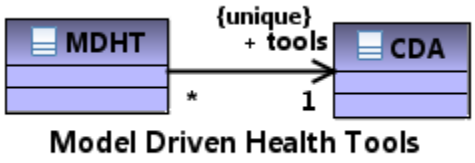
HL7 Implementation Guide
Reporting Birth and Fetal Death
US Realm



DSTU Ballot

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

Chapter 1

INTRODUCTION

Topics:

Overview

This implementation guide provides a format for using HL7's Clinical Document Architecture to transmit medical/ health information on live births and fetal deaths from a birthing facility setting to a jurisdictional vital records electronic registration system. Vital Records birth certificates and fetal death reports include important demographic, medical and key information about the antepartum period, the labor and delivery process and the newborn/fetal death . Medical and health information collected from Electronic Health Record (EHR) and data for the birth certificate and fetal death report once gathered, can be provided public health agencies to track maternal and infant health to target interventions for at risk populations.

The document is generated from UML models developed in the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project.

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

This specification covers the provision of live birth and fetal death reporting data to the applicable jurisdictional Vital Records Office. The guide focuses on the use case describing the communication of that portion of the record collected by electronic health record systems to state/jurisdictional vital record offices. It includes optional acknowledgments of receipt of transactions. The goal of the use case is to provide safe, reliable delivery of relevant clinical information to vital records. The use case does not cover the data that is reported by the mother, or in the case of fetal death, by the funeral director. This use case is not intended to cover reporting to national public health agencies such as NCHS.

The implementation guide has been structured for consistency with the IHE (Interconnecting the Health Enterprise)Health Birth Summary draft document. That document, which is a supplement to the IHE Quality, Research and Public Health Technical Framework, identifies a way for clinical information captured within a fully coded electronic health record environment to be represented in a format consistent with US Vital Records standards. Our expectations is that organizations which implement support for the IHE Health Birth Summary will find it natural and straightforward to format that data as defined within this implementation guide.

This guide calls for specific vocabulary standards for managing live birth and fetal death reporting information. Use of standard vocabularies is important for a number of reasons. Use of standard vocabularies allows broad distribution of healthcare information without the need for individual institutions to exchange master files for data such as test codes, result codes, etc. Each institution maps its own local vocabularies to the standard code, allowing information to be shared broadly, rather than remaining isolated as a single island of information.

The following use case provides a common scenario of how birth and fetal death events are recorded in a birthing hospital. For the birth record, prenatal care and pregnancy history information, such as the mother’s last menstrual period (LMP), are obtained from the mother’s prenatal records which are sent to the hospital by the prenatal care provider prior to the mother’s estimated delivery date. Information about the labor and delivery and the infant (e.g., a spontaneous vaginal delivery of a girl weighing 3,242 grams) is documented by the nurse in the hospital’s labor and

delivery (L&D) log. Information about the labor and delivery and the newborn to be collected for the birth record is also documented by the nurse in the Facility Worksheet for the Child's Birth Certificate. The Pediatrician documents the physical assessment in the newborn's medical record and the nurse then completes the newborn information sections of the Facility Worksheet.

The Birth Information Specialist (BIS), the hospital staff person responsible for gathering and entering information for the birth certificate, checks the hospital's information system for a list of all new births. She prints a copy of the list and takes it to the L&D unit where she picks up the Facility Worksheet completed by the Nurse. The BIS then goes to the Mother's room and presents her with a packet of information and several forms to complete. One of the forms, called the Mother's Worksheet for the Child's Birth Certificate, collects important demographic information on the mother and father. The BIS helps the Mother complete the Mother's Worksheet. The BIS reviews the Facility Worksheet for completeness. If a section has not been completed, she reviews the L&D log, mother's prenatal care and other medical records for the required information. If necessary, she calls the prenatal care provider for more information.

The BIS then enters the information from the Mother's and Facility worksheets into the State's web-based Electronic Birth Registration System (EBRS). At the time of data entry, the EBRS performs field edits and cross-field edits that are pre-programmed into the system. Once the record "passes" all validations, the BIS submits the record to the state for registration. The birth record is then automatically transmitted over a secure Internet connection to the State Office of Vital Records.

The vital records registrar reviews a list of newly transmitted birth records received from birthing facilities around his state. If there are records that have not passed all edits, he contacts the hospital and requests that they correct and retransmit the birth record. The hospital corrects the birth record and retransmits. Once the birth record has passed all edits, the vital records registrar registers the baby's birth and the mother is provided with a certified copy of the birth certificate on request.

The process of collecting information at the hospital for the fetal death report is similar to that for birth. The labor and delivery nurse enters information in the medical records and completes the Facility Worksheet. The BIS is responsible for gathering and entering information into the Electronic Fetal Death Registration System (EFDRS) for the fetal death report. She first checks the hospital's information system and learns about the mother's loss. She obtains the completed Facility Worksheet from the nurse and helps the mother complete the Patient's Worksheet. She may also contact the prenatal care provider to obtain the Mother's prenatal care information and the obstetrician to enter the cause of death in the system.

The hospital of birth will serve as the Content Creator for the mother's and infant's medical record. A Form Filler may serve to pre-populate this information utilizing the standard Facility Worksheet format. The Health Birth Summary will provide the medical information for an Electronic Data Capture System such as a Form Receiver. The Form Receiver will ensure adherence to the Birth and Fetal Death Reporting (BFDRpt) specifications for consistency with the requirements in the detailed specifications for the birth certificate and fetal death report. The Electronic Data Capture System must also allow for manual edits to the pre-populated data and any additional information needed for vital registration purposes before the data is transmitted to the public health authorities and potentially other vital records stakeholders.

Audience

The audience for this document includes software developers and implementers who wish to develop specifications for reporting the vital records birth and fetal death information spcecified within this document.

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: `2.16.840.1.113883.5.25 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
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

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 exactly one [1..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] *Antenatal Testing and Surveillance 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] *Pregnancy History Section* (templateId: `2.16.840.1.113883.10.20.26.xxx`)

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

    a. Contains exactly one [1..1] *History of Infection Section* (templateId: `2.16.840.1.113883.10.20.26.xxx`)

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

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

17. **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`)

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">
  <realmCode code="Code forrealmCode"/>
  <typeId root="2.16.840.1.113883.1.3"/>
  <id root="1697925716" extension="MDHT"/>
  <code code="1929532559"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="906223347"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="344148035" extension="MDHT"/>
      <addr/>
      <patient classCode="PSN" determinerCode="INSTANCE"/>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
```

```
    <time/>
    <assignedAuthor>
      <id root="1561289738" extension="MDHT"/>
      <assignedPerson/>
    </assignedAuthor>
  </author>
  <custodian typeCode="CST">
    <assignedCustodian/>
  </custodian>
  <component>
    <structuredBody>
      <component>
        <section/>
      </component>
      <component>
        <section classCode="DOCSECT" moodCode="EVN">
          <realmCode code="Code forrealmCode"/>
          <templateId root="2.16.840.1.113883.10.20.26.xxx"/>
          <id root="2047856247" extension="MDHT"/>
          <code code="694842784"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="412025831"/>
          <languageCode code="Code forlanguageCode"/>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation classCode="OBS" moodCode="EVN">
              <realmCode code="Code forrealmCode"/>
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              <id root="1130055768" extension="MDHT"/>
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                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
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          </entry>
          <entry>
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          </entry>
          <entry>
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          </entry>
          <entry>
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          <entry>
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```

```
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                <high value="2012"/>
              </effectiveTime>
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            </observation>
          </entry>
          <entry>
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              <code code="48629748"/>
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                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
              <entryRelationship typeCode="COMP"/>
            </observation>
          </entry>
        </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="358765869" extension="MDHT"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="1282051344"/>
          <languageCode code="Code forlanguageCode"/>
          <subject typeCode="SBJ">
            <relatedSubject classCode="PRS"/>
          </subject>
          <entry>
            <observation classCode="OBS">
              <realmCode code="Code forrealmCode"/>
              <templateId root="2.16.840.1.113883.10.20.26.12"/>
              <id root="1386491680" extension="MDHT"/>
              <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/
>
```

```
            <effectiveTime>
              <low value="2012"/>
              <high value="2012"/>
            </effectiveTime>
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          </observation>
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            <code code="1861502023"/>
            <effectiveTime>
              <low value="2012"/>
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          </observation>
        </entry>
        <component>
          <section/>
        </component>
      </section>
    </component>
    <component>
      <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: `2.16.840.1.113883.5.25 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] *Labor and Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.5`)
14. **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`)
15. **SHOULD** contain zero or one [0..1] **`component`**
    a. Contains exactly one [1..1] *Antenatal Testing and Surveillance Section* (templateId: `2.16.840.1.113883.10.20.26.3`)
16. **SHOULD** contain zero or one [0..1] **`component`**
    a. Contains exactly one [1..1] *Pregnancy History Section* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
17. **SHOULD** contain zero or more [0..*] **`component`**
    a. Contains exactly one [1..1] *History of Infection Section* (templateId: `2.16.840.1.113883.10.20.26.xxx`)

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">
  <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="1806569714" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode codeSystemName="Confidentiality"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="1120307717" extension="MDHT"/>
      <addr/>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
    <time/>
    <assignedAuthor>
      <id root="1527941033" extension="MDHT"/>
      <assignedPerson/>
    </assignedAuthor>
  </author>
  <custodian typeCode="CST">
    <assignedCustodian/>
  </custodian>
  <component>
    <structuredBody>
```

```
      <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="1441199843" extension="MDHT"/>
          <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="1973991695"/>
          <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="2096417045" extension="MDHT"/>
              <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="1430830751" extension="MDHT"/>
              <code code="689205272"/>
              <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.xxx"/>
              <id root="969235" extension="MDHT"/>
              <code code="32521276"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation moodCode="EVN">
```

```
            <realmCode code="Code forrealmCode"/>
            <templateId root="2.16.840.1.113883.10.20.26.xxx"/>
            <id root="1091571223" extension="MDHT"/>
            <code code="77505086"/>
            <effectiveTime>
              <low value="2012"/>
              <high value="2012"/>
            </effectiveTime>
            <languageCode code="Code forlanguageCode"/>
          </observation>
        </entry>
      </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.xxx"/>
        <id root="1642066963" extension="MDHT"/>
        <code code="715284887"/>
        <title>TEXT FOR TITLE</title>
        <confidentialityCode code="1080921957"/>
        <languageCode code="Code forlanguageCode"/>
        <entry>
          <observation/>
        </entry>
        <entry>
          <observation classCode="OBS" moodCode="EVN">
            <realmCode code="Code forrealmCode"/>
            <templateId root="2.16.840.1.113883.10.20.26.24"/>
            <id root="69411265" extension="MDHT"/>
            <code code="973519817"/>
            <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="2.16.840.1.113883.10.20.26.30"/>
            <id root="1516052625" extension="MDHT"/>
            <code code="192647358"/>
            <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="2.16.840.1.113883.10.20.26.31"/>
              <id root="512598385" extension="MDHT"/>
              <code code="1177472191"/>
              <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="2.16.840.1.113883.10.20.26.25"/>
              <id root="1983904735" extension="MDHT"/>
              <code code="645123149"/>
              <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="2.16.840.1.113883.10.20.26.34"/>
              <id root="1605491502" extension="MDHT"/>
              <code code="1939758424"/>
              <effectiveTime>
                <low value="2012"/>
                <high value="2012"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
              <entryRelationship typeCode="COMP"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section/>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Chapter 3

SECTION TEMPLATES

Topics:

Antenatal Testing and Surveillance 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 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 captures prenatal experience information in the case of a live birth.
4. **SHOULD** 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`)

Antenatal Testing and Surveillance 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="2045229846" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </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 of the section 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. **SHOULD** contain zero or one [0..1] **`text`**
5. **SHALL** contain exactly one [1..1] **`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. **SHALL** contain exactly one [1..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 exactly one [1..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. **SHOULD** contain zero or one [0..1] **`entry`**
    a. Contains exactly one [1..1] *Autopsy Performance* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
12. **SHALL** contain exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Fetal Death Occurrance* (templateId: `2.16.840.1.113883.10.20.26.xxx`)

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="1584868232" extension="MDHT"/>
  <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="2137633176" extension="MDHT"/>
      <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="787865786" extension="MDHT"/>
      <code code="2024695338"/>
      <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.xxx"/>
      <id root="2113429373" extension="MDHT"/>
      <code code="52315087"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.xxx"/>
      <id root="96837381" extension="MDHT"/>
      <code code="83731502"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

History of Infection Section

[Section: templateId `2.16.840.1.113883.10.20.26.xxx`]

This section SHALL include the infections that the mother might have contracted during the current pregnancy. If the data is not present or not available within the system no entry is required. A negative diagnosis SHALL be recorded with the use of the negation indicator attribute.

1. Contains exactly one [1..1] **`@classCode`**`="DOCSECT"` (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. Contains exactly one [1..1] **`code`**
4. **SHALL** contain at least one [1..*] **`entry`**
   a. Contains exactly one [1..1] *Infections Present* (templateId: `2.16.840.1.113883.10.20.26.19`)
5. **SHOULD** contain zero or one [0..1] **`text`**

History of Infection 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.xxx"/>
  <id root="2139665910" extension="MDHT"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.19"/>
      <id root="1864319758" extension="MDHT"/>
```

```
      <code code="687148429"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Labor and Delivery Outcomes Section

[Section: templateId `2.16.840.1.113883.10.20.26.xxx`]

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`**
4. **SHOULD** contain zero or one [0..1] **`text`**
5. **SHALL** contain at least one [1..*] **`entry`**
   a. Contains exactly one [1..1] *Labor Onsets* (templateId: `2.16.840.1.113883.10.20.26.23`)

Labor and Delivery Outcomes 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.xxx"/>
  <id root="1994824209" extension="MDHT"/>
  <code code="1553437006"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.23"/>
      <id root="360920790" extension="MDHT"/>
      <code code="734290486"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Labor and Delivery Procedures Section

[Section: templateId `2.16.840.1.113883.10.20.26.xxx`]

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`**
4. **SHOULD** contain zero or one [0..1] **`text`**
5. **SHALL** contain at least one [1..*] **`entry`**

   a. Contains exactly one [1..1] *Obstetric Procedures* (templateId: `2.16.840.1.113883.10.20.26.29`)
6. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Route and Method of Delivery* (templateId: `2.16.840.1.113883.10.20.26.35`)

Labor and Delivery Procedures 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.xxx"/>
  <id root="739678198" extension="MDHT"/>
  <code code="357304223"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.29"/>
      <id root="1993859447" extension="MDHT"/>
      <code code="835048821"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
</section>
```

Labor and Delivery Section

[Section: templateId `2.16.840.1.113883.10.20.26.5`]

This section SHALL contain information pertinent to the labor and delivery process and outcome (e.g. type of labor, method of delivery, membrane detail, placenta detail, admission reason, gestational age at delivery, fetal surveillance, labor complications, and delivery complications). This section shall include the following sections: Procedures and Interventions, Vital Signs, and Event Outcomes subsections.

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 is the labor and delivery section.
4. **SHOULD** 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. **SHALL** contain zero or one [0..1] **`component`**
   a. Contains exactly one [1..1] *Vital Sign - Mother* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
7. Contains zero or one [0..1] **`component`**

   a. Contains exactly one [1..1] *Labor and Delivery Procedures Section* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
8. Contains zero or one [0..1] **`component`**
   a. Contains exactly one [1..1] *Labor and Delivery Outcomes Section* (templateId: `2.16.840.1.113883.10.20.26.xxx`)

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="1997724747" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </entry>
  <component>
    <section/>
  </component>
  <component>
    <section/>
  </component>
  <component>
    <section/>
  </component>
</section>
```

Newborn Delivery 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. **SHOULD** 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. **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`)
7. **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`)
8. **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`)
9. **SHALL** contain zero or one [0..1] **`component`**

   a. Contains exactly one [1..1] *Vital Sign - Newborn* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
10. **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`)
11. **SHALL** contain zero or one [0..1] **`entry`**

    a. Contains exactly one [1..1] *Infant Living* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
12. **SHALL** contain exactly one [1..1] **`entry`**

    a. Contains exactly one [1..1] *Infant Breastfed* (templateId: `2.16.840.1.113883.10.20.26.xxx`)
13. **MAY** contain zero or one [0..1] **`entry`**

    a. Contains exactly one [1..1] *infant Transfer* (templateId: `2.16.840.1.113883.10.20.26.xxx`)

Newborn 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="2.16.840.1.113883.10.20.26.6"/>
  <id root="551446465" extension="MDHT"/>
  <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 classCode="OBS">
      <templateId root="2.16.840.1.113883.10.20.26.12"/>
      <id root="1085100433" extension="MDHT"/>
      <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/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.xxx"/>
      <id root="1727192368" extension="MDHT"/>
      <code code="1989619717"/>
      <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.xxx"/>
      <id root="745734307" extension="MDHT"/>
      <code code="1465394708"/>
      <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.xxx"/>
      <id root="1293613327" extension="MDHT"/>
      <code code="633147399"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
      <participant typeCode="DST">
        <participantRole classCode="SDLOC"/>
      </participant>
    </observation>
  </entry>
  <component>
    <section/>
  </component>
</section>
```

Pregnancy History Section

[Section: templateId `2.16.840.1.113883.10.20.26.xxx`]

The pregnancy history section contains entries describing the patient history of pregnancies.

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`**
4. **SHOULD** contain zero or one [0..1] **`text`**
5. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Date of Last Live Birth* (templateId: `2.16.840.1.113883.10.20.26.17`)
6. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Last Menstrual Period Date* (templateId: `2.16.840.1.113883.10.20.26.24`)
7. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Number of Births Still Living* (templateId: `2.16.840.1.113883.10.20.26.26`)
8. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Number of Live Births now Dead* (templateId: `2.16.840.1.113883.10.20.26.28`)
9. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Other Pregnancy Outcomes* (templateId: `2.16.840.1.113883.10.20.26.30`)
10. **SHALL** contain exactly one [1..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 exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Estimate of Gestation* (templateId: `2.16.840.1.113883.10.20.26.18`)
12. **SHALL** contain exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Plurality* (templateId: `2.16.840.1.113883.10.20.26.31`)
13. **SHALL** contain at least one [1..*] **`entry`**
    a. Contains exactly one [1..1] *Maternal Morbidities* (templateId: `2.16.840.1.113883.10.20.26.25`)
14. **SHALL** contain at least one [1..*] **`entry`**
    a. Contains exactly one [1..1] *Risk Factors* (templateId: `2.16.840.1.113883.10.20.26.34`)

Pregnancy History 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.xxx"/>
  <id root="1541435215" extension="MDHT"/>
  <code code="1439793000"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation/>
  </entry>
```

```
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.26.24"/>
    <id root="1491845918" extension="MDHT"/>
    <code code="801493924"/>
    <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="43427457" extension="MDHT"/>
    <code code="837782294"/>
    <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="2.16.840.1.113883.10.20.26.31"/>
    <id root="246817670" extension="MDHT"/>
    <code code="1461826425"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2012"/>
      <high value="2012"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.26.25"/>
    <id root="895066347" extension="MDHT"/>
    <code code="1499552315"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2012"/>
      <high value="2012"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation classCode="OBS" moodCode="EVN">
    <templateId root="2.16.840.1.113883.10.20.26.34"/>
    <id root="956882781" extension="MDHT"/>
```

```
      <code code="1360863320"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN"/>
      </entryRelationship>
    </observation>
  </entry>
</section>
```

Vital Sign - Mother

[Section: templateId `2.16.840.1.113883.10.20.26.xxx`]

The vital signs section contains measurement results of a patient's vital signs, including the temperature.

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`)
4. **SHOULD** contain zero or one [0..1] **`text`**
5. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Body Weight at Delivery* (templateId: `2.16.840.1.113883.10.20.26.14`)
6. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Height* (templateId: `2.16.840.1.113883.10.20.26.21`)

Vital Sign - Mother 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.xxx"/>
  <id root="2087577327" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.21"/>
      <id root="1072281429" extension="MDHT"/>
      <code code="1250281099"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Vital Sign - Newborn

[Section: templateId `2.16.840.1.113883.10.20.26.xxx`]

The vital signs section contains measurement results of a patient's vital signs, including the temperature.

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`)
4. **SHOULD** contain zero or one [0..1] **`text`**
5. **SHALL** contain [1..2] **`entry`**
   a. Contains exactly one [1..1] *Apgar Score* (templateId: `2.16.840.1.113883.10.20.26.9`)
6. **SHALL** contain zero or one [0..1] **`entry`**
   - Record the birth weight of the newborn.

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

Vital Sign - Newborn 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.xxx"/>
  <id root="540078046" extension="MDHT"/>
  <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.9"/>
      <id root="1047535609" extension="MDHT"/>
      <code code="1322833102"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.36"/>
      <id root="1602678713" extension="MDHT"/>
      <code code="1806146755"/>
      <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.

- *Weight*

Abnormal Conditions of the Newborn

[Observation: templateId `2.16.840.1.113883.10.20.26.8`]

Information on one or more disorders or significant morbidities experienced by the newborn.

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 - it records the nature of the abnormal 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="2143863178" extension="MDHT"/>
  <code code="849495166"/>
  <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 measured Apgar score for the infant. The score is determined by evaluating the newborn baby on five simple criteria on a scale from zero to two, then summing up the five values thus obtained.

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="2062959935" extension="MDHT"/>
  <code code="323525469"/>
  <effectiveTime>
```

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

Autopsy Performance

[Observation: templateId `2.16.840.1.113883.10.20.26.xxx`]

Information on whether or not an autopsy was performed.

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 indicates whether an autopsy was performed
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - Information to identify whether an autopsy was performed.

Autopsy Performance 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.xxx"/>
  <id root="1623671128" extension="MDHT"/>
  <code code="1650185090"/>
  <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="1642010291" extension="MDHT"/>
  <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>
```

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="1046340672" extension="MDHT"/>
  <code code="1136062253"/>
  <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 characteristics 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 characteristic 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="1756838618" extension="MDHT"/>
  <code code="1828825208"/>
  <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 infant suffered from one or more of a list of known malformations diagnosed prenatally or after 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 *`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="164033515" extension="MDHT"/>
  <code code="54031806"/>
  <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="889245506" extension="MDHT"/>
  <code code="734673965"/>
  <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 final estimate of gestation.

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="42323177" extension="MDHT"/>
  <code code="1434464603"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Fetal Death Occurrance

[Observation: templateId `2.16.840.1.113883.10.20.26.xxx`]

Information on the estimated time of fetal death; the time of death is characterized by relationshp to the time of delivery.

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 - that it indicates the death of a fetus.
4. **SHALL** contain exactly one [1..1] **`value`** with data type CD, where the @code **SHALL** be selected from ValueSet *`Fetal Death Time Points`* **STATIC**
   - Information regarding the point within the delivery process at which fetal death occurred.

Fetal Death Occurrance 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"
 moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.xxx"/>
  <id root="485271297" extension="MDHT"/>
  <code code="207121753"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CD" code="110456360"/>
</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="117066859" extension="MDHT"/>
  <code code="1123730858"/>
```

```
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CD" code="1934260288"/>
</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="328463223" extension="MDHT"/>
  <code code="1342165167"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

home Birth Plan

[Observation: templateId `2.16.840.1.113883.10.20.26.xxx`]

Information on whether a home birth was planned for the 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 whether or not a home birth was planned.
4. **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.

home Birth Plan 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.xxx"/>
  <id root="629685635" extension="MDHT"/>
  <code code="1021231276"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Infant Breastfed

[Observation: templateId `2.16.840.1.113883.10.20.26.xxx`]

Information on whether the infant is being breastfed at the time of departure from the birth facility.

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 indicates whether the infant is being breastfed.
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - Information to identify whether the infant was being breastfed at discharge.

Infant Breastfed 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.xxx"/>
  <id root="395442896" extension="MDHT"/>
  <code code="1723783021"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Infant Living

[Observation: templateId `2.16.840.1.113883.10.20.26.xxx`]

INLINE

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 includes information on whether the infant was living at time of report.
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - Information to identify whether the infant was living at the time of report.

Infant 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" moodCode="EVN">
  <templateId root="2.16.840.1.113883.10.20.26.xxx"/>
  <id root="235635714" extension="MDHT"/>
  <code code="1681750458"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

infant Transfer

[Observation: templateId `2.16.840.1.113883.10.20.26.xxx`]

Information on whether or not the infant was transferred within 24 hours 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`**
   - The code value indicates the observation refers to the transfer of an infant.
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - A Boolean value to indicate whether or not the infant was transferred within 24 hours of delivery.
5. **MAY** contain zero or one [0..1] **`participant`**
   a. This participant **SHALL** contain exactly one [1..1] **`@typeCode`**`="DST"`
   b. This participant **SHALL** contain exactly one [1..1] **`participantRole`**
      a. This participantRole Contains zero or one [0..1] **`@classCode`**`="SDLOC"`
      b. This participantRole Contains zero or one [0..1] **`scopingEntity`**
         a. This scopingEntity **SHALL** contain exactly one [1..1] **`@classCode`**`="ORG"`
         b. This scopingEntity **SHALL** contain exactly one [1..1] **`@determinerCode`**`="INSTANCE"`
         c. This scopingEntity **SHALL** contain exactly one [1..1] **`name`**

            The name of the facility the infant was transferred to.

infant Transfer 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.xxx"/>
  <id root="381014429" extension="MDHT"/>
  <code code="422364525"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <participant typeCode="DST">
    <participantRole classCode="SDLOC"/>
  </participant>
</observation>
```

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 **STATIC**
   - A code value that indicates the nature of the observation - it records nature of the infection about which information is provided. Note, for live birth reporting refer to the value set: Birth Reporting - Infections Present. For fetal death reporting refer to the value set: Fetal Death Reporting - Infections Present.
4. **SHALL** contain exactly one [1..1] **`value`** with data type BL

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="1695090965" extension="MDHT"/>
  <code code="122165671"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</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. **SHALL** contain exactly one [1..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.
8. **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)
9. **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)
10. **MAY** contain zero or one [0..1] **entryRelationship**

    The information is only collected in cases where fetal death is reported. In case of fetal death reporting, it is required.
   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.
11. **SHOULD** contain zero or one [0..1] **entryRelationship**
   a. Contains **@typeCode="COMP"** *COMP*
   b. Contains exactly one [1..1] *home Birth Plan* (templateId: 2.16.840.1.113883.10.20.26.xxx)
12. **SHALL** contain exactly one [1..1] **entryRelationship**
   a. Contains **@typeCode="COMP"** *COMP*
   b. Contains exactly one [1..1] *Maternal Transfer* (templateId: 2.16.840.1.113883.10.20.xxxx)

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="454704236" extension="MDHT"/>
  <code code="613122376"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <performer typeCode="PRF">
    <assignedEntity>
      <id root="1505918661" extension="MDHT"/>
      <code code="1880245965"/>
    </assignedEntity>
  </performer>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="1546062126" extension="MDHT"/>
      <code code="1848197489"/>
      <assignedPerson/>
    </assignedEntity>
  </performer>
```

```
  <participant typeCode="LOC">
    <participantRole classCode="ROL">
      <id root="1324292355" extension="MDHT"/>
      <code code="1106414463"/>
      <addr/>
      <playingEntity classCode="PLC" determinerCode="INSTANCE"/>
    </participantRole>
  </participant>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="864612242"/>
      <value xsi:type="CD" code="1061205270"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="42535716"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation/>
  </entryRelationship>
  <entryRelationship>
    <observation classCode="OBS" moodCode="EVN">
      <templateId root="2.16.840.1.113883.10.20.26.20"/>
      <id root="1124384900" extension="MDHT"/>
      <code code="2036810113"/>
      <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.xxx"/>
      <id root="923461658" extension="MDHT"/>
      <code code="1221391900"/>
      <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.xxxx"/>
      <id root="936791797" extension="MDHT"/>
      <code code="337126729"/>
      <effectiveTime>
        <low value="2012"/>
        <high value="2012"/>
      </effectiveTime>
      <participant typeCode="ORG">
        <participantRole classCode="SDLOC"/>
      </participant>
    </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="321414255" extension="MDHT"/>
  <code code="378510241"/>
  <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="751207531" extension="MDHT"/>
  <code code="1252525606"/>
  <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="1273630940" extension="MDHT"/>
  <code code="2078288439"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Maternal Transfer

[Observation: templateId 2.16.840.1.113883.10.20.xxxx]

Information on whether or not the mother had been transferred to the delivery facility based on maternal medical or fetal indications.

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 refers to the transfer of the mother prior to delivery.
4. **SHALL** contain exactly one [1..1] **value** with data type BL
   - A Boolean value to indicate whether or not the mother was transferred.
5. **MAY** contain zero or one [0..1] **participant**
   a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="ORG"

   b. This participant **SHALL** contain exactly one [1..1] **`participantRole`**

      a. This participantRole **SHALL** contain exactly one [1..1] **`@classCode`**`="SDLOC"`
      b. This participantRole **SHALL** contain exactly one [1..1] **`scopingEntity`**

         a. This scopingEntity **SHALL** contain exactly one [1..1] **`@classCode`**`="ORG"`
         b. This scopingEntity **SHALL** contain exactly one [1..1] **`@determinerCode`**`="INSTANCE"`
         c. This scopingEntity **SHALL** contain exactly one [1..1] **`name`**

            The name of the facility the mother was transferred from.

Maternal Transfer 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.xxxx"/>
  <id root="1850919935" extension="MDHT"/>
  <code code="1669118081"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <participant typeCode="ORG">
    <participantRole classCode="SDLOC"/>
  </participant>
</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="556416060" extension="MDHT"/>
  <code code="574291682"/>
  <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="613963863" extension="MDHT"/>
  <code code="1406674077"/>
  <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="199665314" extension="MDHT"/>
  <code code="389823994"/>
  <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="1164506899" extension="MDHT"/>
  <code code="864618106"/>
  <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="80937582" extension="MDHT"/>
  <code code="1071733235"/>
  <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="965904102" extension="MDHT"/>
  <code code="1885269052"/>
  <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="755701818" extension="MDHT"/>
  <code code="1449964088"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="299070052"/>
      <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="1628938367" extension="MDHT"/>
  <code code="398454599"/>
  <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="1807510065" extension="MDHT"/>
  <code code="987723487"/>
  <effectiveTime>
    <low value="2012"/>
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="436250413"/>
      <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="652313533" extension="MDHT"/>
  <code code="489530083"/>
  <effectiveTime>
    <low value="2012"/>
```

```
    <high value="2012"/>
  </effectiveTime>
  <value xsi:type="CD" code="1543806736"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="1534049694"/>
      <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 weight of the person. Collect unit of measure as well as the weight 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="1315796826" extension="MDHT"/>
  <code code="1730682856"/>
  <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.

Concept Code	Concept Name	Code System	Description
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. Note, the codes used are based on the current worksheet, and may be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
MD	Medical Doctor		
DO	Doctor of Osteopathy		

Concept Code	Concept Name	Code System	Description
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.

Concept Code	Concept Name	Code System	Description
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.

Concept Code	Concept Name	Code System	Description
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		

Concept Code	Concept Name	Code System	Description
CP	Cleft Palate Alone		
DSC	Down Syndrome Karyotype Confirmed		
DSP	Down Syndrome Karyotype Pending		
HY	Hypospadias		
None	None of the Cited Anomalies		
DS	Down Syndrome		
SCD	Suspected Chromosomal Disorder		
SCDC	Suspected Chromosomal Disorder Karyotype Confirmed		
SCDP	Suspected Chromosomal Disorder Karyotype Pending		

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 expense of labor and delivery. Note, the codes used are based on the current worksheet, and may be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
PI	Private Insurance		
MD	Medicaid		
SP	Self Pay		
OTH	Other		

Delivery Routes

Value Set	Delivery Routes - (OID not specified)
Description	A list of delivery routes that are relevant. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
VS	Vaginal/Spontaneous		
VF	Vaginal/Forceps		

Concept Code	Concept Name	Code System	Description
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.

Concept Code	Concept Name	Code System	Description
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)
Description	A list of time points during the delivery process at which the fetal death is thought to have occured. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
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		
UNK	Unknown time of fetal death		

Fetal Presentations

Value Set	Fetal Presentations - (OID not specified)
Description	A list of the different ways a fetus may present at the point of delivery. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
C	Cephalic		
B	Breech		
OTH	Other		

Implementation Guide Sections

Value Set	Implementation Guide Sections - (OID not specified)
Description	A list of the sections that have been created for the implementation guide. Note, the codes used are imaginary and are expected to be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
ATS	Antenatal Testing and Surveillance		
F	Fetus		
HI	History of Infection		
LDO	Labor and Delivery Outcomes		
LDP	Labor and Delivery Procedures		
LD	Labor and Delivery		
ND	Newborn Delivery		
PH	Pregancy History		
VSM	Vital Signs Mother		
VSN	Vital Signs Newborn		

Implementation Guide Templates

Value Set	Implementation Guide Templates - (OID not specified)
Description	A list of the templates that are used within the implementation guide. Note, the codes used are imaginary and are expected to be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
ACN	Abnormal Conditions of the Newborn		
APS	Apgar Score		
BO	Birth Order		
BWD	Body weight at delivery		
CLD	Characteristics of Labor and Delivery		
COAN	Congenital Anomalies of the Newborn		
DLLB	Date of Last Live Birth		
EG	Estimate of Gestation		
FDO	Fetal Death Occurance		
FP	Fetal Presentations		
HGT	Height		
LDI	Labor and Delivery Information		
LO	Labor Onsets		
LMPD	Last Menstrual Period Date		
MM	Maternal Morbidities		
NBSL	Number of Births Still Living		
NIBA	Number of Infants Born Alive		
NLD	Number of Live Births now Dead		
OP	Obstetric Procedures		
OPO	Other pregnancy outcomes		
PL	Plurality		
PNC	PreNatal Care		
PPBW	PrePregnancy Body Weight		
RF	Risk Factors		
RMD	Route and Method of Delivery		
WGT	Weight		
AP	Autopsy Performance		
HBP	Home Birth Plan		

Concept Code	Concept Name	Code System	Description
IB	Infant Breastfed		
IL	Infant Living		
INT	Infant Transfer		
IP	Infections Present		
MT	Maternal Transfer		

Labor and Delivery Characteristics

Value Set	Labor and Delivery Characteristics - (OID not specified)
Description	A list of relevant characteristics that can affect the labor and delivery process. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
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)
Description	A list of possible onsets of labor. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
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. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
PL	Perineal Laceration		
RU	Ruptured Uterus		
UH	Unplanned Hysterectomy		
ICU	Admission to Intensive Care		
OR	Unplanned Operating Room Procedure		
NONE	None of the Cited Maternal Morbidities		
MT	Maternal Transfusion		

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.

Concept Code	Concept Name	Code System	Description
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)
Description	A list of different types of place or situations in which the birth or delivery occurred. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Concept Code	Concept Name	Code System	Description
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.

Concept Code	Concept Name	Code System	Description
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		

REFERENCES

- HL7 Implementation Guide: CDA Release 2 – Continuity of Care Document (CCD) A CDA implementation of ASTM E2369-05 Standard Specification for Continuity of Care Record© (CCR) April 01, 2007 available through *HL7* .
- HL7 Implementation Guide for CDA Release 2 Quality Reporting Document Architecture (QRDA) Draft Standard for Trial Use March 2009. Available at: *Quality Reporting Document Architecture (QRDA)*
- HL7 Implementation Guide for CDA Release 2 CDA for Public Health Case Reports (PHCR) Informative Standard October 2009. Available through *HL7* .
- HL7 Implementation Guide for CDA Release 2: NHSN Healthcare Associated Infection (HAI) Reports, Release 2 Draft Standard for Trial Use January 2009 Available at: *NHSN Healthcare Associated Infection (HAI) Reports*
- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A, (Editors). HL7 Clinical Document Architecture, Release 2.0. ANSI-approved HL7 Standard; May 2005. Ann Arbor, Mich.: Health Level Seven, Inc. Available through *HL7* or if an HL7 member with the following link: *CDA Release 2 Normative Web Edition.*
- *LOINC®* : Logical Observation Identifiers Names and Codes, Regenstrief Institute.
- *SNOMED CT®* : SNOMED Clinical Terms SNOMED International Organization.
- Extensible Markup Language, *www.w3.org/XML* .
- Dolin RH, Alschuler L, Boyer S, Beebe C, Behlen FM, Biron PV, Shabo A., HL7 Clinical Document Architecture, Release 2. J Am Med Inform Assoc. 2006;13:30-39. Available at: *http://www.jamia.org/cgi/reprint/13/1/30* .
- Using SNOMED CT in HL7 Version 3; Implementation Guide, Release 1.5. Available through *HL7* or if an HL7 member with the following link: *Using SNOMED CT in HL7 Version 3*