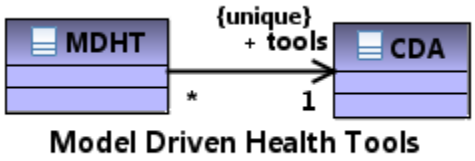
Implementation Guide for Reporting Birth and Fetal Death Information HL7 Implementation Guide

Optional Subtitle



Model Driven Health Tools

Ballot Version

Contents

Acknowledgments

This document contains an example of healthcare standards and specifications publication generated from UML models, using the OHT Model Driven Health Tools (MDHT). Some portions of this document may not be publicly available but are included for demonstration purposes only, therefore this version of the document is to be treated as CONFIDENTIAL by the project participants.

This demonstration document contains informtion from the following sources:

Revision History

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

List of Figures

Chapter 1

INTRODUCTION

Topics:

Overview

This implementation guide is generated from UML models developed in the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project. The data specifications have been formalized into computational models expressed in UML. These models are used by automated tooling to generate this publication, plus validation tools and Java libraries for implementers.

Approach

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

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

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

Scope

TODO: scope of this implementation guide.

Audience

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

Organization of This Guide

The requirements as laid out in the body of this document are subject to change per the policy on implementation guides (see section 13.02" Draft Standard for Trial Use Documents" within the HL7 Governance and Operations Manual, *http://www.hl7.org/documentcenter/public/membership/HL7_Governance_and_Operations_Manual.pdf*).

Templates

Templates are organized by document (see Document Templates), by section (see Section Templates), and by clinical statements (see Clinical Statement Templates). Within a section, templates are arranged hierarchically, where a more specific template is nested under the more generic template that it conforms to. See Templates by Containment for a listing of the higher level templates by containment; the appendix Templates Used in This Guide includes a table of all of the templates Organized Hierarchically.

Vocabulary and Value Sets

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

Use of Templates

When valued in an instance, the template identifier (`templateId`) signals the imposition of a set of template-defined constraints. The value of this attribute provides a unique identifier for the templates in question.

Originator Responsibilities

An originator can apply a `templateId` to assert conformance with a particular template.

In the most general forms of CDA exchange, an originator need not apply a `templateId` for every template that an object in an instance document conforms to. This implementation guide asserts when `templateId`s are required for conformance.

Recipient Responsibilities

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

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

Conventions Used in This Guide

Conformance Requirements

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

Template name

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

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

1. Conforms to <The template name> Template (templateId: XXXX<XX>XXX>YYY).
2. **SHALL** contain [1..1] @classCode = <AAA> <code display name> (CodeSystem: 123.456.789 <XXX> Class) **STATIC** (CONF:<number>).
3. .....

Figure 1: Template name and "conforms to" appearance

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

The following cardinality indicators may be interpreted as follows:

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

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

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

1. **SHALL** contain [1..1] component/structuredBody (CONF:4082).
    a. This component/structuredBody **SHOULD** contain [0..1] component (CONF:4130) such that it
        a. **SHALL** contain [1..1] Reporting Parameters section (templateId:2.16.840.1.113883.10.20.17.2.1) (CONF:4131).
    b. This component/structuredBody **SHALL** contain [1..1] component (CONF:4132) such that it
        a. **SHALL** contain [1..1] Patient data section - NCR (templateId:2.16.840.1.113883.10.20.17.2.5) (CONF:4133).

Figure 2: Template-based conformance statements example

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

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

Figure 3: CCD conformance statements example

Keywords

The keywords SHALL, SHALL NOT, SHOULD, SHOULD NOT, MAY, and NEED NOT in this document are to be interpreted as described in the *HL7 Version 3 Publishing Facilitator's Guide*:

- **SHALL**: an absolute requirement
- **SHALL NOT**: an absolute prohibition against inclusion
- **SHOULD/SHOULD NOT**: valid reasons to include or ignore a particular item, but must be understood and carefully weighed
- **MAY/NEED NOT**: truly optional; can be included or omitted as the author decides with no implications

XML Examples

XML samples appear in various figures in this document in a fixed-width font. Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (…) as shown in the example below.

```
<ClinicalDocument xmlns='urn:h17-org:v3'>
  ...
</ClinicalDocument>
```

Figure 4: ClinicalDocument example

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

Chapter 2

DOCUMENT TEMPLATES

Topics:

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

Reporting Birth Information from a clinical setting to vital records

[ClinicalDocument: templateId `2.16.840.1.113883.10.20.26.1`]

The document definition captures the information represented on the US Facility Worksheet for the Live Birth Certificate, which is used to record and register the birth of a child. In the United States, registration of vital events is the responsibility of 57 vital records jurisdictions representing 50 states, 5 territories, Washington, DC and New York City. Vital statistics are reported to the National Center for Health Statistics, a Center within the Centers for Disease Control and Prevention (CDC). The experience of state and federal vital records officials has been drawn on for the contents of the document.

The collection of birth event data is required whether the birth takes place in a facility, at home (planned or unplanned), or en route to a facility.

1. Contains zero or one [0..1] **`@classCode`**`="DOCCLIN"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
   - *The code value indicates this is a clincial document.*
2. **SHALL** contain zero or one [0..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
   - *The value indicates the included information refers to an existing document - as opposed to an intended one.*
3. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *The value provided indicates that the document is a live birth report.*
4. **SHALL** contain exactly one [1..1] **`confidentialityCode`**, where the @code **SHALL** 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] **`effectiveTime`**
   - *The point in time the document was created at.*
6. **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.*
7. **SHALL** contain exactly one [1..1] **`languageCode`**
   - *The language used for recording information within the document.*
8. **SHALL** contain exactly one [1..1] **`realmCode/@code`**`="US"` (CodeSystem: `1.0.3166.1 Country (ISO 3166-1)`)
   - *The realm that the document is relevant for. This specification is a US realm product.*
9. **MAY** contain zero or one [0..1] **`title`**
   - *A text title for the document.*
10. **SHALL** contain exactly one [1..1] **`author`**

    The author participation contains information about the person who authored the document.

    a. This author Contains exactly one [1..1] **`@typeCode`**`="AUT"`

    b. This author **SHALL** contain exactly one [1..1] **`assignedAuthor`**

    a. This assignedAuthor **SHOULD** contain zero or one [0..1] **`id`**

    An identifier for the author of the live birth report. Normally this is the certifying clinician.

    b. This assignedAuthor Contains exactly one [1..1] **`assignedPerson`**, where its type is CDA Person

    a. Contains exactly one [1..1] CDA Person

11. **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] **`@typeCode`**`="CST"`
    b. This custodian Contains exactly one [1..1] **`assignedCustodian`**, where its type is CDA Assigned Custodian

        a. Contains exactly one [1..1] CDA Assigned Custodian

12. **SHALL** contain exactly one [1..1] **`recordTarget`**

    Information to identify the mother of the child.

    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 zero or one [0..1] **`@classCode`**`="PAT"`
        b. This patientRole **SHOULD** contain zero or more [0..*] **`addr`**

           The current postal address for the mother.
        c. This patientRole **SHALL** contain exactly one [1..1] **`id`**

           The medical record number assigned to the mother by the health care facility.
        d. This patientRole Contains zero or one [0..1] **`patient`**

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

               The name of the mother.

13. **SHALL** contain exactly one [1..1] **`component`**

    a. Contains exactly one [1..1] *Birth Reporting - Prenatal Experience Section* (templateId: `2.16.840.1.113883.10.20.26.3`)

14. **SHALL** contain exactly one [1..1] **`component`**

    a. Contains exactly one [1..1] *Labor and Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.5`)

15. **SHALL** contain exactly one [1..1] **`component`**

    a. Contains exactly one [1..1] *Newborn Section* (templateId: `2.16.840.1.113883.10.20.26.6`)

Reporting Birth Information from a clinical setting to vital records example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCCLIN">
  <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="MDHT" extension="1050948472"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="407785141"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="MDHT" extension="822917861"/>
      <addr/>
```

```
      <patient classCode="PSN" determinerCode="INSTANCE"/>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
    <time/>
    <assignedAuthor>
      <id root="MDHT" extension="1123793998"/>
      <assignedPerson/>
    </assignedAuthor>
  </author>
  <custodian typeCode="CST">
    <assignedCustodian/>
  </custodian>
  <component>
    <structuredBody>
      <component>
        <section/>
      </component>
      <component>
        <section/>
      </component>
      <component>
        <section classCode="DOCSECT" moodCode="EVN">
          <realmCode code="Code forrealmCode"/>
          <templateId root="2.16.840.1.113883.10.20.26.6"/>
          <id root="MDHT" extension="2125806154"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="687758227"/>
          <languageCode code="Code forlanguageCode"/>
          <subject typeCode="SBJ">
            <relatedSubject classCode="PRS"/>
          </subject>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.9"/>
              <id root="MDHT" extension="1812817189"/>
              <code code="592740490"/>
              <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="2.16.840.1.113883.10.20.26.31"/>
              <id root="MDHT" extension="1630872760"/>
              <code code="1926522222"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation classCode="OBS">
```

```
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.12"/>
              <id root="MDHT" extension="1070112331"/>
              <code codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.36"/>
              <id root="MDHT" extension="1352995761"/>
              <code code="457113806"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
        </section>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Reporting Fetal Death Information from a clinical setting to vital records

[ClinicalDocument: templateId `2.16.840.1.113883.10.20.26.2`]

The document definition captures the information represented on the US Facility Worksheet for the Live Birth Certificate, which is used to record and register the birth of a child. In the United States, registration of vital events is the responsibility of 57 vital records jurisdictions representing 50 states, 5 territories, Washington, DC and New York City. Vital statistics are reported to the National Center for Health Statistics, a Center within the Centers for Disease Control and Prevention (CDC). The experience of state and federal vital records officials has been drawn on for the contents of the document.

The collection of birth event data is required whether the birth takes place in a facility, at home (planned or unplanned), or en route to a facility.

1. Contains zero or one [0..1] **`@classCode`**`="DOCCLIN"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
   - *The code value indicates this is a clincial document.*
2. **SHALL** contain zero or one [0..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
   - *The value indicates the included information refers to an existing document - as opposed to an intended one.*

3. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *The value provided indicates that the document is a live birth report.*
4. **SHALL** contain exactly one [1..1] **`confidentialityCode`**, where the @code **SHALL** 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] **`effectiveTime`**
   - *The point in time the document was created at.*
6. **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.*
7. **SHALL** contain exactly one [1..1] **`languageCode`**
   - *The language used for recording information within the document.*
8. **SHALL** contain exactly one [1..1] **`realmCode/@code`**`="US"` (CodeSystem: `1.0.3166.1 Country (ISO 3166-1)`)
   - *The realm that the document is relevant for. This specification is a US realm product.*
9. **MAY** contain zero or one [0..1] **`title`**
   - *A text title for the document.*
10. **SHALL** contain exactly one [1..1] **`author`**
    a. This author Contains exactly one [1..1] **`@typeCode`**`="AUT"`
    b. This author **SHALL** contain exactly one [1..1] **`assignedAuthor`**
       a. This assignedAuthor **SHOULD** contain zero or one [0..1] **`id`**

          An identifier for the author of the live birth report. Normally this is the certifying clinician.
       b. This assignedAuthor **SHALL** contain exactly one [1..1] **`assignedPerson`**
11. **SHALL** contain exactly one [1..1] **`custodian`**
    a. This custodian **SHALL** contain exactly one [1..1] **`@typeCode`**`="CST"`
12. **SHALL** contain zero or one [0..1] **`recordTarget`**
    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 zero or one [0..1] **`@classCode`**`="PAT"`
       b. This patientRole **SHOULD** contain zero or more [0..*] **`addr`**

          The current postal address for the mother.
       c. This patientRole **SHALL** contain exactly one [1..1] **`id`**

          The medical record number assigned to the mother by the health care facility.
       d. This patientRole Contains zero or one [0..1] **`patient`** with data type *Patient*
13. **SHALL** contain exactly one [1..1] **`component`**
    a. Contains exactly one [1..1] *Fetal Death Reporting - Prenatal Experience Section* (templateId: `2.16.840.1.113883.10.20.26.4`)
14. **SHALL** contain exactly one [1..1] **`component`**
    a. Contains exactly one [1..1] *Labor and Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.5`)
15. **SHALL** contain exactly one [1..1] **`component`**
    a. Contains exactly one [1..1] *Fetus Section* (templateId: `2.16.840.1.113883.10.20.26.7`)

Reporting Fetal Death Information from a clinical setting to vital records example

```
<?xml version="1.0" encoding="UTF-8"?>
<ClinicalDocument xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCCLIN">
  <realmCode code="Code forrealmCode"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <templateId root="2.16.840.1.113883.10.20.26.2"/>
  <id root="MDHT" extension="1512565177"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="1304369991"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="MDHT" extension="214837595"/>
      <addr/>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
    <time/>
    <assignedAuthor>
      <id root="MDHT" extension="1565975230"/>
      <assignedPerson/>
    </assignedAuthor>
  </author>
  <custodian typeCode="CST">
    <assignedCustodian/>
  </custodian>
  <component>
    <structuredBody>
      <component>
        <section/>
      </component>
      <component>
        <section/>
      </component>
      <component>
        <section classCode="DOCSECT" moodCode="EVN">
          <realmCode code="Code forrealmCode"/>
          <templateId root="2.16.840.1.113883.10.20.26.7"/>
          <id root="MDHT" extension="1074859845"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="683986205"/>
          <languageCode code="Code forlanguageCode"/>
          <subject/>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation classCode="OBS">
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.12"/>
              <id root="MDHT" extension="1425732118"/>
              <code codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
```

```
            <languageCode code="Code forlanguageCode"/>
          </observation>
        </entry>
        <entry>
          <observation/>
        </entry>
        <entry>
          <observation/>
        </entry>
        <entry>
          <observation classCode="OBS" moodCode="EVN">
            <realmCode code="Code forrealmCode"/>
            <templateId root="2.16.840.1.113883.10.20.26.36"/>
            <id root="MDHT" extension="1164171262"/>
            <code code="1589030696"/>
            <effectiveTime>
              <low value="2012"/>
              <high value="2012"/>
            </effectiveTime>
            <languageCode code="Code forlanguageCode"/>
          </observation>
        </entry>
      </section>
    </component>
  </structuredBody>
 </component>
</ClinicalDocument>
```

Chapter 3

SECTION TEMPLATES

Topics:

Birth Reporting - Prenatal Experience Section

[Section: templateId `2.16.840.1.113883.10.20.26.3`]

The section contains information on the prenatal experience of the mother. The content is drawn from prenatal care records, mother's medical records, labor and delivery records. Information recorded for live births differs slightly from that recorded for a fetal death report.

1. **SHALL** contain zero or one [0..1] **`@classCode`**`="DOCSECT"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain zero or one [0..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **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 value that indicates the nature of the section - it captures prenatal experience information in the case of a live birth.*
4. **SHALL** contain zero or one [0..1] **`text`**
5. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Pre-Natal Care* (templateId: `2.16.840.1.113883.10.20.26.32`)
6. **MAY** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Height* (templateId: `2.16.840.1.113883.10.20.26.21`)
7. **SHOULD** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Date of Last Live Birth* (templateId: `2.16.840.1.113883.10.20.26.17`)
8. **SHOULD** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Last Menstrual Period Date* (templateId: `2.16.840.1.113883.10.20.26.24`)
9. **SHOULD** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Number of Births Still Living* (templateId: `2.16.840.1.113883.10.20.26.26`)
10. **SHOULD** contain zero or one [0..1] **`entry`**
    a. Contains exactly one [1..1] *Number of Live Births now Dead* (templateId: `2.16.840.1.113883.10.20.26.28`)
11. **SHOULD** contain zero or one [0..1] **`entry`**
    a. Contains exactly one [1..1] *Other Pregnancy Outcomes* (templateId: `2.16.840.1.113883.10.20.26.30`)
12. **SHALL** contain zero or more [0..*] **`entry`**
    a. Contains exactly one [1..1] *Birth Reporting - Infections Present* (templateId: `2.16.840.1.113883.10.20.26.13`)
13. **SHALL** contain at least one [1..*] **`entry`**
    a. Contains exactly one [1..1] *Birth Reporting - Infections Present* (templateId: `2.16.840.1.113883.10.20.26.13`)

Birth Reporting - Prenatal Experience Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCSECT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.3"/>
  <id root="MDHT" extension="437888667"/>
```

```
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.21"/>
      <id root="MDHT" extension="964535199"/>
      <code code="597285557"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.24"/>
      <id root="MDHT" extension="320380132"/>
      <code code="1580551922"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.30"/>
      <id root="MDHT" extension="488476609"/>
      <code code="1091865033"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
</section>
```

Fetal Death Reporting - Prenatal Experience Section

[Section: templateId `2.16.840.1.113883.10.20.26.4`]

The section contains information on the prenatal experience of the mother. The content is drawn from prenatal care records, mother's medical records, labor and delivery records. Information recorded for live births differs slightly from that recorded for a fetal death report.

1. **SHALL** contain zero or one [0..1] **`@classCode`**`="DOCSECT"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain zero or one [0..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **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 value that indicates the nature of the section - it records the mother's prenatal experience when a fetal death is reported.*
4. **SHALL** contain zero or one [0..1] **`text`**
5. **SHALL** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Pre-Natal Care* (templateId: `2.16.840.1.113883.10.20.26.32`)
6. **MAY** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Height* (templateId: `2.16.840.1.113883.10.20.26.21`)
7. **SHOULD** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Date of Last Live Birth* (templateId: `2.16.840.1.113883.10.20.26.17`)
8. Contains zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Last Menstrual Period Date* (templateId: `2.16.840.1.113883.10.20.26.24`)
9. **SHOULD** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Number of Births Still Living* (templateId: `2.16.840.1.113883.10.20.26.26`)
10. **SHOULD** contain zero or one [0..1] **`entry`**
    a. Contains exactly one [1..1] *Number of Live Births now Dead* (templateId: `2.16.840.1.113883.10.20.26.28`)
11. **SHOULD** contain zero or one [0..1] **`entry`**
    a. Contains exactly one [1..1] *Other Pregnancy Outcomes* (templateId: `2.16.840.1.113883.10.20.26.30`)
12. **SHALL** contain zero or more [0..*] **`entry`**
    a. Contains exactly one [1..1] *Birth Reporting - Infections Present* (templateId: `2.16.840.1.113883.10.20.26.13`)
13. **SHALL** contain at least one [1..*] **`entry`**
    a. Contains exactly one [1..1] *Fetal Death Reporting - Infections Present* (templateId: `2.16.840.1.113883.10.20.26.19`)

Fetal Death Reporting - Prenatal Experience Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCSECT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.4"/>
  <id root="MDHT" extension="686275996"/>
```

```
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.21"/>
      <id root="MDHT" extension="1636524900"/>
      <code code="1944666787"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.24"/>
      <id root="MDHT" extension="1723825954"/>
      <code code="1724808250"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.30"/>
      <id root="MDHT" extension="2052559861"/>
      <code code="678210923"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
</section>
```

Fetus Section

[Section: templateId `2.16.840.1.113883.10.20.26.7`]

The section contains information on the delivered fetus. Note, if there is a multiple delivery, there will be a separate report for each delivered fetus. The content is drawn from labor and delivery records, patient's medical records.

1. **SHALL** contain exactly one [1..1] **`@classCode="DOCSECT"`** (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`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the section - it contains information regarding the delivered fetus.*
4. **SHALL** contain exactly one [1..1] **`text`**
5. **SHALL** contain exactly one [1..1] **`subject`**
   a. Contains exactly one [1..1] CDA Subject
6. **SHALL** contain at least one [1..*] **`entry`**
   a. Contains exactly one [1..1] *Abnormal Conditions of the Newborn* (templateId: `2.16.840.1.113883.10.20.26.8`)
7. **MAY** contain zero or one [0..1] **`entry`**
   - *Record birth order if not a single delivery.*

   a. Contains exactly one [1..1] *Birth Order* (templateId: `2.16.840.1.113883.10.20.26.12`)
8. **SHALL** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Number of Infants Born Alive* (templateId: `2.16.840.1.113883.10.20.26.27`)
9. **SHALL** contain at least one [1..*] **`entry`**
   a. Contains exactly one [1..1] *Congenital Anomalies of the Newborn* (templateId: `2.16.840.1.113883.10.20.26.16`)
10. **SHALL** contain exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Weight* (templateId: `2.16.840.1.113883.10.20.26.36`)
11. **SHALL** contain exactly one [1..1] **`timeOfDeathAssociation`**
    a. This timeOfDeathAssociation **SHALL** conform to *time Of Death Association*
12. **SHALL** contain exactly one [1..1] **`autopsyPerformanceAssociation`**
    a. This autopsyPerformanceAssociation **SHALL** contain exactly one [1..1] **`@typeCode="COMP"`**
    b. This autopsyPerformanceAssociation **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`**

          A code value that indicates the nature of the observation - that it indicates whether an autopsy was performed
       d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type BL

          Information to identify whether an autopsy was performed.

Fetus Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCSECT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.7"/>
  <id root="MDHT" extension="308028612"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <subject/>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS">
      <templateId root="2.16.840.1.113883.10.20.26.12"/>
      <id root="MDHT" extension="1579005616"/>
      <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.36"/>
      <id root="MDHT" extension="1397779980"/>
      <code code="541088669"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Labor and Delivery Section

[Section: templateId `2.16.840.1.113883.10.20.26.5`]

The section contains information on the mother's labor and the delivery of the baby or fetus. The content is drawn from labor and delivery records, mother's medical records.

1. **SHALL** contain zero or one [0..1] **`@classCode`**`="DOCSECT"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain zero or one [0..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **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 value that indicates the nature of the section - it is the labor and delivery section.*

4. **SHALL** contain zero or one [0..1] **`text`**
   - *A text representation of the structured section content.*
5. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Labor and Delivery Information* (templateId: `2.16.840.1.113883.10.20.26.22`)
6. **SHOULD** contain zero or one [0..1] **`entry`**
   a. Contains exactly one [1..1] *Body Weight at Delivery* (templateId: `2.16.840.1.113883.10.20.26.14`)

Labor and Delivery Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCSECT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.5"/>
  <id root="MDHT" extension="2052145375"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </entry>
  <entry>
    <observation/>
  </entry>
</section>
```

Newborn Section

[Section: templateId `2.16.840.1.113883.10.20.26.6`]

The section contains information on the newborn baby. Note, if there is a multiple delivery, there will be a separate report for each birth. The content is drawn from labor and delivery records, newborn's medical records, mother's medical records.

1. **SHALL** contain zero or one [0..1] **`@classCode`**`="DOCSECT"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain zero or one [0..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **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 value that indicates the nature of the section - it contains information on the newborn.*
4. **SHALL** contain zero or one [0..1] **`text`**
5. **SHALL** contain exactly one [1..1] **`subject`**
   a. This subject **SHALL** contain zero or one [0..1] **`@typeCode`**`="SBJ"`
   b. This subject **SHALL** contain exactly one [1..1] **`relatedSubject`**
      a. This relatedSubject **SHALL** contain exactly one [1..1] **`@classCode`**`="PRS"`
      b. This relatedSubject **SHALL** contain exactly one [1..1] **`subject`**
         a. This subject **SHALL** contain exactly one [1..1] **`@classCode`**`="PSN"`
         b. This subject Contains exactly one [1..1] **`@determinerCode`**`="INSTANCE"`

   c. This subject **SHALL** contain exactly one [1..1] **`birthTime`**

      The birth date and time of the newborn. By the same token, the date and time of delivery.
   d. This subject **SHALL** contain exactly one [1..1] **`name`**

      The name provided for the newborn.
   e. This subject **SHALL** contain exactly one [1..1] **`sDTCId`**

      An identifier for the newborn. The medical record number assigned by the delivering institution should be provided.
   f. This subject **SHALL** contain exactly one [1..1] **`administrativeGenderCode`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.5.1 AdministrativeGenderCode`)
6. **SHOULD** contain zero or one [0..1] **`entry`**

   a. Contains exactly one [1..1] *Estimate of Gestation* (templateId: `2.16.840.1.113883.10.20.26.18`)
7. **SHALL** contain [1..2] **`entry`**

   - *Enter the infant's Apgar score at 5 minutes. If the score at 5 minutes is less than 6, it is necessary to enter the infant's Apgar score at 10 minutes. Otherwise the value may be omitted.*

   a. Contains exactly one [1..1] *Apgar Score* (templateId: `2.16.840.1.113883.10.20.26.9`)
8. **SHALL** contain exactly one [1..1] **`entry`**

   a. Contains exactly one [1..1] *Plurality* (templateId: `2.16.840.1.113883.10.20.26.31`)
9. **MAY** contain zero or one [0..1] **`entry`**

   - *Record birth order if not a single delivery.*

   a. Contains exactly one [1..1] *Birth Order* (templateId: `2.16.840.1.113883.10.20.26.12`)
10. **MAY** contain zero or one [0..1] **`entry`**

    a. Contains exactly one [1..1] *Number of Infants Born Alive* (templateId: `2.16.840.1.113883.10.20.26.27`)
11. **SHALL** contain at least one [1..*] **`entry`**

    a. Contains exactly one [1..1] *Congenital Anomalies of the Newborn* (templateId: `2.16.840.1.113883.10.20.26.16`)
12. **SHALL** contain exactly one [1..1] **`infantLivingAssociation`**

    a. This infantLivingAssociation **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`
    b. This infantLivingAssociation **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`**

          A code value that indicates the nature of the observation - that it includes information on whether the infant was living at time of report.
       d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type BL

          Information to identify whether the infant was living at the time of report.
13. **SHALL** contain exactly one [1..1] **`entry`**

    a. Contains exactly one [1..1] *Weight* (templateId: `2.16.840.1.113883.10.20.26.36`)

Newborn Section example

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd"
 classCode="DOCSECT" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.6"/>
  <id root="MDHT" extension="1524673260"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <subject typeCode="SBJ">
    <relatedSubject classCode="PRS">
      <subject classCode="PSN" determinerCode="INSTANCE">
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
 codeSystemName="AdministrativeGenderCode"/>
      </subject>
    </relatedSubject>
  </subject>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.9"/>
      <id root="MDHT" extension="1669877693"/>
      <code code="1775929973"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.31"/>
      <id root="MDHT" extension="322899184"/>
      <code code="963659711"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS">
      <templateId root="2.16.840.1.113883.10.20.26.12"/>
      <id root="MDHT" extension="7935035"/>
      <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.36"/>
```

```
      <id root="MDHT" extension="764899232"/>
      <code code="1765860249"/>
      <text>Text Value</text>
      <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.

Abnormal Conditions of the Newborn

[Observation: templateId `2.16.840.1.113883.10.20.26.8`]

Information on whether the mother suffered from one or more of a list of known risk factors during pregnancy.

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`**, where the @code **SHALL** be selected from ValueSet *`Pregnancy Risk Factors`* **STATIC**
   - *A code value that indicates the nature of the risk factor about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Abnormal Conditions of the Newborn example

```
<?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="2.16.840.1.113883.10.20.26.8"/>
  <id root="MDHT" extension="774189961"/>
  <code code="735857848"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Apgar Score

[Observation: templateId `2.16.840.1.113883.10.20.26.9`]

A systematic measure for evaluating the physical condition of the infant at specific intervals following birth.

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`**
   - *A code value that indicates the nature of the observation - that it is an Apgar score.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The height of the person. Collect unit of measure as well as the height value.*

Apgar Score example

```
<?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="2.16.840.1.113883.10.20.26.9"/>
  <id root="MDHT" extension="1074654598"/>
```

```
  <code code="1910468522"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Attempted Forceps Delivery

[Observation: templateId `2.16.840.1.113883.10.20.26.10`]

Information on whether an unsucessful attempt at a forceps delivery was made.

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`**
   - *A code value that indicates the nature of the observation -it relates to an attempted forceps delivery.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - *Was delivery with forceps attempted but unsuccessful?*

Attempted Forceps Delivery example

```
<?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="2.16.840.1.113883.10.20.26.10"/>
  <id root="MDHT" extension="1682885696"/>
  <code code="189485555"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Attempted Vacuum Extraction

[Observation: templateId `2.16.840.1.113883.10.20.26.11`]

Information on whether an unsucessful attempt at a vaccum extraction was made.

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`**
   - *A code value that indicates the nature of the observation - it relates to an attempted vacuum extraction.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - *Was delivery with vacuum extraction attempted but unsuccessful?*

Attempted Vacuum Extraction example

```
<?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="2.16.840.1.113883.10.20.26.11"/>
  <id root="MDHT" extension="429224196"/>
  <code code="1453480619"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Birth Order

[Observation: templateId `2.16.840.1.113883.10.20.26.12`]

The order in which the newborn or fetus was delivered in the pregnancy. All live births and fetal losses resulting from the pregnancy should be included.

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`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it is a birth order observation.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type INT
   - *Indicate the order delivered in the pregnancy of the baby or fetus, aka "Set Number". Leave the field empty for singleton births or deliveries.*

Birth Order example

```
<?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="2.16.840.1.113883.10.20.26.12"/>
  <id root="MDHT" extension="1947765403"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Birth Reporting - Infections Present

[Observation: templateId `2.16.840.1.113883.10.20.26.13`]

Information on whether the mother suffered from one or more of a defined list of infections during pregnancy.

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`**, where the @code **SHALL** be selected from ValueSet *`Birth Reporting - Infections Present`* **STATIC**
   - *A code value that indicates the nature of the observation - it conveys the nature of the infection about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Birth Reporting - Infections Present example

```
<?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="2.16.840.1.113883.10.20.26.13"/>
  <id root="MDHT" extension="43012862"/>
  <code code="952877550"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Body Weight at Delivery

[Observation: templateId `2.16.840.1.113883.10.20.26.14`]

The measured body weight of a mother after the baby is delivered.

1. **SHALL** contain exactly one [1..1] **`@classCode`**`="OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. Contains exactly one [1..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - it captures the weight of the subject at the comencement of the delivery process.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The mother's weight at delivery. Both value and unit are collected.*

Body Weight at Delivery example

```
<?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="2.16.840.1.113883.10.20.26.14"/>
  <id root="MDHT" extension="353474234"/>
  <code code="672397981"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
```

```
  <value xsi:type="PQ"/>
</observation>
```

Characteristics of Labor and Delivery

[Observation: templateId `2.16.840.1.113883.10.20.26.15`]

Information on whether the mother experienced one or more of a set of defined characeristics of labor and delivery.

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`**, where the @code **SHALL** be selected from ValueSet *`Labor and Delivery Characteristics`* **STATIC**
   - *A code value that indicates the nature of the observation - it indicates the nature of the labor and delivery characeristic about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Characteristics of Labor and Delivery example

```
<?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="2.16.840.1.113883.10.20.26.15"/>
  <id root="MDHT" extension="1727994251"/>
  <code code="506673710"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Congenital Anomalies of the Newborn

[Observation: templateId `2.16.840.1.113883.10.20.26.16`]

Information on whether the mother suffered from one or more of a list of known risk factors during pregnancy.

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`**, where the @code **SHALL** be selected from ValueSet *`Congenital Anomalies of the Newborn`* **STATIC**
   - *A code value that indicates the nature of the observation - it records the nature of the congenital anomaly about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Congenital Anomalies of the Newborn example

```
<?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="2.16.840.1.113883.10.20.26.16"/>
  <id root="MDHT" extension="1558192222"/>
  <code code="2124610308"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Date of Last Live Birth

[Observation: templateId `2.16.840.1.113883.10.20.26.17`]

The date of birth of the last live-born infant (month and year) excluding this delivery. Includes live-born infants now living and now dead. If this was a multiple delivery, include all live born infants who preceded the live born infant in this delivery. If first born, do not include this infant. If second born, include the first born.

1. Contains 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`**
   - *A code value that indicates the nature of the observation - it records the date of the last live birth for the mother.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type TS
   - *The date of birth of the last live born infant. Month and year should be provided.*

Date of Last Live Birth example

```
<?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="2.16.840.1.113883.10.20.26.17"/>
  <id root="MDHT" extension="1299516915"/>
  <code code="1839114978"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Estimate of Gestation

[Observation: templateId `2.16.840.1.113883.10.20.26.18`]

The delivery attendant's final estimate of gestation based on all perinatal factors and assessments.

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`**
   - *A code value that indicates the nature of the observation - that it records the birth attendant's estimate of gestation.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type INT
   - *The measured Apgar score.*

Estimate of Gestation example

```
<?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="2.16.840.1.113883.10.20.26.18"/>
  <id root="MDHT" extension="1823082023"/>
  <code code="1655869076"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Fetal Death Reporting - Infections Present

[Observation: templateId `2.16.840.1.113883.10.20.26.19`]

Information on whether the mother suffered from one or more of a defined list of infections during pregnancy.

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`**, where the @code **SHALL** be selected from ValueSet *`Fetal Death Reporting - Infections Present`* **STATIC**
   - *A code value that indicates the nature of the observation - it records nature of the infection about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Fetal Death Reporting - Infections Present example

```
<?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="2.16.840.1.113883.10.20.26.19"/>
  <id root="MDHT" extension="1796953586"/>
  <code code="23795210"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Fetal Presentation

[Observation: templateId `2.16.840.1.113883.10.20.26.20`]

Information on the fetal presentation at delivery.

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`**
   - *A code value that indicates the nature of the observation - fetal presentation.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type CD, where the @code **SHALL** be selected from ValueSet *`Fetal Presentations`* **STATIC**
   - *Information on the presentation of the fetus at the point of delivery.*

Fetal Presentation example

```
<?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="2.16.840.1.113883.10.20.26.20"/>
  <id root="MDHT" extension="1735406241"/>
  <code code="851212264"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CD" code="1262463174"/>
</observation>
```

Height

[Observation: templateId `2.16.840.1.113883.10.20.26.21`]

A measure of a person's height.

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`**
   - *A code value that indicates the nature of the observation - it is the record of the person's height.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The height of the person. Collect unit of measure as well as the height value.*

Height example

```
<?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="2.16.840.1.113883.10.20.26.21"/>
  <id root="MDHT" extension="1253356837"/>
  <code code="695797142"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Labor and Delivery Information

[Act: templateId `2.16.840.1.113883.10.20.26.22`]

Information directly associated with the labor and delivery process.

1. **SHALL** contain exactly one [1..1] **`@classCode`**`="ACT"` *Act* (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`**
   - *A code value that indicates the nature of the observation - it contains information regarding the labor and delivery process.*
4. **SHALL** contain exactly one [1..1] **`participant`**

   Information about the place of birth. Birth may take place in a healthcare facility, at a defined address that is not a healthcare facility, or as some other place, e.g., a conveyance such as an automobile. In each of these cases, the specific attributes collected may differ.

   a. This participant **SHALL** contain exactly one [1..1] **`@typeCode`**`="LOC"`
   b. This participant **SHALL** contain exactly one [1..1] **`participantRole`**
      a. This participantRole **SHALL** contain exactly one [1..1] **`@classCode`**`="ROL"`
      b. This participantRole **MAY** contain zero or one [0..1] **`addr`**

         The address for the place where the delivery took place. It is collected in those cases where the delivery did not occur within a healthcare facility.
      c. This participantRole **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from ValueSet *`Place where Birth/Delivery Occurred`* **STATIC**

         A code that indicates the type of facility or place at which the delivery took place.
      d. This participantRole **SHOULD** contain zero or more [0..*] **`id`**

         An identifer for the facility within which the delivery took place. This attribute is not relevant if the birth took place outside of a health care facility. The attribute repeats to allow entry of both state and nationally assigned identifiers.
      e. This participantRole **SHOULD** contain zero or one [0..1] **`playingEntity`**
         a. This playingEntity **SHALL** contain zero or one [0..1] **`@classCode`**`="PLC"`
         b. This playingEntity **SHALL** contain zero or one [0..1] **`@determinerCode`**`="INSTANCE"`
         c. This playingEntity **MAY** contain zero or one [0..1] **`desc`**

            A description of the place where the birth took place. The attribute is used for those cases in which the delivery occurred neither at a healthcare facility, nor at a place with a defined postal address.
         d. This playingEntity **SHOULD** contain zero or more [0..*] **`name`**

            The name of the facility at which the delivery took place.

5. **SHALL** contain exactly one [1..1] **`performer`**
   a. This performer **SHALL** conform to *attendant Participation*
   b. This performer **SHALL** contain exactly one [1..1] **`@typeCode`**`="PRF"`
   c. This performer **SHALL** contain exactly one [1..1] **`assignedEntity`**
      a. This assignedEntity **SHALL** conform to *attendant Role*
6. **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 zero or one [0..1] **`@classCode`**`="ASSIGNED"`
      b. This assignedEntity **SHALL** contain zero or more [0..*] **`id`**

         An identifier for the birth attendant. The national provider id is expected. A state registration id may be provided as well.
      c. This assignedEntity **SHALL** contain exactly one [1..1] **`assignedPerson`**
         a. This assignedPerson **SHALL** conform to *Attendant*
      d. This assignedEntity **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from ValueSet *`Birth Attendant Titles`* **STATIC**

         An indication of the professional qualification of the birth attendant. Their title.
7. **SHOULD** contain zero or one [0..1] **`entryRelationship`**

   Contains information that indicates whether the mother planned to give birth at home.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`
   b. This entryRelationship **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`**

         A code value that indicates the nature of the observation - it records whether or not a home birth was planned.
      d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type BL

         A Boolean value to indicate whether or not the mother planned to delivery at home.
8. **SHALL** contain exactly one [1..1] **`entryRelationship`**

   a.
9. **SHOULD** contain zero or one [0..1] **`entryRelationship`**

   Information on the source of payment for the delivery. Not collected for a fetal death report.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`
   b. This entryRelationship **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`**

         A code value that indicates the nature of the observation - that it includes payment source information.
      d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type CD

Information to identify the source of payment for charges associated with delivering the baby.

10. **SHALL** contain zero or more [0..*] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Maternal Morbidities* (templateId: 2.16.840.1.113883.10.20.26.25)
11. **SHALL** contain at least one [1..*] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Characteristics of Labor and Delivery* (templateId: 2.16.840.1.113883.10.20.26.15)
12. **SHALL** contain at least one [1..*] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Labor Onsets* (templateId: 2.16.840.1.113883.10.20.26.23)
13. **SHALL** contain at least one [1..*] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Obstetric Procedures* (templateId: 2.16.840.1.113883.10.20.26.29)
14. **SHALL** contain exactly one [1..1] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Attempted Forceps Delivery* (templateId: 2.16.840.1.113883.10.20.26.10)
15. **SHALL** contain exactly one [1..1] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Attempted Vacuum Extraction* (templateId: 2.16.840.1.113883.10.20.26.11)
16. **SHALL** contain exactly one [1..1] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Fetal Presentation* (templateId: 2.16.840.1.113883.10.20.26.20)
17. **SHALL** contain exactly one [1..1] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Route and Method of Delivery* (templateId: 2.16.840.1.113883.10.20.26.35)
18. **SHOULD** contain zero or one [0..1] **entryRelationship**
    a. Contains **@typeCode="COMP"** *COMP*
    b. Contains exactly one [1..1] *Body Weight at Delivery* (templateId: 2.16.840.1.113883.10.20.26.14)
19. **MAY** contain zero or one [0..1] **entryRelationship**

    The information is only collected in cases where fetal death is reported.

    a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode="COMP"**
    b. This entryRelationship **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**

           A code value that indicates the nature of the observation - that it indicates whether a hysterotomy or hysterectomy was performed.
        d. This observation **SHALL** contain exactly one [1..1] **value** with data type BL

Information to identify whether a hysterotomy or hysterectomy was performed as a method of delivering the fetus.

Labor and Delivery Information example

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="ACT"
 moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.22"/>
  <id root="MDHT" extension="1345388412"/>
  <code code="758289287"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <performer typeCode="PRF">
    <assignedEntity>
      <id root="MDHT" extension="405100362"/>
      <code code="424235093"/>
    </assignedEntity>
  </performer>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="MDHT" extension="1571084142"/>
      <code code="262540844"/>
      <assignedPerson/>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="ROL">
      <id root="MDHT" extension="1044557848"/>
      <code code="1695248158"/>
      <addr/>
      <playingEntity classCode="PLC" determinerCode="INSTANCE"/>
    </participantRole>
  </participant>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="379417851"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
  <entryRelationship/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="432265766"/>
      <value xsi:type="CD" code="605101319"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="1319552265"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.25"/>
      <id root="MDHT" extension="1293655005"/>
      <code code="1392454453"/>
      <effectiveTime>
```

```
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation/>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.23"/>
      <id root="MDHT" extension="1089855739"/>
      <code code="780101286"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.29"/>
      <id root="MDHT" extension="536432751"/>
      <code code="807336420"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.10"/>
      <id root="MDHT" extension="29233445"/>
      <code code="1045986951"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.11"/>
      <id root="MDHT" extension="972917609"/>
      <code code="624076709"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.20"/>
      <id root="MDHT" extension="564745592"/>
      <code code="1246544185"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
```

```
    <observation/>
  </entryRelationship>
  <entryRelationship>
    <observation/>
  </entryRelationship>
</act>
```

Labor Onsets

[Observation: templateId 2.16.840.1.113883.10.20.26.23]

Information on whether the mother suffered from one or more of a list of known serious complications associated with labor and delivery.

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**, where the @code **SHALL** be selected from ValueSet *Labor Onsets* **STATIC**
   - *A code value that indicates the nature of the observation - it records a complication associated with labor and delivery.*
4. **SHALL** contain exactly one [1..1] **value** with data type BL

Labor Onsets example

```
<?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="2.16.840.1.113883.10.20.26.23"/>
  <id root="MDHT" extension="1139791348"/>
  <code code="1000457133"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Last Menstrual Period Date

[Observation: templateId 2.16.840.1.113883.10.20.26.24]

The date the mother's last normal menstrual period began.

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**
   - *A code value that indicates the nature of the observation - it contains the date of the last menstrual period.*
4. **SHALL** contain exactly one [1..1] **value** with data type TS
   - *The date the mother's last normal menstrual period began. (month, day and year.)*

Last Menstrual Period Date example

```
<?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="2.16.840.1.113883.10.20.26.24"/>
  <id root="MDHT" extension="305483958"/>
  <code code="2116717078"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Maternal Morbidities

[Observation: templateId `2.16.840.1.113883.10.20.26.25`]

Information on whether the mother suffered from one or more of a list of recognized maternal morbidities during the labor and delivery process.

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`**, where the @code **SHALL** be selected from ValueSet *`Maternal Morbidities`* **STATIC**
   - *A code value that indicates the nature of the observation - it records the nature of the maternal morbidity about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Maternal Morbidities example

```
<?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="2.16.840.1.113883.10.20.26.25"/>
  <id root="MDHT" extension="1573794372"/>
  <code code="398853305"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Number of Births Still Living

[Observation: templateId `2.16.840.1.113883.10.20.26.26`]

The total number of previous live-born infants now living. For multiple deliveries include all live-born infants before this infant in the pregnancy. If the first born, do not include this infant.

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`**
3. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - it contains the total number of previous live-born infants now living.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type INT
   - *The total number of previous live-born infants now living.*

Number of Births Still Living example

```
<?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="2.16.840.1.113883.10.20.26.26"/>
  <id root="MDHT" extension="1935480236"/>
  <code code="1415214869"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Number of Infants Born Alive

[Observation: templateId `2.16.840.1.113883.10.20.26.27`]

A measure of the number of infants born alive within this delivery.

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`**
   - *A code value that indicates the nature of the observation - it captures the number of infants born alive within a delivery.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type INT
   - *The number of infants born alive.*

Number of Infants Born Alive example

```
<?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="2.16.840.1.113883.10.20.26.27"/>
  <id root="MDHT" extension="1523381206"/>
  <code code="502144389"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
```

```
</observation>
```

Number of Live Births now Dead

[Observation: templateId 2.16.840.1.113883.10.20.26.28]

The total number of previous live-born infants now dead. For multiple deliveries include all live-born infants before this infant in the pregnancy who are now dead. If the first born, do not include this infant.

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**
   - *A code value that indicates the nature of the observation - it records the total number of previous live-born infants now dead.*
4. **SHALL** contain zero or more [0..*] **value** with data type INT
   - *The total number of previous live-born infants now dead.*

Number of Live Births now Dead example

```
<?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="2.16.840.1.113883.10.20.26.28"/>
  <id root="MDHT" extension="97346534"/>
  <code code="1515850315"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Obstetric Procedures

[Observation: templateId 2.16.840.1.113883.10.20.26.29]

Information on whether a particular medical treatment or invasive/manipulative procedure was performed during this pregnancy specifically in the treatment of the pregnancy, management of labor and/or delivery.

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**, where the @code **SHALL** be selected from ValueSet *Obstetric Procedures* **STATIC**
   - *A code value that indicates the nature of the observation - it specifies the nature of the obstetric procedure about which information is provided.*
4. **SHALL** contain exactly one [1..1] **value** with data type BL

Obstetric Procedures example

```
<?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="2.16.840.1.113883.10.20.26.29"/>
  <id root="MDHT" extension="1711053697"/>
  <code code="442193511"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Other Pregnancy Outcomes

[Observation: templateId `2.16.840.1.113883.10.20.26.30`]

Total number of other pregnancy outcomes that did not result in a live birth. Includes pregnancy losses of any gestation age. For multiple deliveries include all previous pregnancy losses before this infant in this pregnancy and in previous pregnancies.

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`**
   - *A code to indicate the observation contains information on the total number of other pregnancy outcomes that did not result in a live birth.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type INT
   - *Total number of other pregnancy outcomes that did not result in a live birth.*
5. **SHOULD** contain zero or one [0..1] **`effectiveTime`**
   - *The date of the most recent pregnancy outcome that did not result in a live birth. Value the high property of the interval data type.*

Other Pregnancy Outcomes example

```
<?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="2.16.840.1.113883.10.20.26.30"/>
  <id root="MDHT" extension="572955309"/>
  <code code="13942871"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Plurality

[Observation: templateId `2.16.840.1.113883.10.20.26.31`]

The number of fetuses delivered live or dead at any time in the pregnancy regardless of gestational age or if the fetuses were delivered at different dates in the pregnancy.

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`**
   - *A code value that indicates the nature of the observation - it records the plurality of the delivery.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type INT
   - *A measure of the plurality of the pregnancy.*

Plurality example

```
<?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="2.16.840.1.113883.10.20.26.31"/>
  <id root="MDHT" extension="1922260885"/>
  <code code="1939929870"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Pre-Natal Care

[Act: templateId `2.16.840.1.113883.10.20.26.32`]

Information on whether the mother received prenatal care, and on the dates of prenatal care visits.

1. **SHALL** contain exactly one [1..1] **`@classCode`**`="ACT"` *Act* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
2. **SHALL** contain exactly one [1..1] **`@moodCode`**`="DEF"` (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
3. **MAY** contain zero or one [0..1] **`@negationInd`**
   - *Value the negation indicator as true if the mother did not receive prenatal care.*
4. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - it includes information about prenatal care received by the mother.*
5. **SHOULD** contain zero or one [0..1] **`effectiveTime`**
   - *The time interval is used to indicate the date of the first prenatal care visit, and the date of the last visit.*
6. **SHALL** contain exactly one [1..1] **`entryRelationship`**
   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`

b. This entryRelationship **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`**

d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type INT

The number of prenatal visits for this pregnancy.

Pre-Natal Care example

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd" classCode="ACT"
 moodCode="DEF">
  <templateId root="2.16.840.1.113883.10.20.26.32"/>
  <id root="MDHT" extension="447294864"/>
  <code code="538180573"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="1251513274"/>
      <value xsi:type="INT" value="1"/>
    </observation>
  </entryRelationship>
</act>
```

Pre-pregnancy Body Weight

[Observation: templateId `2.16.840.1.113883.10.20.26.33`]

The mother's weight before becoming pregnant.

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`)
   - *The mother's weight before becoming pregnant.*
3. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - the mother's weight before becoming pregnant.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The mother's weight before becoming pregnant. The unit of measure must be provided.*

Pre-pregnancy Body Weight example

```
<?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="2.16.840.1.113883.10.20.26.33"/>
  <id root="MDHT" extension="722853191"/>
```

```
  <code code="999451673"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Risk Factors

[Observation: templateId `2.16.840.1.113883.10.20.26.34`]

Information on whether the mother suffered from one or more of a list of known risk factors during pregnancy.

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`**, where the @code **SHALL** be selected from ValueSet *`Pregnancy Risk Factors`* **STATIC**
   - *A code value that indicates the nature of the observation - the nature of the risk factor about which information is provided.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
5. **MAY** contain zero or more [0..*] **`entryRelationship`**

   If a risk factor of previous Cesarean delivery is recorded, the number of previous Cesarian deliveries should be noted.

   a. Such entryRelationships **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`
   b. Such entryRelationships **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`**

         A code value that indicates the nature of the observation - the number of previous Cesarean deliveries.
      d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type INT

         The number of previous Cesarean deliveries.

Risk Factors example

```
<?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="2.16.840.1.113883.10.20.26.34"/>
  <id root="MDHT" extension="1633023956"/>
  <code code="6844939"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
```

```
      <code code="1293893110"/>
      <value xsi:type="INT" value="1"/>
    </observation>
  </entryRelationship>
</observation>
```

Route and Method of Delivery

[Observation: templateId `2.16.840.1.113883.10.20.26.35`]

A characterization of the method and route of delivery.

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`**
   - *A code value that indicates the nature of the observation - the method and route of delivery.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type CD, where the @code **SHALL** be selected from ValueSet *`Delivery Routes`* **STATIC**
   - *The method and route of delivery.*
5. **MAY** contain exactly one [1..1] **`entryRelationship`**

   In the final route of delivery is Cesarean, it is important to indicate whether or not a trial of labor was attempted.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`
   b. This entryRelationship **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`**

         Indicates the observation contains information on a trial of labor.
      d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type BL

         Information on whether, in the case of a Casearean delivery, a trial of labor was attempted.

Route and Method of Delivery example

```
<?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="2.16.840.1.113883.10.20.26.35"/>
  <id root="MDHT" extension="980613264"/>
  <code code="1662889733"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CD" code="15365684"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="2099053842"/>
      <value xsi:type="BL"/>
```

```
    </observation>
  </entryRelationship>
</observation>
```

Weight

[Observation: templateId `2.16.840.1.113883.10.20.26.36`]

A measure of the weight of an infant or a fetus.

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`**
   - *A code value that indicates the nature of the observation - a record of the person's weight.*
4. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The height of the person. Collect unit of measure as well as the height value.*

Weight example

```
<?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="2.16.840.1.113883.10.20.26.36"/>
  <id root="MDHT" extension="1275204807"/>
  <code code="993938542"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</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.

Abnormal Conditions of the Newborn

Value Set	Abnormal Conditions of the Newborn - (OID not specified)
Description	A list of disorders or significant morbidities experienced by the newborn. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
AVI		Assisted Ventilation Immediatly Following Delivery
AV6		Assisted Ventilation for more than 6 Hours
NICH		Admission to NICU
NSFT		Newborn Given Surfactant Replacement Therapy
ANS		Antibiotics Received for Suspected Neonatal Sepsis
SND		Seizure or Serious Neurologic Dysfunction
SBI		Significant Birth Injury
None		None of the Cited Abnormal Conditions

Act Codes

Value Set	Act Codes - (OID not specified)
Description	A list of the different act codes -most are observations - which are used within the implementation guide.

Birth Attendant Titles

Value Set	Birth Attendant Titles - (OID not specified)
Description	A list of different titles used by birth attendants to denote professional role

Code	Code System	Print Name
MD		Medical Doctor
DO		Doctor of Osteopathy
CNM		Certified Nurse Midwife
HA		Hospital Adminstrator or Designee
MW		Midwife other than CNM/CM
OTH		Other

Birth Reporting - Infections Present

Value Set	Birth Reporting - Infections Present - (OID not specified)
Description	A list of infections which may be present during pregnancy. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
GON		Gonorrhea
SYP		Syphilis
CLM		Chlamydia
HPB		Hepatitis B
HPC		Hepatitis C
NONE		None of the Cited Infections

Congenital Anomalies of the Newborn

Value Set	Congenital Anomalies of the Newborn - (OID not specified)
Description	A list of malformations of the newborn or fetus diagnosed prenatally or after delivery. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
AN		Anencephaly
MSB		Meningomyelocele Spina Bifida
CGHD		Cyanotic Congenital Heart Disease
OM		Omphalocele
GA		Gastroschisis
LRD		Limb Reduction Defect
CL		Cleft Lip with or without Cleft Palate
CP		Cleft Palate Alone
DSC		Down Syndrome Karyotype Confirmed
DSP		Down Syndrome Karyotype Pending
HY		Hypospadias
None		None of the Cited Anomalies

Delivery Payment Source

Value Set	Delivery Payment Source - (OID not specified)
Description	A list of different types of payment that may be used to support the expenese of labor and delivery.

Code	Code System	Print Name
PI		Private Insurance
MD		Medicaid
SP		Self Pay

Code	Code System	Print Name
OTH		Other

Delivery Routes

Value Set	Delivery Routes - (OID not specified)

Code	Code System	Print Name
VS		Vaginal/Spontaneous
VF		Vaginal/Forceps
CE		Cesarean
VV		Vaginal

Fetal Death Reporting - Infections Present

Value Set	Fetal Death Reporting - Infections Present - (OID not specified)
Description	A list of infections which may be present during pregnancy. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
GON		Gonorrhea
SYP		Syphilis
CLM		Chlamydia
LIS		Listeria
GBS		Group B Streptococcus
NONE		None of the Cited Infections
CMV		Cytomegalovirus
B19		Parovirus
TOXO		Toxoplasmosis
OTH		Other

Fetal Death Time Points

Value Set	Fetal Death Time Points - (OID not specified)

Code	Code System	Print Name
FAwoL		Death at time of first assessment, no labor ongoing
FAwL		Dead at time of first assessment labor ongoing
DL		Died during labor after first assessment

Code	Code System	Print Name
UNK		Unknown time of fetal death

Fetal Presentations

Value Set	Fetal Presentations - (OID not specified)

Code	Code System	Print Name
C		Cephalic
B		Breech
OTH		Other

Labor and Delivery Characteristics

Value Set	Labor and Delivery Characteristics - (OID not specified)

Code	Code System	Print Name
IL		Induction of Labor
AL		Augmentation of Labor
NVP		Non-vertex Presentation
STU		Use of Steroids
ANU		Use of Antibiotics
CH		Chorioamnionitis
MC		Meconium staining
FI		Fetal intolerance
ANES		Anesthesia
NONE		None of the cited characteristics

Labor Onsets

Value Set	Labor Onsets - (OID not specified)

Code	Code System	Print Name
PR		Premature Rupture
PPL		Precipitous labor
PLL		Prolonged Labor
NONE		Note of the cited unusual onsets

Maternal Morbidities

Value Set	Maternal Morbidities - (OID not specified)
Description	A list of maternal morbidities that may be experienced by the mother during labor and delivery.

Code	Code System	Print Name
PL		Perinea Laceration
RU		Ruptured Uterus
UH		Unplanned Hysterectomy
ICU		Admission to Intensive Care
OR		Unplanned Operating Room Procedure
NONE		None of the Cited Maternal Morbidities

Obstetric Procedures

Value Set	Obstetric Procedures - (OID not specified)
Description	A list of obstetric procedures which may be performed during pregnancy. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
CC		Cervical Cerclage
CT		Cervical Tocolysis
ECVS		External Cephalic Version - Successful
ECVF		External Cephalic Version - Failed
None		None of the cited procedures

Place where Birth/Delivery Occurred

Value Set	Place where Birth/Delivery Occurred - (OID not specified)

Code	Code System	Print Name
HOSP		Hospital
FBC		Freestanding Birth Center
HB		Home Birth
DO		Clinic/Doctor's Office
OTH		Other

Pregnancy Risk Factors

Value Set	Pregnancy Risk Factors - (OID not specified)
Description	A list of risk factors for a pregnancy. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
DIA		Diabetes
GD		Gestational Diabetes
PPHP		PrePregnancy Hypertension
GSPP		Gestational Hypertension
EC		Eclampsia
PPB		Previous PreTerm Birth
OPPO		Other Poor Pregnancy Outcome
IFT		Pregnancy Resulted from Infertility Treatment
IFT-FED		Fertility Enhancing Drugs
IFT-ART		Assisted Reproductive Technology
PC		Previous Cesarian
NONE		None of the Cited Factors

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