMP"

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

       a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)

       b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)

       c. This observation **SHALL** contain exactly one [1..1] **code/@code**="69444-8" *Did death result from injury at work* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)

       d. This observation **SHALL** contain zero or more [0..*] **value** with data type BL

       A Boolean indicator (Yes/No) that tells whether or not the injury occurred while the person was at work. Required if the decedent suffered an injury leading to death.

7. **MAY** contain zero or one [0..1] **component**

    a. This component **SHALL** contain zero or one [0..1] **@typeCode**="COMP"

    b. This component Contains zero or one [0..1] **observation**

       a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)

       b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)

       c. This observation **SHALL** contain exactly one [1..1] **code/@code**="69448-9" *Injury leading to death associated with transportation event* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)

       d. This observation **SHALL** contain zero or more [0..*] **value** with data type BL

       A Boolean indicator (Yes/No) that tells whether the injury leading to death was associated with a transportation event. Required if the decedent suffered an injury leading to death.

8. **MAY** contain zero or one [0..1] **component**

    a. This component **SHALL** contain zero or one [0..1] **@typeCode**="COMP"

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

    a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)

    b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)

    c. This observation **SHALL** contain exactly one [1..1] **code/@code**="69451-3" *Transportation role of decedent* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)

    d. This observation **SHALL** contain zero or more [0..*] **value** with data type BL

    A coded value that states, if the injury was related to transportation, the specific role played by the decedent, e.g. driver, passenger. Required if the decedent suffered an injury leading to death.

Injury example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<organizer xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="CLUSTER" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.1.9"/>
  <id root="1872892676" extension="MDHT"/>
  <code code="LOINC TBD" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Injury Cluster"/>
  <statusCode code="completed"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <component typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="11374-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Injury incident description"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
      <value xsi:type="BL"/>
      <participant typeCode="LOC"/>
    </observation>
  </component>
  <component typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="69444-8" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Did death result from injury at work"/>
      <value xsi:type="BL"/>
    </observation>
  </component>
  <component typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="69448-9" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Injury leading to death associated with
transportation event"/>
      <value xsi:type="BL"/>
    </observation>
  </component>
  <component typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="69451-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Transportation role of decedent"/>
      <value xsi:type="BL"/>
    </observation>
  </component>
```

```
</organizer>
```

Location of Death

[Observation: templateId `2.16.840.1.113883.10.20.26.1.10`]

This template contains information to document where the death occurred.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001` HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="LOINC TBD" *Location of Death* (CodeSystem: `2.16.840.1.113883.6.1` LOINC)
4. **MAY** contain zero or one [0..1] **text**
   - Information about the place where death occurred. It is provided if no address can be.
5. **SHALL** contain exactly one [1..1] **value** with data type AD
   - The mailing address for the place where the person died. This attribute is collected if the person died at a home, a health facility, or other location with a postal address.

vsdr::Location of Death							
cda::observation[cda:templateId/@root =]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		
text	text	0..1	MAY	YES	ED		
value	value	1..1	SHALL	YES	AD		

vsdr::Location of Death							
cda::observation[cda:templateId/@root =]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Location of Death example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="196967142" extension="MDHT"/>
  <code code="1527461919"/>
  <text>Text Value</text>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="AD"/>
</observation>
```

Manner of Death

[Observation: templateId 2.16.840.1.113883.10.20.26.1.11]

This template contains information on the main categories in which death can occur.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="69449-7" *Manner of Death* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
4. **SHALL** contain exactly one [1..1] **value** with data type CE, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.114222.4.11.6002 Manners Of Death)

   • A coded indication of the manner in which the person died.

vsdr::Manner of Death							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.11]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 null
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.11
text	text	0..1		YES	ED		
value	value	1..1	SHALL	NO	CE		Manners Of Death 2.16.840.1.114222.4.11.6002
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Manner of Death example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.26.1.11"/>
  <id root="1831101121" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" displayName="Manner of Death"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CE" code="2105048361"/>
</observation>
```

Pregnancy Status

[Observation: templateId `2.16.840.1.113883.10.20.26.1.12`]

This template contains information on the pregnancy status of the deceased.

1. **SHALL** contain exactly one [1..1] **@classCode**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001` HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**=`"69442-2"` *Timing of recent pregancy related to death* (CodeSystem: `2.16.840.1.113883.6.1` LOINC)
4. **SHALL** contain exactly one [1..1] **value** with data type CE, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.114222.4.11.6003` Pregnancy Statuses)

   - A code that provides information regarding whether or not the person was pregnant at the time of her death, or whether she was pregnant around the time of death. Required if the person is female and in the age range 5 to 75 years.

vsdr::Pregnancy Status							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.12]/							
Name	XPath	Cardinality	Severity	Nullable	Data Type	Conformance	Value(s)
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 null
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		

vsdr::Pregnancy Status							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.12]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.12
text	text	0..1		YES	ED		
value	value	1..1	SHALL	NO	CE		Pregnancy Statuses 2.16.840.1.114222.4.11.6003
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Pregnancy Status example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <templateId root="2.16.840.1.113883.10.20.26.1.12"/>
  <id root="195598376" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" displayName="Timing of recent
 pregancy related to death"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CE" code="2021992563"/>
</observation>
```

Time of Death

[Observation: templateId 2.16.840.1.113883.10.20.26.1.13]

The template provides information about the decedent's date and time of death.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="31211-6" *Date of Death* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
4. **SHOULD** contain exactly one [1..1] **effectiveTime** with data type TS
   • Provide the date and time of death if it is known.
5. **MAY** contain zero or one [0..1] **text**
   • Provide informamtion relevant to the date/time of death in cases where the point in time can in no way be established.

vsdr::Time of Death							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.13]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_DocumentActMood		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 31211-6
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	1..1	SHOULD	YES	TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.13
text	text	0..1	MAY	YES	ED		
value	value	0..*		YES	ANY		

vsdr::Time of Death							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.13]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Time of Death example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.1.13"/>
  <id root="476008744" extension="MDHT"/>
  <code code="31211-6" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Date of Death"/>
  <text>Text Value</text>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
</observation>
```

Tobacco Use

[Observation: templateId `2.16.840.1.113883.10.20.26.1.14`]

this template includes information about the deceased's use of tobacco.

1. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: `2.16.840.1.113883.5.6` HL7ActClass)
2. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: `2.16.840.1.113883.5.1001` HL7ActMood)
3. **SHALL** contain exactly one [1..1] **code/@code**="69443-0" *Tobacco Use* (CodeSystem: `2.16.840.1.113883.6.1` LOINC)

   - A coded indication of the extent of the person's use of tobacco. The data is captured if tobacco use may have contributed to their death.
4. **SHALL** contain exactly one [1..1] **value** with data type CE, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.114222.4.11.6004` Tobacco Use)

vsdr::Tobacco Use							
cda::observation[cda:templateId/@root = 2.16.840.1.113883.10.20.26.1.14]/							
Name	**XPath**	**Cardinality**	**Severity**	**Nullable**	**Data Type**	**Conformance**	**Value(s)**
classCode	@classCode	1..1	SHALL	NO	ActClassObservation		ALRT
moodCode	@moodCode	1..1	SHALL	NO	x_ActMoodDocumentObservation		DEF
negationInd	@negationInd	0..1		NO	Boolean		
nullFlavor	@nullFlavor	0..1		NO	NullFlavor		ASKU
code	code	1..1	SHALL	NO	CD		LOINC 2.16.840.1.113883.6.1 69443-0
derivationExpr	derivationExpr	0..1		YES	ST		
effectiveTime	effectiveTime	0..1		YES	IVL_TS		
id	id	0..*		YES	II		
interpretationCode	interpretationCode	0..*		YES	CE		
languageCode	languageCode	0..1		YES	CS		
methodCode	methodCode	0..*		YES	CE		
priorityCode	priorityCode	0..1		YES	CE		
realmCode	realmCode	0..*		YES	CS		
repeatNumber	repeatNumber	0..1		YES	IVL_INT		
statusCode	statusCode	0..1		YES	CS		
targetSiteCode	targetSiteCode	0..*		YES	CD		
templateId	templateId	0..*		YES	II		2.16.840.1.113883.10.20.26.1.14
text	text	0..1		YES	ED		
value	value	1..1	SHALL	YES	CE		Tobacco Use 2.16.840.1.114222.4.11.6004
author	author	0..*		YES	Author		
entryRelationship	entryRelationship	0..*		YES	EntryRelationship		
informant	informant	0..*		YES	Informant12		
participant	participant	0..*		YES	Participant2		
performer	performer	0..*		YES	Performer2		
precondition	precondition	0..*		YES	Precondition		
reference	reference	0..*		YES	Reference		
referenceRange	referenceRange	0..*		YES	ReferenceRange		
specimen	specimen	0..*		YES	Specimen		
subject	subject	0..1		YES	Subject		
typeId	typeId	0..1		YES	InfrastructureRootTypeId		

Tobacco Use example

```xml
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="OBS" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.1.14"/>
  <id root="558890418" extension="MDHT"/>
  <code code="69443-0" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Tobacco Use"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CE" code="315008410"/>
</observation>
```

Chapter

5

OTHER CLASSES

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

Chapter

6

VALUE SETS

Topics:

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

Certifier Type Codes

Value Set	CertifierTypeCodes - 2.16.840.1.114222.4.11.6001
Code System	Certifier Types - 2.16.840.1.114222.4.11.6001
Description	The value set collects all the codes defined within the Certifier Types coding system.

Concept Code	Concept Name	Code System	Description
C	Coroner	Certifier Types	
CA	County Attorney	Certifier Types	
ME	Medical Examiner	Certifier Types	
NP	Nurse Practitioner	Certifier Types	
PHY	Physician	Certifier Types	
PA	Physician Assistant	Certifier Types	

Certifier Types

Value Set	Certifier Types
Description	The code system collects the possible professional roles played by the person who certifies the death.

Death Location Type Codes

Value Set	DeathLocationTypeCodes - (OID not specified)
Code System	Death Location Types - OID TBD

Concept Code	Concept Name	Code System	Description
H-IN	Hospital Inpatient	Death Location Types	
H-ER/ OP	Hospital Emergency Department or Outpatient	Death Location Types	
H-DOA	Hospital Dead on Arrival	Death Location Types	

Concept Code	Concept Name	Code System	Description
NH	Nursing Home	Death Location Types	
RES	Residence	Death Location Types	
OTH	Other	Death Location Types	

Death Location Types

Value Set	Death Location Types

Manner Of Death Codes

Value Set	MannerOfDeathCodes - 2.16.840.1.114222.4.11.6002
Code System	Manners Of Death - 2.16.840.1.114222.4.11.6002
Description	The value set includes all members of the Manners of Death coding system.

Concept Code	Concept Name	Code System	Description
A	Accident	Manners Of Death	
C	Could not be determined	Manners Of Death	
H	Homicide	Manners Of Death	
N	Natural	Manners Of Death	
NOS	Not on Standard	Manners Of Death	A value for manner of death has been provided that does not appear on the standard list.
NS	Not Specified	Manners Of Death	The manner of death is not specified.
P	Pending Investigation	Manners Of Death	

Concept Code	Concept Name	Code System	Description
SI	Self Inflicted	Manners Of Death	The death was self-inflicted. This could include injury, and is therefore not identical with suicide.
S	Suicide	Manners Of Death	

Manners Of Death

Value Set	Manners Of Death
Description	The coding system defines a list of the possible manners by which the person died.

Pregnancy Status Codes

Value Set	PregnancyStatusCodes - 2.16.840.1.114222.4.11.6003
Code System	Pregnancy Statuses - 2.16.840.1.114222.4.11.6003
Description	The value set includes all the values from the Prenancy Statuses coding system.

Concept Code	Concept Name	Code System	Description
1	Not pregnant within the past year	Pregnancy Statuses	
2	Pregnant at the time of death	Pregnancy Statuses	
3	Not pregnant, but pregnant within 42 days of death	Pregnancy Statuses	
4	Not pregnant, but pregnant 43 days to 1 year before death	Pregnancy Statuses	
9	Unknown if pregnant within the past year	Pregnancy Statuses	
8	Not Applicable: Computer Generated	Pregnancy Statuses	
7	Not on Certificate	Pregnancy Statuses	

Pregnancy Statuses

Value Set	Pregnancy Statuses
Description	The coding system contains a collection of values to provide an indication of whether or not a person was pregnant at the time of death.

Tobacco Use

Value Set	Tobacco Use
Description	The coding system contains a list of values to describe the extent to which tobacco use contributed to the person's death.

Tobacco Use Codes

Value Set	TobaccoUseCodes - 2.16.840.1.114222.4.11.6004
Code System	Tobacco Use - 2.16.840.1.114222.4.11.6004
Description	The value set includes the entire content of the Tobacco Use coding system.

Concept Code	Concept Name	Code System	Description
N	No	Tobacco Use	No, use of tobacco did not contribute to the person's death.
P	Probable	Tobacco Use	It is probable that use of tobacco contributed to the person's death.
Y	Yes	Tobacco Use	Yes, use of tobacco contributed to the person's death.
U	Unknown	Tobacco Use	The extent to which tobacco use contributed to the person's death is not known.
C	Not on Certificate	Tobacco Use	

Transportation Relationship Codes

Value Set	TransportationRelationshipCodes - (OID not specified)
Description	The value set contains the entire set of codes from the Transportation Relationships coding system.

Concept Code	Concept Name	Code System	Description
D	Driver or Operator		
PA	Passenger		
PE	Pedestrian		

Transportation Relationships

Value Set	Transportation Relationships
Description	The coding system contains the list of possible roles that the decedent could play with relationship to a transport vehicle in the context of an accident.

REFERENCES

- 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.
- 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* .