Implementation Guide for CDA Release 2: Reporting Birth and Fetal Death Information from the EHR to Vital Records, Release 1

Public Health and Emergency Response Work Group

Contents

Acknowledgments

This document contains specifications for using HL7's Clinical Document Architecture for reporting birth and fetal death information to vital records.

The content defined within this implementation guide is drawn from the US Standard Certificate of Live Birth, and from the US Standard Report of Death as revised November 2003.

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The templates and content provided within this Implementation Guide have been checked against those defined within the Implementation Guide for CDA Release 2.0, Consolidated CDA Templates, December 2011.

Revision History

Rev	Date	By Whom	Changes
HL7 DSTU	March 2013	Mead Walker	Initial package prepared for HL7 Balloting
DSTU pre-publication	October 2013	Mead Walker	Revised submission based on ballot comments.

List of Figures

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 birthing facilities and centers 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 or fetus. 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 to public health agencies to track maternal and infant health populations of interest.

The document has been generated through creation of a UML model created to support CDA Release 2. The model exists within the environment created by the Open Health Tools (OHT) Model-Driven Health Tools (MDHT) project. This document was generated from the model using the features of the toolkit.

Approach

The document focuses on the use case describing the communication of that portion of the birth record or fetal death report collected by clinicians to appropriate local, state, and territorial vital statistics agencies using the HL7 Clinical Document Architecture. The goal of the implementation guide is to provide safe, reliable delivery of relevant clinical information to vital records. The use case supported by this implementation guide does not cover the data that is reported in Electronic Birth Registration Systems (EDRS). For fetal death reporting, the use case does not preclude medical examiners from using EHRs as a primary source for some of the clinical data that may be transmitted to an EDRS.

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

The following assumption is a precondition for the use of this implementation guide: The data requirements for clinician supplied live birth or fetal death information are to be completed by the medical certifier according to the Edit Specifications for the U.S. Standard Certificate of Live Birth, or the US Standard Report of Fetal Death.. The applicable jurisdiction may have additional data requirements and edit specifications that will be addressed at the jurisdictional level.

The implementation guide has been developed with a primary reference to documentation created by the National Center for Health Statistics (CDC-NCHS). Content has been drawn from:

- US Standard Certification of Live Birth, Revised 11/2003
- US Standard Report of Fetal Death, Revised 11/2003
- Facility Worksheet for the Live Birth Certificate, Final 2/5/04
- Facility Worksheet for the Report of Fetal Death, Final 2/5/04
- Birth Edit Specifications for the 2003 Proposed Revision of the US Standard Certificate of Birth, (5/2004)
- Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death, 2003 revision (Updated March 2012)

It is expected that electronic health record systems that provide data for inclusion within clinical documents conformant to this implementation guide, may use the IHE (Interconnecting the Healthcare Enterprise) Birth and Fetal Death Reporting (BFDR) technical framework supplement as a guide to extracting the data. Therefore, we have sought to organize sections within this document, both to reflect the organization of the Facility Worksheets, and to correspond to the BFDR document. References to the corresponding IHE data structure will be provided where relevant.

Relationship to C-CDA

We have also used HL7's consolidated CDA (C-CDA) as a point of reference for developing the templates used within this guide. However, the focus of the reporting is rather different from that in the C-CDA documents: those provide an open structure to allow clininians to record relevant data for patient care across a wide range of institutional settings, while birth and fetal death reporting address a constrained data set whose content is tailord to the

specific needs of vital statistics. As a result, it was only possible to draw upon a few of the templates created for C-CDA. The descriptions of individual templates touch on their relationship to C-CDA where appropriate.

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.

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 form and content of that portion of the record collected by electronic health record systems for transmission to state/jurisdictional vital record offices. 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. The use case covers events that are recorded by a birthing facility in an EHR. Planned or unplanned home births are generally not recorded by the hospital unless the mother is taken there immediately after birth for emergency medical care, and even in these cases, the home birth is usually filed by the home birth attendant. This use case is not intended to cover reporting to national public health agencies such as NCHS."

The following use case provides a common scenario for the recording of birth and fetal death events 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. The staff person prints a copy of the list and takes it to the L&D unit where they pick 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, the L&D log, mother's prenatal care and other medical records are reviewed for the required information. If necessary, the the prenatal care provider is called in order to supply more information.

The BIS may enter 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, the registrar 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. The nurse first checks the hospital's information system and learns about the mother's loss. The BIS obtains the completed Facility Worksheet from the nurse and helps the mother complete the Patient's Worksheet. The

BIS 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 source for information drawn from the mother's and infant's electronic medical record. This data may be directly entered by the responsible person. Data items may also be extracted from the electronic record system used to support patient medical records. In such cases, we expect the IHE (Interconnecting the Health Enterprise) specifications for Labor and Delivery Profiles to be useful.

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 defined 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

The Implementation Guide provides definition for the vocabulary items that are needed as content for those elements using coded data types. The use of coded types, and the precise expression of the valid content of code sets is essential to enable efficient processing of subject data report content, and to allow the proper use of the contained data. Within this guide, the vocabulary section documents the various act code values used to define structural elements - to identify particular acts or observations. It also defines the several value sets needed to constrain the semantic content of coded items. In principle, all the vocabulary needed to support subject data reporting would draw on a common set of concepts. This has been done wherever possible, and the Public Health Information Network (PHIN) Vocabulary Access and Distribution System (VADS) is used as the repository and source for the commonly agreed upon vocabulary items.

In a nunber of cases, the NCVS edit specifications for data collection allow the entry of "UNKNOWN" to represent the case in which desired information is not available. This concept is captured, within this implementation guide, through use of the nullFlavor - UNK".

Throughout this Implementation Guide, the bindings between coded attributes and the cited value sets are static, and the value sets are versioned as of the date of guide publication. If it proves necessary to make changes to these value sets, this will be recorded, either through published erata, or through issuing an updated version of the document.

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 (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.

A custom header has been used - as compared to the Consolidated US Realm header - because of the substantial differences in the underlying use case. For vital records purposes, basic identification only of the record target is provided. However, the more detailed demographics information required for Consolidated CDA is not included within the facilities work sheet which provides the data content of this stream of reporting.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.1"
2. Contains exactly one [1..1] **@classCode**="DOCCLIN" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
   - *The code value indicates this is a clincial document.*
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:4)
   - *The value indicates the included information refers to an existing document - as opposed to an intended one.*
4. **SHALL** contain exactly one [1..1] **realmCode** (CONF:1)**/@code**="USA" (CodeSystem: 1.0.3166.1 Country (ISO 3166-1)) (CONF:2)
   - *The realm that the document is relevant for. This specification is a US realm product.*
5. **SHALL** contain exactly one [1..1] **typeId** (CONF:3)
   - *Type ID root = 2.16.840.1.113003.1.3.*
     Type ID extension = "POCD_HD000040.
6. **SHALL** contain exactly one [1..1] **id** (CONF:5)
   - *Provide the identifier assigned to the document by the healthcare provider acting as a custodian of the information. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.*
7. **SHALL** contain exactly one [1..1] **code** (CONF:6)**/@code**="68998-4" *U.S. standard certificate of live birth - 2003 revision* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:7)
   - *The value provided indicates that the document is a live birth report.*
8. **SHALL** contain exactly one [1..1] **title** (CONF:8)
   - *A text title for the document. The title may be either a locally defined name or the display name corresponding to clinicalDocument/code.*
9. **SHALL** contain exactly one [1..1] **effectiveTime** (CONF:9)
   - *The point in time the document was created at.*
10. **SHALL** contain exactly one [1..1] **confidentialityCode** (CONF:10), where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.5.25 Confidentiality) (CONF:11)
    - *An indication of the level of confidentiality with which the document needs to be managed.*
11. **SHALL** contain exactly one [1..1] **languageCode** (CONF:12)
    - *The language used for recording information within the document.*
12. **SHALL** contain exactly one [1..1] **recordTarget** (CONF:13)

Information to identify the mother of the child.

- **a.** This recordTarget **SHALL** contain exactly one [1..1] **@typeCode**="RCT" (CONF:23)
- **b.** This recordTarget **SHALL** contain exactly one [1..1] **patientRole** (CONF:24)
  - **a.** This patientRole **SHALL** contain exactly one [1..1] **@classCode**="PAT" (CONF:28)
  - **b.** This patientRole **SHOULD** contain zero or one [0..1] **addr** (CONF:25)

    The current postal address for the mother.
  - **c.** This patientRole **SHALL** contain exactly one [1..1] **id** (CONF:26)

    The medical record number assigned to the mother by the health care facility. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
  - **d.** This patientRole **SHALL** contain exactly one [1..1] **patient** (CONF:27)
    - **a.** This patient **SHALL** contain exactly one [1..1] **@classCode**="PSN" (CONF:29)
    - **b.** This patient **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE" (CONF:30)
    - **c.** This patient **SHALL** contain exactly one [1..1] **name** (CONF:31)

      The name of the mother.

13. **SHALL** contain exactly one [1..1] **author** (CONF:14)

    The author participation contains information about the person who authored the document. This is the person who verifies/approves the accuracy of the data to be sent to the vital records system.

    - **a.** This author Contains exactly one [1..1] **@typeCode**="AUT"
    - **b.** This author **SHALL** contain exactly one [1..1] **assignedAuthor** (CONF:21)
      - **a.** This assignedAuthor **SHALL** contain exactly one [1..1] **id** (CONF:22)

        An identifier for the author of the live birth report. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
14. **SHALL** contain exactly one [1..1] **custodian** (CONF:15)

    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" (CONF:32)
    - **b.** This custodian **SHALL** contain exactly one [1..1] **assignedCustodian** (CONF:33)
      - **a.** This assignedCustodian **SHALL** contain exactly one [1..1] **@classCode**="ASSIGNED" (CONF:34)
      - **b.** This assignedCustodian Contains exactly one [1..1] **representedCustodianOrganization**
        - **a.** This representedCustodianOrganization **SHALL** contain exactly one [1..1] **@classCode**="ORG" (CONF:35)
        - **b.** This representedCustodianOrganization **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE" (CONF:36)
        - **c.** This representedCustodianOrganization **SHALL** contain exactly one [1..1] **id** (CONF:37)

          An identifier for the custodian organization. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
15. **SHALL** contain exactly one [1..1] **component** (CONF:16)

    - **a.** Contains exactly one [1..1] *Prenatal Testing and Surveillance Section* (templateId: 2.16.840.1.113883.10.20.26.3)
16. **SHALL** contain exactly one [1..1] **component** (CONF:17)

    - **a.** Contains exactly one [1..1] *Prior Pregnancy History Section* (templateId: 2.16.840.1.113883.10.20.26.12)
17. **SHALL** contain exactly one [1..1] **component**

   a. Contains exactly one [1..1] *History of Infection - Live Birth Section* (templateId: `2.16.840.1.113883.10.20.26.5`)

18. **SHALL** contain exactly one [1..1] **`component`** (CONF:20)

   a. Contains exactly one [1..1] *Labor and Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.8`)

19. **SHALL** contain exactly one [1..1] **`component`** (CONF:19)

   a. Contains exactly one [1..1] *Newborn Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.10`)

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="MDHT" extension="1577403594"/>
  <code code="343268593"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="1051196199"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="MDHT" extension="6723242"/>
      <addr/>
      <patient classCode="PSN" determinerCode="INSTANCE"/>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
    <time/>
    <assignedAuthor>
      <id root="MDHT" extension="265893303"/>
    </assignedAuthor>
  </author>
  <custodian typeCode="CST">
    <assignedCustodian classCode="ASSIGNED">
      <representedCustodianOrganization classCode="ORG"
 determinerCode="INSTANCE"/>
    </assignedCustodian>
  </custodian>
  <component>
    <structuredBody>
      <component>
        <section/>
      </component>
      <component>
        <section>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="943567033"/>
          <code code="1606948580"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="960175712"/>
          <languageCode code="Code forlanguageCode"/>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation>
```

```
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="755564132"/>
              <code code="553853973"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation>
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              <code code="801332281"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
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      </component>
      <component>
        <section>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="823084435"/>
          <code code="1729252624"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="1746607099"/>
          <languageCode code="Code forlanguageCode"/>
          <subject typeCode="SBJ">
            <relatedSubject classCode="PRS">
              <code code="CHILD" codeSystem="2.16.840.1.113883.5.111"
codeSystemName="RoleCode"/>
            </relatedSubject>
          </subject>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="1781695333"/>
              <code code="1900537690"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
```

```
            <observation/>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="305172659"/>
              <code code="2087904451"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
              <entryRelationship typeCode="COMP"/>
              <entryRelationship typeCode="COMP"/>
            </observation>
          </entry>
          <entry>
            <observation/>
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          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="871350140"/>
              <code code="1670032592"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="1370266886"/>
              <code code="301276268"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="543629593"/>
              <code code="2043942566"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
              <participant typeCode="DST"/>
            </observation>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
```

```
              <id root="MDHT" extension="1649132788"/>
              <code code="1688528400"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <component>
            <section>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="142789278"/>
              <code code="933122256"/>
              <title>TEXT FOR TITLE</title>
              <confidentialityCode code="1709224019"/>
              <languageCode code="Code forlanguageCode"/>
              <entry>
                <observation/>
              </entry>
            </section>
          </component>
          <component>
            <section>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="771586726"/>
              <code code="1086693166"/>
              <title>TEXT FOR TITLE</title>
              <confidentialityCode code="979448514"/>
              <languageCode code="Code forlanguageCode"/>
              <entry>
                <observation/>
              </entry>
            </section>
          </component>
        </section>
      </component>
      <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 Report of Fetal Death, 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 1992 Revision of the Model State Vital Statistics Act and Regulations (1) recommends the following

definition of fetal death. This definition is based on the definition promulgated by the World Health Organization in 1950 and revised in 1988 by a working group formed by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (2). The revision added clarifiers to help determine what is to be considered a fetal death:
"Fetal death" means death prior to the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy and which is not an induced termination of pregnancy. The death is indicated by the fact that after such expulsion or extraction, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps.
Forty-one areas use a definition very similar to this definition, thirteen areas use a shortened definition of fetal death, and three areas have no formal definition of fetal death. (State Definitions and Reporting Requirements for
Live Births, Fetal Deaths, and INduced Terminations of Pregnancy 1997 Revision, US Department of Health and Human
Services, Centers for Disease Control and Prevention, National Center for Health Statistics)

A custom header has been used - as compared to the Consolidated US Realm header - because of the substantial differences in the underlying use case. For vital records purposes, basic identification only of the record target is provided. However, the more detailed demographics information required for Consolidated CDA is not included within the facilities work sheet which provides the data content of this stream of reporting.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.2"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`DOCCLIN`" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:142)
   - *The code value indicates this is a clincial document.*
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:143)
   - *The value indicates the included information refers to an existing document - as opposed to an intended one.*
4. **SHALL** contain exactly one [1..1] **`realmCode`** (CONF:139)**`/@code`**="`US`" (CodeSystem: `1.0.3166.1 Country (ISO 3166-1)`) (CONF:140)
   - *The realm that the document is relevant for. This specification is a US realm product.*
5. **SHALL** contain exactly one [1..1] **`typeId`** (CONF:141)
   - *Type ID root = 2.16.840.1.113003.1.3.*
     Type ID extension = "POCD_HD000040.
6. **SHALL** contain exactly one [1..1] **`id`** (CONF:144)
   - *Provide the identifier assigned to the document by the healthcare provider acting as a custodian of the information. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.*
7. **SHALL** contain exactly one [1..1] **`code`** (CONF:145)**`/@code`**="`69045-3`" *U.S. stanard report of fetal death - 2003 revision* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:146)
   - *The value provided indicates that the document is a report of fetal death.*
8. **SHALL** contain exactly one [1..1] **`title`** (CONF:147)
   - *A text title for the document. The title may be either a locally defined name or the display name corresponding to clinicalDocument/code.*
9. **SHALL** contain exactly one [1..1] **`effectiveTime`** (CONF:148)
   - *The point in time the document was created at.*
10. **SHALL** contain exactly one [1..1] **`confidentialityCode`** (CONF:149), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.5.25 Confidentiality`) (CONF:150)

- *An indication of the level of confidentiality with which the document needs to be managed.*

11. **SHALL** contain exactly one [1..1] **`languageCode`** (CONF:151)
    - *The language used for recording information within the document.*
12. **SHALL** contain exactly one [1..1] **`recordTarget`** (CONF:152)
    a. This recordTarget **SHALL** contain exactly one [1..1] **`@typeCode`**="`RCT`" (CONF:164)
    b. This recordTarget **SHALL** contain exactly one [1..1] **`patientRole`** (CONF:165)
        a. This patientRole **SHALL** contain exactly one [1..1] **`@classCode`**="`PAT`" (CONF:169)
        b. This patientRole **SHOULD** contain zero or one [0..1] **`addr`** (CONF:166)

           The current postal address for the mother.
        c. This patientRole **SHALL** contain exactly one [1..1] **`id`** (CONF:167)

           The medical record number assigned to the mother by the health care facility. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
        d. This patientRole **SHALL** contain exactly one [1..1] **`patient`** with data type *Patient* (CONF:168)
13. **SHALL** contain exactly one [1..1] **`author`** (CONF:153)

    The author participation contains information about the person who authored the document. This is the person who verifies/approves the accuracy of the data to be sent to the vital records system.

    a. This author **SHALL** contain exactly one [1..1] **`@typeCode`**="`AUT`" (CONF:160)
    b. This author **SHALL** contain exactly one [1..1] **`assignedAuthor`** (CONF:161)
        a. This assignedAuthor **SHALL** contain exactly one [1..1] **`@classCode`**="`ASSIGNED`" (CONF:162)
        b. This assignedAuthor **SHALL** contain exactly one [1..1] **`id`** (CONF:163)

           An identifier for the author of the fetal death report. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
14. **SHALL** contain exactly one [1..1] **`custodian`** (CONF:154)
    a. This custodian **SHALL** contain exactly one [1..1] **`@typeCode`**="`CST`" (CONF:173)
    b. This custodian **SHALL** contain exactly one [1..1] **`assignedCustodian`** (CONF:174)
        a. This assignedCustodian **SHALL** contain exactly one [1..1] **`@classCode`**="`ASSIGNED`" (CONF:175)
        b. This assignedCustodian **SHALL** contain exactly one [1..1] **`representedCustodianOrganization`** (CONF:176)
            a. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **`@classCode`**="`ORG`" (CONF:177)
            b. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **`@determinerCode`**="`INSTANCE`" (CONF:178)
            c. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **`id`** (CONF:179)

               An identifier for the custodian organization. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
15. **SHALL** contain exactly one [1..1] **`component`** (CONF:157)
    a. Contains exactly one [1..1] *Prenatal Testing and Surveillance Section* (templateId: `2.16.840.1.113883.10.20.26.3`)
16. **SHALL** contain exactly one [1..1] **`component`** (CONF:158)
    a. Contains exactly one [1..1] *Prior Pregnancy History Section* (templateId: `2.16.840.1.113883.10.20.26.12`)
17. **SHALL** contain exactly one [1..1] **`component`**
    a. Contains exactly one [1..1] *History of Infection - Fetal Death Section* (templateId: `2.16.840.1.113883.10.20.26.5`)

18. **SHALL** contain exactly one [1..1] **`component`** (CONF:155)
    a. Contains exactly one [1..1] *Labor and Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.8`)
19. **SHALL** contain exactly one [1..1] **`component`** (CONF:156)
    a. Contains exactly one [1..1] *Fetal Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.4`)

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"/>
  <id root="MDHT" extension="604191042"/>
  <code code="1242248925"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="332673482"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget typeCode="RCT">
    <patientRole classCode="PAT">
      <id root="MDHT" extension="1759758898"/>
      <addr/>
    </patientRole>
  </recordTarget>
  <author typeCode="AUT">
    <time/>
    <assignedAuthor classCode="ASSIGNED">
      <id root="MDHT" extension="104169390"/>
    </assignedAuthor>
  </author>
  <custodian typeCode="CST">
    <assignedCustodian classCode="ASSIGNED">
      <representedCustodianOrganization classCode="ORG"
 determinerCode="INSTANCE"/>
    </assignedCustodian>
  </custodian>
  <component>
    <structuredBody>
      <component>
        <section/>
      </component>
      <component>
        <section>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1496293877"/>
          <code code="1375743993"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="1074525847"/>
          <languageCode code="Code forlanguageCode"/>
          <subject typeCode="SBJ">
            <relatedSubject classCode="PRS"/>
          </subject>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="1874086392"/>
              <code code="87283818"/>
              <effectiveTime>
```

```
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
          <languageCode code="Code forlanguageCode"/>
        </observation>
      </entry>
      <entry>
        <observation/>
      </entry>
      <entry>
        <observation>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1598897748"/>
          <code code="217283959"/>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
          <languageCode code="Code forlanguageCode"/>
          <entryRelationship/>
        </observation>
      </entry>
      <entry>
        <observation>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1236861513"/>
          <code code="326068288"/>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
          <languageCode code="Code forlanguageCode"/>
        </observation>
      </entry>
      <entry>
        <observation>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="521397939"/>
          <code code="1105302881"/>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
          <languageCode code="Code forlanguageCode"/>
        </observation>
      </entry>
      <entry>
        <observation>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="1145467843"/>
          <code code="2033515882"/>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
          <languageCode code="Code forlanguageCode"/>
          <entryRelationship typeCode="COMP"/>
          <entryRelationship typeCode="COMP"/>
        </observation>
      </entry>
```

```
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="1775539280"/>
              <code code="253437277"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
        </section>
      </component>
      <component>
        <section/>
      </component>
      <component>
        <section>
          <realmCode code="Code forrealmCode"/>
          <typeId root="2.16.840.1.113883.1.3"/>
          <id root="MDHT" extension="2082204610"/>
          <code code="849328941"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="896990263"/>
          <languageCode code="Code forlanguageCode"/>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="802684317"/>
              <code code="402266214"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation/>
          </entry>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
              <typeId root="2.16.840.1.113883.1.3"/>
              <id root="MDHT" extension="1718538128"/>
              <code code="1172859453"/>
              <effectiveTime>
                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <entry>
            <observation/>
```

```
          </entry>
        </section>
      </component>
      <component>
        <section/>
      </component>
    </structuredBody>
  </component>
</ClinicalDocument>
```

Chapter 3

SECTION TEMPLATES

Topics:

Assessments Section

[Section: templateId 2.16.840.1.113883.10.20.26.9]

The section includes assessments, namely Apgar scores, that are recorded for the infant.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.9"
2. **SHALL** contain exactly one [1..1] **@classCode**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:360)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:363)
4. **SHALL** contain exactly one [1..1] **code** (CONF:362)**/@code**="51848-0" *Assessment Note* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:361)
5. **SHALL** contain exactly one [1..1] **text** (CONF:364)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain at least one [1..*] **entry**
   - *Apgar scores are recorded to assess the condition of the newborn. In those cases in which the 5 minute Apgar score is less than 6, the 10 minute Apgar score is to be recorded, .*
   a. Contains exactly one [1..1] *Assessments Observation* (templateId: 2.16.840.1.113883.10.20.26.46)

Assessments Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="210608902"/>
  <code code="1997071123"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <id root="MDHT" extension="1829516804"/>
      <code code="301307039"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Fetal Delivery Section

[Section: templateId 2.16.840.1.113883.10.20.26.4]

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 and from the patient's medical record.

The reader should note that the subject of this section - the delivered fetus - is different from the overall subject of the clinical document - which is the mother.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.4"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`DOCSECT`" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:76)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:78)
4. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:77)
   - *A code value that indicates the nature of the section - it contains information regarding the delivered fetus.*
5. **SHALL** contain exactly one [1..1] **`text`** (CONF:79)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain exactly one [1..1] **`entry`** (CONF:81)
   a. Contains exactly one [1..1] *Plurality* (templateId: `2.16.840.1.113883.10.20.26.41`)
7. **SHALL** contain exactly one [1..1] **`entry`** (CONF:82)
   - *Record birth order if not a single delivery.*
   a. Contains exactly one [1..1] *Birth Order* (templateId: `2.16.840.1.113883.10.20.26.16`)
8. **SHALL** contain exactly one [1..1] **`entry`** (CONF:83)
   a. Contains exactly one [1..1] *Number of Infants Born Alive* (templateId: `2.16.840.1.113883.10.20.26.37`)
9. **SHOULD** contain zero or one [0..1] **`entry`** (CONF:85)
   a. Contains exactly one [1..1] *Autopsy Performance* (templateId: `2.16.840.1.113883.10.20.26.15`)
10. **SHALL** contain exactly one [1..1] **`entry`** (CONF:86)
    a. Contains exactly one [1..1] *Fetal Death Occurrance* (templateId: `2.16.840.1.113883.10.20.26.22`)
11. **SHALL** contain at least one [1..*] **`entry`** (CONF:87)
    - *There may be multiple congenital anomalies recorded. At least one observation will be present in the case that none are present.*
    a. Contains exactly one [1..1] *Congenital Anomaly* (templateId: `2.16.840.1.113883.10.20.26.19`)
12. **SHALL** contain exactly one [1..1] **`entry`** (CONF:88)
    a. Contains exactly one [1..1] *Fetal Delivery Time* (templateId: `2.16.840.1.113883.10.20.26.23`)
13. **SHALL** contain exactly one [1..1] **`subject`**
    a. This subject **SHALL** contain exactly one [1..1] **`@typeCode`**="`SBJ`" (CONF:65)
    b. This subject **SHALL** contain exactly one [1..1] **`relatedSubject`**
       a. This relatedSubject **SHALL** contain exactly one [1..1] **`@classCode`**="`PRS`" (CONF:67)
       b. This relatedSubject **SHALL** contain exactly one [1..1] **`subject`**
          a. This subject **SHALL** contain exactly one [1..1] **`@classCode`**="`PSN`" (CONF:69)
          b. This subject **SHALL** contain exactly one [1..1] **`@determinerCode`**="`INSTANCE`" (CONF:70)
          c. This subject **MAY** contain zero or one [0..1] **`name`** (CONF:72)

             A name provided for the fetus.
          d. This subject **SHALL** contain exactly one [1..1] **`administrativeGenderCode`** (CONF:73), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.5.1 AdministrativeGenderCode`) (CONF:74)

Fetal Delivery Section example

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

```
 <id root="MDHT" extension="1354314617"/>
 <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>
     <id root="MDHT" extension="1038202920"/>
     <code code="182053163"/>
     <text>Text Value</text>
     <effectiveTime>
       <low value="2013"/>
       <high value="2013"/>
     </effectiveTime>
   </observation>
 </entry>
 <entry>
   <observation/>
 </entry>
 <entry>
   <observation>
     <id root="MDHT" extension="2078671485"/>
     <code code="392050675"/>
     <text>Text Value</text>
     <effectiveTime>
       <low value="2013"/>
       <high value="2013"/>
     </effectiveTime>
     <entryRelationship>
       <observation>
         <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
       </observation>
     </entryRelationship>
   </observation>
 </entry>
 <entry>
   <observation>
     <id root="MDHT" extension="2140017311"/>
     <code code="347336539"/>
     <text>Text Value</text>
     <effectiveTime>
       <low value="2013"/>
       <high value="2013"/>
     </effectiveTime>
   </observation>
 </entry>
 <entry>
   <observation>
     <id root="MDHT" extension="971088808"/>
     <code code="1181051113"/>
     <text>Text Value</text>
     <effectiveTime>
       <low value="2013"/>
       <high value="2013"/>
     </effectiveTime>
   </observation>
 </entry>
 <entry>
```

```
    <observation>
      <id root="MDHT" extension="767548253"/>
      <code code="1992636449"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
          <code code="73779-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Down syndrome karyotype status"/>
        </observation>
      </entryRelationship>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
          <code code="73778-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Suspected chromosomal disorder
 karyotype status"/>
        </observation>
      </entryRelationship>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1703068440"/>
      <code code="1642292098"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

History of Infection - Fetal Death Section

[Section: templateId `2.16.840.1.113883.10.20.26.5`]

This section SHALL include the infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. 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. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.5"
2. Contains exactly one [1..1] **`@classCode`**`="DOCSECT"` (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
3. Contains exactly one [1..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code/@code`**`="71459-2"` *Infection Panel* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
5. **SHALL** contain at least one [1..*] **`entry`**
   - *There may be multiple infections recorded. At least one observation will be present in the case that none are present.*
   a. Contains exactly one [1..1] *Infection Present - Fetal Death* (templateId: `2.16.840.1.113883.10.20.26.30`)

6. Contains zero or one [0..1] **`text`**
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*

History of Infection - Fetal Death Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1077521383"/>
  <title>TEXT FOR TITLE</title>
  <entry>
    <observation/>
  </entry>
</section>
```

History of Infection - Live Birth Section

[Section: templateId `2.16.840.1.113883.10.20.26.5`]

This section SHALL include the infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. 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. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.5"
2. Contains exactly one [1..1] **`@classCode`**="`DOCSECT`" (CodeSystem: `2.16.840.1.113883.5.6` `HL7ActClass`)
3. Contains exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001` `HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code/@code`**="`71459-2`" *Infection panel* (CodeSystem: `LOINC`)
5. **SHALL** contain exactly one [1..1] **`text`** (CONF:379)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain at least one [1..*] **`entry`**
   - *There may be multiple infections recorded. At least one observation will be present in the case that none are present.*
   a. Contains exactly one [1..1] *Infection Present - Live Birth* (templateId: `2.16.840.1.113883.10.20.26.30`)

History of Infection - Live Birth Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="39462182"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation/>
  </entry>
</section>
```

Labor and Delivery Procedure Section

[Section: templateId `2.16.840.1.113883.10.20.26.7`]

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.7"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`DOCSECT`" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:380)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:382)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:381)
5. **SHALL** contain exactly one [1..1] **`text`** (CONF:383)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **MAY** contain zero or more [0..*] **`entry`** (CONF:384)
   - *Obstetric procedure information is collected for a live birth certificate, but not for a fetal death report. One or more entries recording the presence of an obstetric procedure may be recorded. Each entry contains information for a single procedure. In addition, an observation is provided (for live births only) if none of the indicated procedures were performed.*
   a. Contains exactly one [1..1] *Obstetric Procedure* (templateId: `2.16.840.1.113883.10.20.26.39`)
7. **SHALL** contain exactly one [1..1] **`entry`** (CONF:385)
   a. Contains exactly one [1..1] *Method of Delivery* (templateId: `2.16.840.1.113883.10.20.26.45`)

Labor and Delivery Procedure Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1712750764"/>
  <code code="1954044694"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <procedure>
      <id root="MDHT" extension="1309702048"/>
      <code code="737565829"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </procedure>
  </entry>
  <entry>
    <procedure/>
  </entry>
</section>
```

Labor and Delivery Section

[Section: templateId `2.16.840.1.113883.10.20.26.8`]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.8"

2. **SHALL** contain exactly one [1..1] **`@classCode`**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:43)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:45)
4. **SHALL** contain exactly one [1..1] **`code/@code`**="34079-4" *Labor and delivery section* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:44)
   - *A code value that indicates the nature of the section - it is the labor and delivery section.*
5. **SHALL** contain exactly one [1..1] **`text`** (CONF:46)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain exactly one [1..1] **`entry`** (CONF:47)
   a. Contains exactly one [1..1] *Labor and Delivery Information* (templateId: 2.16.840.1.113883.10.20.26.31)
7. **MAY** contain zero or more [0..*] **`entry`** (CONF:48)
   - *Onset of labor information is collected for a live birth certificate, but not for a fetal death report.*

   a. Contains exactly one [1..1] *Onset of Labor* (templateId: 2.16.840.1.113883.10.20.26.32)
8. **SHALL** contain exactly one [1..1] **`component`** (CONF:49)
   a. Contains exactly one [1..1] *Assessments Section* (templateId: 2.16.840.1.113883.10.20.26.9)
9. **SHALL** contain exactly one [1..1] **`component`** (CONF:50)
   a. Contains exactly one [1..1] *Labor and Delivery Procedure Section* (templateId: 2.16.840.1.113883.10.20.26.7)

Labor and Delivery Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1281569734"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <component>
    <section>
      <id root="MDHT" extension="1939435494"/>
      <title>TEXT FOR TITLE</title>
      <text/>
      <entry>
        <observation>
          <id root="MDHT" extension="1515695454"/>
          <code code="827135391"/>
          <text>Text Value</text>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
        </observation>
      </entry>
    </section>
  </component>
  <component>
    <section/>
  </component>
```

```
</section>
```

Mother's Vital Signs Section

[Section: templateId 2.16.840.1.113883.10.20.26.9]

The section includes vital signs collected for the mother in the context of labor and delivery for this pregnancy. Items collected include height, as well as body weight prior to the pregnancy and at delivery.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.9"
2. **SHALL** contain exactly one [1..1] **@classCode**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:360)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:363)
4. **SHALL** contain exactly one [1..1] **code** (CONF:362)**/@code**="8716-3" *Vital Signs* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:361)
5. **SHALL** contain exactly one [1..1] **text** (CONF:364)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain zero or more [0..*] **entry**
   a. Contains exactly one [1..1] *Mothers Vital Signs Observation* (templateId: 2.16.840.1.113883.10.20.26.46)

Mother's Vital Signs Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="147593090"/>
  <code code="413579228"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <id root="MDHT" extension="1368785739"/>
      <code code="932500603"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Newborn Delivery Section

[Section: templateId 2.16.840.1.113883.10.20.26.10]

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. The reader should note that the subject of this section - the newborn infant - is different from the overall subject of the clinical document - which is the mother.

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.10"
2. **SHALL** contain exactly one [1..1] **@classCode**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:51)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:53)
4. **SHALL** contain exactly one [1..1] **code/@code**="57075-4" *Newborn delivery information from newborn narrative* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:52)
   - *A code value that indicates the nature of the section - it contains information on the newborn.*
5. **SHALL** contain exactly one [1..1] **text** (CONF:54)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain exactly one [1..1] **subject** (CONF:55)
   a. This subject **SHALL** contain exactly one [1..1] **@typeCode**="SBJ" (CONF:65)
   b. This subject **SHALL** contain exactly one [1..1] **relatedSubject** (CONF:66)
      a. This relatedSubject **SHALL** contain exactly one [1..1] **@classCode**="PRS" (CONF:67)
      b. This relatedSubject **SHALL** contain exactly one [1..1] **subject** (CONF:68)
         a. This subject **SHALL** contain exactly one [1..1] **@classCode**="PSN" (CONF:69)
         b. This subject **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE" (CONF:70)
         c. This subject **SHALL** contain exactly one [1..1] **sDTCId** (CONF:71)

            An identifier for the newborn. The medical record number assigned by the delivering institution should be provided.
         d. This subject **SHALL** contain exactly one [1..1] **name** (CONF:72)

            The name provided for the newborn.
         e. This subject **SHALL** contain exactly one [1..1] **administrativeGenderCode** (CONF:73), where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.5.1 AdministrativeGenderCode) (CONF:74)
         f. This subject **SHALL** contain exactly one [1..1] **birthTime** (CONF:75)

            The birth date and time of the newborn. By the same token, the date and time of delivery.
      c. This relatedSubject **SHALL** contain exactly one [1..1] **code/@code**="CHILD" (CodeSystem: 2.16.840.1.113883.5.111 RoleCode)
7. **SHALL** contain exactly one [1..1] **entry** (CONF:56)
   a. Contains exactly one [1..1] *Plurality* (templateId: 2.16.840.1.113883.10.20.26.41)
8. **MAY** contain zero or one [0..1] **entry** (CONF:57)
   - *Record birth order if not a single delivery.*
   a. Contains exactly one [1..1] *Birth Order* (templateId: 2.16.840.1.113883.10.20.26.16)
9. **MAY** contain zero or one [0..1] **entry** (CONF:58)
   a. Contains exactly one [1..1] *Number of Infants Born Alive* (templateId: 2.16.840.1.113883.10.20.26.37)
10. **SHALL** contain at least one [1..*] **entry** (CONF:59)
    - *One or more entries recording the presence of an abnormal condition may be recorded. Each entry contains information for a single condition.*
    a. Contains exactly one [1..1] *Abnormal Condition of the Newborn* (templateId: 2.16.840.1.113883.10.20.26.13)
11. **SHALL** contain at least one [1..*] **entry** (CONF:60)

- *There may be multiple congenital anomalies recorded. At least one observation will be present in the case that none are present.*

a. Contains exactly one [1..1] *Congenital Anomaly* (templateId: `2.16.840.1.113883.10.20.26.19`)

12. MAY contain zero or one [0..1] **`entry`** (CONF:61)

a. Contains exactly one [1..1] *Infant Transfer* (templateId: `2.16.840.1.113883.10.20.26.29`)

13. SHALL contain exactly one [1..1] **`entry`** (CONF:62)

a. Contains exactly one [1..1] *Infant Living* (templateId: `2.16.840.1.113883.10.20.26.28`)

14. SHALL contain exactly one [1..1] **`entry`** (CONF:63)

a. Contains exactly one [1..1] *Infant Breastfed* (templateId: `2.16.840.1.113883.10.20.26.27`)

15. SHALL contain exactly one [1..1] **`component`** (CONF:64)

a. Contains exactly one [1..1] *Newborns Vital Signs Section* (templateId: `2.16.840.1.113883.10.20.26.11`)

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

a. Contains exactly one [1..1] *Assessments Section* (templateId: `2.16.840.1.113883.10.20.26.9`)

Newborn Delivery Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="886855027"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <subject typeCode="SBJ">
    <relatedSubject classCode="PRS">
      <code code="CHILD" codeSystem="2.16.840.1.113883.5.111"
 codeSystemName="RoleCode"/>
      <subject classCode="PSN" determinerCode="INSTANCE">
        <administrativeGenderCode codeSystem="2.16.840.1.113883.5.1"
 codeSystemName="AdministrativeGenderCode"/>
      </subject>
    </relatedSubject>
  </subject>
  <entry>
    <observation>
      <id root="MDHT" extension="1974401735"/>
      <code code="1984615932"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1193957216"/>
      <code code="231667789"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
```

```
          <code code="73779-1" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Down syndrome karyotype status"/>
        </observation>
      </entryRelationship>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
          <code code="73778-3" codeSystem="2.16.840.1.113883.6.1"
codeSystemName="LOINC" displayName="Suspected chromosomal disorder
karyotype status"/>
        </observation>
      </entryRelationship>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="548347065"/>
      <code code="2045441720"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1430181111"/>
      <code code="1792710140"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1796975277"/>
      <code code="763678092"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <participant typeCode="DST">
        <participantRole classCode="SDLOC"/>
      </participant>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="677609426"/>
      <code code="30814368"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <component>
```

```
    <section>
      <id root="MDHT" extension="258914363"/>
      <title>TEXT FOR TITLE</title>
      <text/>
      <entry>
        <observation>
          <id root="MDHT" extension="680416441"/>
          <code code="1495259082"/>
          <text>Text Value</text>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
        </observation>
      </entry>
    </section>
  </component>
  <component>
    <section>
      <id root="MDHT" extension="1288682996"/>
      <title>TEXT FOR TITLE</title>
      <text/>
      <entry>
        <observation>
          <id root="MDHT" extension="719973042"/>
          <code code="1681781314"/>
          <text>Text Value</text>
          <effectiveTime>
            <low value="2013"/>
            <high value="2013"/>
          </effectiveTime>
        </observation>
      </entry>
    </section>
  </component>
</section>
```

Newborn's Vital Signs Section

[Section: templateId `2.16.840.1.113883.10.20.26.11`]

The vital signs - newborn section contains measurement results of the newborn's vital signs. The reader should note that the subject of this section - the newborn infant - is different from the overall subject of the clinical document - which is the mother.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.11"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`DOCSECT`" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:353)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:356)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:355)**`/@code`**="`8716-3`" *Vital Signs* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:354)
5. **SHALL** contain exactly one [1..1] **`text`** (CONF:357)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain exactly one [1..1] **`entry`**

a. Contains exactly one [1..1] *Newborns Vital Signs Observation* (templateId: `2.16.840.1.113883.10.20.26.46`)

Newborn's Vital Signs Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1837995548"/>
  <code code="1586299768"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <id root="MDHT" extension="197930506"/>
      <code code="547368403"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

Prenatal Testing and Surveillance Section

[Section: templateId `2.16.840.1.113883.10.20.26.3`]

The section contains information on the prenatal care provided to 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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.3"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`DOCSECT`" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:38)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:40)
4. **SHALL** contain exactly one [1..1] **`code/@code`**="`57078-8`" *Antenatal testing and surveillance* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:39)
   - *A code value that indicates the nature of the section - it captures prenatal care information in the case of a live birth or of a fetal death.*
5. **SHALL** contain exactly one [1..1] **`text`** (CONF:41)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain exactly one [1..1] **`entry`** (CONF:42)
   - *The included entry records information regarding prenatal care received by the mother.*
   a. Contains exactly one [1..1] *Prenatal Care* (templateId: `2.16.840.1.113883.10.20.26.42`)

Prenatal Testing and Surveillance Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="501523430"/>
  <title>TEXT FOR TITLE</title>
  <text/>
```

```
  <entry>
    <act>
      <id root="MDHT" extension="1786010345"/>
      <code code="931960047"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
          <code code="68493-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Prenatal visits for this pregnancy"/>
        </observation>
      </entryRelationship>
    </act>
  </entry>
</section>
```

Prior Pregnancy History Section

[Section: templateId 2.16.840.1.113883.10.20.26.12]

The pregnancy history section contains entries describing the patient's prior pregancy history.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.12"
2. **SHALL** contain exactly one [1..1] **@classCode**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:368)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:370)
4. **SHALL** contain exactly one [1..1] **code** (CONF:369)**/@code**="57073-9" *Prenatal events* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
5. **SHALL** contain exactly one [1..1] **text** (CONF:371)
   - *The text entry is drawn from the structured content contained within the entries of this section. Text is required to provide human readible content.*
6. **SHALL** contain exactly one [1..1] **entry** (CONF:372)
   a. Contains exactly one [1..1] *Date of Last Live Birth* (templateId: 2.16.840.1.113883.10.20.26.20)
7. **SHALL** contain exactly one [1..1] **entry** (CONF:373)
   a. Contains exactly one [1..1] *Last Menstrual Period Date* (templateId: 2.16.840.1.113883.10.20.26.33)
8. **SHALL** contain exactly one [1..1] **entry** (CONF:374)
   a. Contains exactly one [1..1] *Number of Births Now Living* (templateId: 2.16.840.1.113883.10.20.26.36)
9. **SHALL** contain exactly one [1..1] **entry** (CONF:375)
   a. Contains exactly one [1..1] *Number of Live Births now Dead* (templateId: 2.16.840.1.113883.10.20.26.38)
10. **SHALL** contain exactly one [1..1] **entry** (CONF:376)
    a. Contains exactly one [1..1] *Other Pregnancy Outcome* (templateId: 2.16.840.1.113883.10.20.26.40)
11. **SHALL** contain exactly one [1..1] **entry** (CONF:377)
    a. Contains exactly one [1..1] *Estimate of Gestation* (templateId: 2.16.840.1.113883.10.20.26.21)

Prior Pregnancy History Section example

```
<section xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1873310855"/>
  <code code="1551890339"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1135261161"/>
      <code code="478344062"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="485056691"/>
      <code code="1539548536"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
</section>
```

Chapter 4

CLINICAL STATEMENT TEMPLATES

Topics:

This section of the Implementation Guide details the clinical statement entries referenced in the document section templates. The clinical statement entry templates are arranged alphabetically.

Abnormal Condition of the Newborn

[Observation: templateId `2.16.840.1.113883.10.20.26.13`]

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

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.13"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:266)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:269)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:267)**`/@code`**="`73812-0`" *Abnormal conditions of the newborn* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it records the fact that abnormal condition information is being provided.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:270), where the @code **SHALL** be selected from ValueSet *`Newborn Abnormal Conditions`* `2.16.840.1.114222.4.11.7121` **STATIC** December 1, 2013

Abnormal Condition of the Newborn example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1448274508"/>
  <code code="958275335"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="453637276"/>
</observation>
```

Assessments Observation

[Observation: templateId `2.16.840.1.113883.10.20.26.46`]

The section includes assessments, namely Apgar scores, that are recorded for the infant. A single Apgar score - at 5 minutes after delivery is expected. A second score - at 10 minutes after birth - is to be provided if the 5 minute score is less than 6.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.46"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:334)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:337)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:335), where the @code **SHALL** be selected from ValueSet *`Newborn Assessments`* **STATIC**
   - *A code value that indicates the nature of the observation. The value is drawn from the Newborn Vital Signs value set.*
5. **SHALL** contain exactly one [1..1] **`value`** (CONF:339)

- *The measured vital sign amount. The meaning of the observation is dependent on the value of observation code. The datatype for assessment value depends on the nature of the assessment.*

Assessments Observation example

```
<observation xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="122300691"/>
  <code code="1121427145"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
</observation>
```

Autopsy Performance

[Observation: templateId `2.16.840.1.113883.10.20.26.15`]

Information on whether or not an autopsy was planned or performed, and if the findings of a performed autopsy were used in completing the medical portion of the fetal death report.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.15"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:398)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:401)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:399)**`/@code`**="`73768-4`" *Autopsy was performed* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:400)
   - *A code value that indicates the nature of the observation - that it indicates whether an autopsy was performed*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:402)
   - *Information to identify whether an autopsy was performed.*
6. **MAY** contain zero or one [0..1] **`entryRelationship`** (CONF:404)

   If an autopsy has been performed, indicate whether or not the results were used for the fetal death report.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**="`COMP`" (CONF:410)
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`observation`**
      a. This observation **SHALL** contain exactly one [1..1] **`code`** (CONF:412), where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:413)
      b. This observation **SHALL** contain exactly one [1..1] **`value`** with data type BL (CONF:414)

         An indicator to tell whether or not the findings of an autopsy were used in completing the medical portion of the fetal death report.

Autopsy Performance example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="912731361"/>
  <code code="885675528"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
```

```
  <value xsi:type="CD" code="1835494537"/>
  <entryRelationship>
    <observation>
      <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
</observation>
```

Birth Order

[Observation: templateId `2.16.840.1.113883.10.20.26.16`]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.16"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:348)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:351)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:349)**`/@code`**="`73771-8`" *Birth order* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:350)
   - *A code value that indicates the nature of the observation - it is a birth order observation.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type INT (CONF:352)
   - *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

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="314872781"/>
  <code code="2023049795"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Characteristic of Labor and Delivery

[Observation: templateId `2.16.840.1.113883.10.20.26.18`]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.18"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:256)

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:259)
4. **SHALL** contain exactly one [1..1] **code** (CONF:257)**/@code**="73813-8" *Characteristics of labor and delivery* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *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.*
5. **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:260), where the @code **SHALL** be selected from ValueSet *Labor and Delivery Characteristics* 2.16.840.1.114222.4.11.7117 **STATIC** December 1, 2013

Characteristic of Labor and Delivery example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="599321873"/>
  <code code="1676248074"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="1056834265"/>
</observation>
```

Congenital Anomaly

[Observation: templateId 2.16.840.1.113883.10.20.26.19]

Information on whether the infant or fetus suffered from one or more of a list of known malformations diagnosed prenatally or after delivery.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.19"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:271)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:274)
4. **SHALL** contain exactly one [1..1] **code** (CONF:272)**/@code**="73780-9" *Congenital anomalies of the newborn* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records the nature of the congenital anomaly about which information is provided.*
5. **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:275), where the @code **SHALL** be selected from ValueSet *Newborn Congenital Anomalies* 2.16.840.1.114222.4.11.7122 **STATIC** December 1, 2013
6. **MAY** contain zero or one [0..1] **entryRelationship**

   Down confirmation information is relevant if Down syndrome has been chosen as a congenital anomaly.

   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/@code**="73779-1" *Down syndrome karyotype status* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   d. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *Karyotype Down Syndrome* 2.16.840.1.114222.4.11.7116 **STATIC** December 1, 2013

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

   Chromosomal disorder confirmation information is relevant if chromosomal disorder syndrome has been chosen as a congenital anomaly.

   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/@code**="73778-3" *Suspected chromosomal disorder karyotype status* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
      d. This observation **SHALL** contain exactly one [1..1] **value** with data type CD, where the @code **SHALL** be selected from ValueSet *Karyotype Suspected Chromosomal Disorder* 2.16.840.1.114222.4.11.7115 **STATIC** December 1, 2013

Congenital Anomaly example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="388305404"/>
  <code code="987761486"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="558735390"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="73779-1" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Down syndrome karyotype status"/>
      <value xsi:type="CD" code="80353961"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="73778-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Suspected chromosomal disorder
 karyotype status"/>
      <value xsi:type="CD" code="1491244734"/>
    </observation>
  </entryRelationship>
</observation>
```

Date of Last Live Birth

[Observation: templateId 2.16.840.1.113883.10.20.26.20]

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. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.20"
2. Contains exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:213)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:212)**`/@code`**="`68499-3`" *Date last live birth* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it records the date of the last live birth for the mother.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type TS (CONF:214)
   - *The date of birth of the last live born infant. Month and year should be provided.*

Date of Last Live Birth example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1344907803"/>
  <code code="191184800"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Estimate of Gestation

[Observation: templateId `2.16.840.1.113883.10.20.26.21`]

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

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.21"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:330)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:332)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:331)**`/@code`**="`11884-4`" *Gestational age Estimated* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - that it records the birth attendant's estimate of gestation.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type PQ (CONF:333)
   - *The final estimate of gestation based on all perinatal factors and assessments, but not the neonatal exam. The value is to be provided as a number of completed weeks.*

Estimate of Gestation example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="894891664"/>
  <code code="471121822"/>
  <effectiveTime>
```

```
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Fetal Death Occurrance

[Observation: templateId 2.16.840.1.113883.10.20.26.22]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.22"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" *Act* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:415)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:417)
4. **SHALL** contain exactly one [1..1] **code** (CONF:416)**/@code**="73811-2" *Estimated time of fetal death* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - that it indicates the death of a fetus.*
5. **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:418), where the @code **SHALL** be selected from ValueSet *Fetal Death Time Points* 2.16.840.1.114222.4.11.7112 **STATIC** December 1, 2013 (CONF:419)
   - *Information regarding the point within the delivery process at which fetal death occurred.*

Fetal Death Occurrance example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1776574113"/>
  <code code="11919851"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="1614995383"/>
</observation>
```

Fetal Delivery Time

[Observation: templateId 2.16.840.1.113883.10.20.26.23]

The date and time of fetal delivery. Since the time of fetal death is prior to delivery, it would not be proper to record this information as time of death.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.23"
2. Contains exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:445)

4. **SHALL** contain exactly one [1..1] **code** (CONF:444)**/@code**="11778-8" *Delivery date for patient selected by practitioner using all pertinent information* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records the date and time of fetal delivery.*
5. **SHALL** contain exactly one [1..1] **value** with data type TS (CONF:446)
   - *The date and time of delivery.*

Fetal Delivery Time example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1638684081"/>
  <code code="1307672284"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Infant Breastfed

[Observation: templateId 2.16.840.1.113883.10.20.26.27]

Information on whether the infant was being breastfed during the period between birth and discharge from the hospital.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.27"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:390)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:392)
4. **SHALL** contain exactly one [1..1] **code** (CONF:391)**/@code**="73756-9" *Infant is being breastfed at discharge* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - that it indicates whether the infant is being breastfed.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:393)
   - *Information to identify whether the infant was being breastfed at discharge.*

Infant Breastfed example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1767180062"/>
  <code code="2072798317"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Infant Living

[Observation: templateId 2.16.840.1.113883.10.20.26.28]

Information on whether the infant is living at the time this birth certificate is being completed. It is expected that "Yes" will be recorded if the infant has already been discharged to home care.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.28"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:386)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:388)
4. **SHALL** contain exactly one [1..1] **code** (CONF:387)**/@code**="73757-7" *Infant living at time of report* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - that it includes information on whether the infant was living at time of report.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:389)
   - *Information to identify whether the infant was living at the time of report.*

Infant Living example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="595390868"/>
  <code code="329006413"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

infant Transfer

[Observation: templateId 2.16.840.1.113883.10.20.26.29]

Information on whether or not the infant was transferred within 24 hours of delivery.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.29"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:432)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:434)
4. **SHALL** contain exactly one [1..1] **code** (CONF:433)**/@code**="73758-5" *Infant was transferred within 24 hours of delivery* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *The code value indicates the observation refers to the transfer of an infant.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:435)
   - *A Boolean value to indicate whether or not the infant was transferred within 24 hours of delivery.*
6. **MAY** contain zero or one [0..1] **participant** (CONF:436)

If the infant has been transferred, the name of the facility is collected - if it is known.

a. This participant **SHALL** contain exactly one [1..1] **`@typeCode`**="DST" (CONF:437)
b. This participant **SHALL** contain exactly one [1..1] **`participantRole`** (CONF:438)

a. This participantRole **SHALL** contain exactly one [1..1] **`@classCode`**="SDLOC" (CONF:439)
b. This participantRole **SHALL** contain exactly one [1..1] **`scopingEntity`** (CONF:440)

a. This scopingEntity **SHALL** contain exactly one [1..1] **`@classCode`**="ORG" (CONF:441)
b. This scopingEntity **SHALL** contain exactly one [1..1] **`@determinerCode`**="INSTANCE" (CONF:442)
c. This scopingEntity **SHALL** contain exactly one [1..1] **`name`** (CONF:443)

The name of the facility the infant was transferred to.

infant Transfer example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1343697558"/>
  <code code="2088558330"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <participant typeCode="DST">
    <participantRole classCode="SDLOC"/>
  </participant>
</observation>
```

Infection Present - Fetal Death

[Observation: templateId 2.16.840.1.113883.10.20.26.30]

Information on infections present and/or treated during the pregnancy. This includes infections present at the start of pregnancy or confirmed diagnosis during pregnancy with or without documentation of treatment.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.30"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:234)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:237)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:235)**`/@code`**="67188-3" *Infection* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records nature of the infection about which information is provided. For fetal death reporting refer to the value set: Fetal Death Reporting - Infections Present.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:238), where the @code **SHALL** be selected from ValueSet *Infections Present Treated - Fetal Death* 2.16.840.1.114222.4.11.7135 **STATIC** December 1, 2013
   - *The content of the observation will be drawn from the appropriate value set: Birth Reporting - Infections Present, or Fetal Death Reporting - Infections persent.*

Infection Present - Fetal Death example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="374967186"/>
  <code code="1546170651"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="862113473"/>
</observation>
```

Infection Present - Live Birth

[Observation: templateId 2.16.840.1.113883.10.20.26.30]

Information on infections present and/or treated during the pregnancy. This includes infections present at the start of pregnancy or confirmed diagnosis during pregnancy with or without documentation of treatment.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.30"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:234)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:237)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:235)**`/@code`**="67188-3" *Infection* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *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.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:238), where the @code **SHALL** be selected from ValueSet *Infections Present Treated - Live Birth* 2.16.840.1.114222.4.11.6070 **STATIC** December 1, 2013
   - *The content of the observation will be drawn from the appropriate value set: Birth Reporting - Infections Present, or Fetal Death Reporting - Infections persent.*

Infection Present - Live Birth example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="966636373"/>
  <code code="974399629"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="236580504"/>
</observation>
```

Labor and Delivery Information

[Act: templateId `2.16.840.1.113883.10.20.26.31`]

Information directly associated with the labor and delivery process.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.31"
2. **SHALL** contain exactly one [1..1] **`@classCode`**=**`"ACT"`** *Act* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:89)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=**`"EVN"`** *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:91)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:90)**`/@code`**=**`"57074-7"`** *Labor and delivery process* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it contains information regarding the labor and delivery process.*
5. **SHALL** contain exactly one [1..1] **`performer`** (CONF:92)

   Information on the person attending the birth.

   a. This performer **SHALL** contain exactly one [1..1] **`@typeCode`**=**`"PRF"`** (CONF:101)
   b. This performer **SHALL** contain exactly one [1..1] **`assignedEntity`** (CONF:102)
      a. This assignedEntity **SHALL** contain exactly one [1..1] **`@classCode`**=**`"ASSIGNED"`** (CONF:103)
      b. This assignedEntity **SHOULD** contain zero or more [0..*] **`id`** (CONF:104)

         An identifier for the birth attendant. The national provider id is expected. A state registration id may be provided as well. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.
      c. This assignedEntity **SHALL** contain exactly one [1..1] **`code`** (CONF:106), where the @code **SHALL** be selected from ValueSet *`Birth Attendant Titles`* `2.16.840.1.114222.4.11.7111` **STATIC** December 1, 2013 (CONF:107)

         An indication of the professional qualification of the birth attendant. Their title. If the code - 394841004 (other category) - is chosen, the original text property is used to record a text value.
      d. This assignedEntity **SHALL** contain exactly one [1..1] **`assignedPerson`**
         a. This assignedPerson **SHALL** contain exactly one [1..1] **`@classCode`**=**`"PSN"`** (CONF:108)
         b. This assignedPerson **SHALL** contain exactly one [1..1] **`@determinerCode`**=**`"INSTANCE"`** (CONF:109)
         c. This assignedPerson **SHALL** contain exactly one [1..1] **`name`** (CONF:110)

            The name of the birth attendant
6. **SHALL** contain exactly one [1..1] **`participant`** (CONF:94)
   a. This participant **SHALL** contain exactly one [1..1] **`@typeCode`**=**`"LOC"`** (CONF:118)
   b. This participant **SHALL** contain exactly one [1..1] **`participantRole`** (CONF:117)
      a. This participantRole **SHALL** contain exactly one [1..1] **`@classCode`**=**`"BIRTHPL"`** (CONF:119)
      b. This participantRole **SHOULD** contain zero or one [0..1] **`id`** (CONF:120)

         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. Within the II data type, use the root to record the identifying OID for the namespace that the identifier value is drawn from.

c. This participantRole **SHALL** contain exactly one [1..1] **`code`** (CONF:121), where the @code **SHALL** be selected from ValueSet *`Birth or Delivery Location`* `2.16.840.1.114222.4.11.7124` **STATIC** December 1, 2013 (CONF:122)

A code that indicates the type of facility or place at which the delivery took place.

d. This participantRole **MAY** contain zero or one [0..1] **`addr`** (CONF:123)

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.

e. This participantRole **SHOULD** contain zero or one [0..1] **`playingEntity`** (CONF:124)

a. This playingEntity **SHALL** contain exactly one [1..1] **`@classCode`**=`"PLC"` (CONF:127)

b. This playingEntity **SHALL** contain exactly one [1..1] **`@determinerCode`**=`"INSTANCE"` (CONF:128)

c. This playingEntity **SHOULD** contain zero or more [0..*] **`name`** (CONF:126)

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

d. This playingEntity **MAY** contain zero or one [0..1] **`desc`** (CONF:125)

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. If this birth occurred en route, that is, in a moving conveyance, enter the city, town, village, or location where the child was first removed from the conveyance.
If the birth occurred in international air space or waters, enter "plane" or "boat."

7. **MAY** contain zero or one [0..1] **`entryRelationship`** (CONF:95)

- *Information on whether or not a home birth was planned is only collected for births that take place at home.*

a. Contains **`@typeCode="`**`COMP`**`"`** *COMP*

b. Contains exactly one [1..1] *Planned Home Birth* (templateId: `2.16.840.1.113883.10.20.26.26`)

8. **SHALL** contain exactly one [1..1] **`entryRelationship`** (CONF:96)

a. Contains **`@typeCode="`**`COMP`**`"`** *COMP*

b. Contains exactly one [1..1] *Maternal Transfer* (templateId: `2.16.840.1.113883.10.20.26.35`)

9. **MAY** contain zero or more [0..*] **`entryRelationship`** (CONF:97)

- *Characteristics of labor and delivery information is collected for a live birth certificate, but not for a fetal death report.*

a. Contains **`@typeCode="`**`COMP`**`"`** *COMP*

b. Contains exactly one [1..1] *Characteristic of Labor and Delivery* (templateId: `2.16.840.1.113883.10.20.26.18`)

10. **SHALL** contain at least one [1..*] **`entryRelationship`** (CONF:98)

a. Contains **`@typeCode="`**`COMP`**`"`** *COMP*

b. Contains exactly one [1..1] *Maternal Morbidity* (templateId: `2.16.840.1.113883.10.20.26.34`)

11. **SHALL** contain at least one [1..*] **`entryRelationship`** (CONF:99)

- *There may be multiple risk factors recorded. At least one observation will be present in the case that none of cited risk factors are present.*

a. Contains **`@typeCode="`**`COMP`**`"`** *COMP*

b. Contains exactly one [1..1] *Pregnancy Risk Factor* (templateId: `2.16.840.1.113883.10.20.26.44`)

12. **SHALL** contain exactly one [1..1] **`entryRelationship`** (CONF:100)

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"` (CONF:111)

b. This entryRelationship **SHALL** contain exactly one [1..1] **`observation`** (CONF:112)

a. This observation **SHALL** contain exactly one [1..1] **`@classCode`**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:113)

b. This observation **SHALL** contain exactly one [1..1] **`@moodCode`**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:115)

c. This observation **SHALL** contain exactly one [1..1] **`code`** (CONF:114)**`/@code`**="68461-3" *Payment source* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)

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 (CONF:116), where the @code **SHALL** be selected from ValueSet *Delivery Payment Sources* **STATIC** December 1, 2013

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

Labor and Delivery Information example

```
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3">
  <id root="MDHT" extension="299057899"/>
  <code code="1349698264"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="MDHT" extension="1684417948"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <assignedPerson classCode="PSN" determinerCode="INSTANCE"/>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="BIRTHPL">
      <id root="MDHT" extension="1188640174"/>
      <code codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMEDCT"/>
      <addr/>
      <playingEntity classCode="PLC" determinerCode="INSTANCE"/>
    </participantRole>
  </participant>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="68461-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Payment source"/>
      <value xsi:type="CD" code="460869818"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation/>
  </entryRelationship>
  <entryRelationship>
    <observation>
      <id root="MDHT" extension="1663644117"/>
      <code code="1478379350"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation>
```

```
      <id root="MDHT" extension="278818911"/>
      <code code="1736632163"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <participant typeCode="ORG">
        <participantRole classCode="SDLOC"/>
      </participant>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation>
      <id root="MDHT" extension="1186993549"/>
      <code code="1047200654"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation>
      <id root="MDHT" extension="1022727026"/>
      <code code="1112930072"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN">
          <code code="68497-7" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Previous cesarean deliveries"/>
        </observation>
      </entryRelationship>
    </observation>
  </entryRelationship>
</act>
```

Last Menstrual Period Date

[Observation: templateId `2.16.840.1.113883.10.20.26.33`]

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

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.33"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:224)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:226)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:225)**`/@code`**="`8665-2`" *Date last menstrual period* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it contains the date of the last menstrual period.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type TS (CONF:227)
   - *The date the mother's last normal menstrual period began. (month, day and year.)*

Last Menstrual Period Date example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="443328300"/>
  <code code="862237267"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Maternal Morbidity

[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 recognized maternal morbidities during the labor and delivery process.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.34"
2. **SHALL** contain exactly one [1..1] **`@classCode`**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:261)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:264)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:262)**`/@code`**=`"73781-7"` *Maternal morbidity* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it records the nature of the maternal morbidity about which information is provided.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:265), where the @code **SHALL** be selected from ValueSet *`Maternal Morbiditiy`* `2.16.840.1.114222.4.11.7119` **STATIC** December 1, 2013

Maternal Morbidity example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="787708515"/>
  <code code="140788228"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="631207212"/>
</observation>
```

Maternal Transfer

[Observation: templateId `2.16.840.1.113883.10.20.26.35`]

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

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.35"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:420)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:422)
4. **SHALL** contain exactly one [1..1] **code** (CONF:421)**/@code**="73763-5" *Mother was transferred for maternal medical or fetal indications for delivery* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it refers to the transfer of the mother to the facility prior to delivery.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:423)
   - *A Boolean value to indicate whether or not the mother was transferred to the facility prior to delivery.*
6. **MAY** contain zero or one [0..1] **participant** (CONF:424)

   Record the source of transfer if the mother has been transferred from another facility. If the name of the facility is not known, enter "unknown."

   a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="ORG" (CONF:425)
   b. This participant **SHALL** contain exactly one [1..1] **participantRole** (CONF:426)
      a. This participantRole **SHALL** contain exactly one [1..1] **@classCode**="SDLOC" (CONF:427)
      b. This participantRole **SHALL** contain exactly one [1..1] **scopingEntity** (CONF:428)
         a. This scopingEntity **SHALL** contain exactly one [1..1] **@classCode**="ORG" (CONF:429)
         b. This scopingEntity **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE" (CONF:430)
         c. This scopingEntity **SHALL** contain exactly one [1..1] **name** (CONF:431)

            The name of the facility the mother was transferred from.

Maternal Transfer example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="468090094"/>
  <code code="862628497"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <participant typeCode="ORG">
    <participantRole classCode="SDLOC"/>
  </participant>
</observation>
```

Method of Delivery

[Procedure: templateId 2.16.840.1.113883.10.20.26.45]

A description of the physical process by which the complete delivery was effected. The template captures information about: a) attempted use of forceps, b) attempted delivery with vacuum extraction, c) fetal presentation at birth, d) final route and method of delivery, e) attempted trial of labor (if Cesarean delivery). Within a fetal death report, information about hysterotomy/Hysterectomy is collected as well.

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

   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.45"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`PROC`" (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:281)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:284)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:282)**`/@code`**="`72149-8`" *Delivery method* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`) (CONF:283)

   - *A code value that indicates the nature of the procedure, that it records the method of delivery.*
5. **SHALL** contain exactly one [1..1] **`entryRelationship`** (CONF:287)

   An observation to record fetal presentation at birth.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:321)
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:323)
   c. This entryRelationship **SHALL** contain exactly one [1..1] **`code`** (CONF:322)**`/@code`**="`73761-9`" *Fetal presentation at birth* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)

      A code value that indicates the nature of the observation - fetal presentation.
   d. This entryRelationship **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:324), where the @code **SHALL** be selected from ValueSet *`Fetal Presentations`* `2.16.840.1.114222.4.11.7113` **STATIC** December 1, 2013 (CONF:325)

      Information on the presentation of the fetus at the point of delivery.
6. **SHALL** contain exactly one [1..1] **`entryRelationship`** (CONF:288)

   An observation that records the final route and method of delivery.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:290)
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:292)
   c. This entryRelationship **SHALL** contain exactly one [1..1] **`code`** (CONF:291)**`/@code`**="`73762-7`" *Final route and method of delivery* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)

      A code value that indicates the nature of the observation - the method and route of delivery.
   d. This entryRelationship **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:293), where the @code **SHALL** be selected from ValueSet *`Delivery Routes`* `2.16.840.1.114222.4.11.7118` **STATIC** December 1, 2013 (CONF:294)

      The method and route of delivery.
   e. This entryRelationship **MAY** contain zero or one [0..1] **`entryRelationship`** with data type *Trial Of Labor Association* (CONF:295)

      If the final route and method of delivery is Cesarean, information regarding attempted trial of labor is collected.

      a. Contains **`@typeCode="`**`COMP`" *COMP*
7. **MAY** contain zero or one [0..1] **`entryRelationship`** (CONF:289)

   An observation to record Information about a potential hysterotomy/hysterectomy. The observation is only collected for a fetal death report.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**="`COMP`" (CONF:315)
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`observation`** (CONF:316)

   a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:317)
   b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:319)
   c. This observation **SHALL** contain exactly one [1..1] **code** (CONF:318)**/@code**="73759-3" *Hysterotomy or hysterectomy was performed at delivery* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)

      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 (CONF:320)

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

Method of Delivery example

```
<procedure xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="457538061"/>
  <code code="1826260993"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="73759-3" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Hysterotomy or hysterectomy was
 performed at delivery"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
</procedure>
```

Mother's Vital Signs Observation

[Observation: templateId 2.16.840.1.113883.10.20.26.46]

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

The consolidated CDA Vital Signs Observation template has been used. The value set for observation.code indicates which vital sign information is collected.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.46"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:334)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:337)
4. **SHALL** contain exactly one [1..1] **code** (CONF:335), 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. The value is drawn from the Maternal Vital Signs value set.*
5. **SHALL** contain exactly one [1..1] **value** (CONF:339)

- *The measured vital sign amount. The meaning of the observation is dependent on the value of observation code.*

Mother's Vital Signs Observation example

```
<observation xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="134373486"/>
  <code code="543097083"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
</observation>
```

Newborn's Vital Signs Observation

[Observation: templateId 2.16.840.1.113883.10.20.26.46]

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

The consolidated CDA Vital Signs Observation template has been used. The value set for observation.code indicates which vital sign information is collected.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.46"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:334)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:337)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:335), 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. The value is drawn from the Newborn Vital Signs value set.*
5. **SHALL** contain exactly one [1..1] **`value`** (CONF:339)
   - *The measured vital sign amount. The meaning of the observation is dependent on the value of observation code.*

Newborn's Vital Signs Observation example

```
<observation xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="2134778530"/>
  <code code="499996023"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
</observation>
```

Number of Births Now Living

[Observation: templateId 2.16.840.1.113883.10.20.26.36]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.36"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:208)
3. **SHALL** contain exactly one [1..1] **`@moodCode`** (CONF:210)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:209)**`/@code`**="`11638-4`" *Births still living* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it contains the total number of previous live-born infants now living.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type INT (CONF:211)
   - *The total number of previous live-born infants now living. The entry is a non-negative integer within the range from zero to 30.*

Number of Births Now Living example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="89282838"/>
  <code code="545194206"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Number of Infants Born Alive

[Observation: templateId `2.16.840.1.113883.10.20.26.37`]

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

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.37"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:344)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:346)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:345)**`/@code`**="`73773-4`" *Number of infants in this delivery born alive* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it captures the number of infants born alive within a delivery.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type INT (CONF:347)
   - *The number of infants born alive. The entry is a non-negative integer within the range from zero to 12.*

Number of Infants Born Alive example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1547469834"/>
```

```
  <code code="832607683"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Number of Live Births now Dead

[Observation: templateId 2.16.840.1.113883.10.20.26.38]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.38"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:215)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:217)
4. **SHALL** contain exactly one [1..1] **code** (CONF:216)**/@code**="68496-9" *Live births now dead* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records the total number of previous live-born infants now dead.*
5. **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:218)
   - *The total number of previous live-born infants now dead. The entry is a non-negative integer within the range from zero to 30.*

Number of Live Births now Dead example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="196362489"/>
  <code code="167825957"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Obstetric Procedure

[Procedure: templateId 2.16.840.1.113883.10.20.26.39]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.39"
2. **SHALL** contain exactly one [1..1] **@classCode**="PROC" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:239)

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:240)
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:241)
   - *The negation indicator defines whether or not the specified procedure was perfomred during the course of delivery. A value of true indicates a procedure was NOT performed.*
5. **SHALL** contain exactly one [1..1] **code** (CONF:242), where the @code **SHALL** be selected from ValueSet *Obstetric Procedures* 2.16.840.1.114222.4.11.7136 **STATIC** December 1, 2013 (CONF:243)
   - *A code value that indicates the nature of the procedure - it specifies the nature of the obstetric procedure about which information is provided.*

Obstetric Procedure example

```
<procedure xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1933880186"/>
  <code code="323537452"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
</procedure>
```

Onset of Labor

[Observation: templateId 2.16.840.1.113883.10.20.26.32]

Serious complications experienced by the mother associated with labor and delivery including: Premature Rupture of the Membranes, Precipitous Labor and Prolonged Labor.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.32"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:229)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:232)
4. **SHALL** contain exactly one [1..1] **code** (CONF:230)**/@code**="73774-2" *Onset of labor* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records a complication associated with labor and delivery.*
5. **SHALL** contain exactly one [1..1] **value** with data type CD (CONF:233), where the @code **SHALL** be selected from ValueSet *Onset Labor* 2.16.840.1.114222.4.11.7123 **STATIC** December 1, 2013

Onset of Labor example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1703222625"/>
  <code code="1609911784"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="1417775332"/>
</observation>
```

Other Pregnancy Outcome

[Observation: templateId `2.16.840.1.113883.10.20.26.40`]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.40"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:219)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:221)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:220)**`/@code`**="`69043-8`" *Other pregnancy outcomes* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code to indicate the observation contains information on the total number of other pregnancy outcomes that did not result in a live birth.*
5. **SHOULD** contain zero or one [0..1] **`effectiveTime`** (CONF:223)
   - *The date that the last pregnancy that did not result in a live birth ended. The effective time for the other pregnancy outcomes is the interval between the first such outcome and the latest. Value the high property of the interval data type.*
6. **SHALL** contain exactly one [1..1] **`value`** with data type INT (CONF:222)
   - *Total number of other pregnancy outcomes that did not result in a live birth. The entry is a non-negative integer within the range from zero to 30.*

Other Pregnancy Outcome example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="862679654"/>
  <code code="1330774763"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Planned Home Birth

[Observation: templateId `2.16.840.1.113883.10.20.26.26`]

Information on whether a home birth was planned for the infant.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.26"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:394)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:396)

4. **SHALL** contain exactly one [1..1] **code** (CONF:395)**/@code**="73765-0" *Planned to delivery at home* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records whether the parents planned to deliver at home.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL (CONF:397)
   - *A Boolean value to indicate whether the mother planned to deliver at home.*

Planned Home Birth example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1165656419"/>
  <code code="83097398"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Plurality

[Observation: templateId 2.16.840.1.113883.10.20.26.41]

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] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.41"
2. **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:340)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:342)
4. **SHALL** contain exactly one [1..1] **code** (CONF:341)**/@code**="57722-1" *Birth plurality* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it records the plurality of the delivery.*
5. **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:343)
   - *A measure of the plurality of the pregnancy.*

Plurality example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="40881819"/>
  <code code="322759258"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Pregnancy Risk Factor

[Observation: templateId `2.16.840.1.113883.10.20.26.44`]

Information on one or more risk factors of the mother during pregnancy.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.44"
2. **SHALL** contain exactly one [1..1] **`@classCode`**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:244)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:247)
4. **SHALL** contain exactly one [1..1] **`code`** (CONF:245)**`/@code`**=`"7377-9"` *Risk factors in this pregnancy* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - the nature of the risk factor about which information is provided.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD (CONF:248), where the @code **SHALL** be selected from ValueSet *`Pregnancy Risk Factors`* `2.16.840.1.114222.4.11.7126` **STATIC** December 1, 2013
6. **MAY** contain zero or one [0..1] **`entryRelationship`** (CONF:249)

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

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**=`"COMP"` (CONF:250)
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`observation`** (CONF:251)
      a. This observation **SHALL** contain exactly one [1..1] **`@classCode`**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`) (CONF:252)
      b. This observation **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`) (CONF:254)
      c. This observation **SHALL** contain exactly one [1..1] **`code`** (CONF:253)**`/@code`**=`"68497-7"` *Previous cesarean deliveries* (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)

         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 (CONF:255)

         The number of previous Cesarean deliveries.

Pregnancy Risk Factor example

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3">
  <id root="MDHT" extension="1970791808"/>
  <code code="100785106"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="1761173525"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="68497-7" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Previous cesarean deliveries"/>
      <value xsi:type="INT" value="1"/>
    </observation>
  </entryRelationship>
```

```
</observation>
```

Pre-Natal Care

[Act: templateId 2.16.840.1.113883.10.20.26.42]

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

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.42"
2. **SHALL** contain exactly one [1..1] **@classCode**="ACT" *Act* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:183)
3. **SHALL** contain exactly one [1..1] **@moodCode**="DEF" (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:187)
4. **SHALL** contain exactly one [1..1] **@negationInd** (CONF:188)
   - *Value the negation indicator as true if the mother DID receive prenatal care.*
5. **SHALL** contain exactly one [1..1] **code** (CONF:184)**/@code**="73776-7" *No-prenatal care* (CodeSystem: 2.16.840.1.113883.6.1 LOINC) (CONF:185)
   - *A code value that indicates the nature of the observation - it indicates whether the mother received any prenatal care.*
6. **SHOULD** contain zero or one [0..1] **effectiveTime** (CONF:186)
   - *The time interval is used to indicate the period of time during which prenatal care was provided. The date of the first prenatal care visit is recorded as the beginning of the prenatal care time interval. The date of the last visit is recorded as the end of the prenatal time interval.*
7. **SHOULD** contain zero or one [0..1] **entryRelationship** (CONF:189)
   a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**="COMP" (CONF:191)
   b. This entryRelationship **SHALL** contain exactly one [1..1] **observation** (CONF:190)
      a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass) (CONF:192)
      b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood) (CONF:194)
      c. This observation **SHALL** contain exactly one [1..1] **code** (CONF:193)**/@code**="68493-6" *Prenatal visits for this pregnancy* (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
      d. This observation **SHALL** contain exactly one [1..1] **value** with data type INT (CONF:195)

         The number of prenatal visits for this pregnancy. The entry is a non-negative integer within the range from zero to 98.

Pre-Natal Care example

```
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3">
  <id root="MDHT" extension="323063178"/>
  <code code="1025268363"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="68493-6" codeSystem="2.16.840.1.113883.6.1"
 codeSystemName="LOINC" displayName="Prenatal visits for this pregnancy"/>
      <value xsi:type="INT" value="1"/>
```

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

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.

Birth Attendant Titles

Value Set	Birth Attendant Titles - 2.16.840.1.114222.4.11.7111
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of different titles used by birth attendants to denote professional role. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
309343006	SNOMEDCT	Physician
76231001	SNOMEDCT	Osteopath
309453006	SNOMEDCT	Registered midwife
75271001	SNOMEDCT	Professional midwife
394841004	SNOMEDCT	Other category

Birth or Delivery Location

Value Set	Birth or Delivery Location - 2.16.840.1.114222.4.11.7124
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of different types of place or situations in which the birth or delivery occurred. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
22232009	SNOMEDCT	Hospital
91154008	SNOMEDCT	Free-standing birthing center
169813005	SNOMEDCT	Home birth
67190003	SNOMEDCT	Free-standing clinic
394841004	SNOMEDCT	Other
261665006	SNOMEDCT	Unknown

Certifier Titles

Value Set	Certifier Titles - (OID not specified)
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of different titles used by birth attendants to denote professional role. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
309343006	SNOMEDCT	Physician
76231001	SNOMEDCT	Osteopath
6868009	SNOMEDCT	Hospital administator
309453006	SNOMEDCT	Registered midwife
75271001	SNOMEDCT	Professional midwife
394841004	SNOMEDCT	Other category

Delivery Payment Sources

Value Set	Delivery Payment Sources - (OID not specified)
Code System	Source of Payment Typology - 2.16.840.1.113883.221.5
Version	December 1, 2013
Definition	The value set is drawn from the Source of payment typology created by the Public Health Data Consortium
Description	A list of different types of payment that may be used to support the expense of labor and delivery. Note, the Public Health Data Consortium Source of Payment Typology is being used as the primary source for codes within the value set.

Code	Code System	Print Name
5	Source of Payment Typology	Private Health Insurance
2	Source of Payment Typology	Medicaid
81	Source of Payment Typology	Self Pay
33	Source of Payment Typology	Indian Health Service
38	Source of Payment Typology	Other Government
311	Source of Payment Typology	CHAMPUS/TRICARE
99	Source of Payment Typology	Other
ZZZ	Source of Payment Typology	Unknown

Delivery Routes

Value Set	Delivery Routes - 2.16.840.1.114222.4.11.7118
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013

Description	A list of delivery routes that are relevant. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
48782003	SNOMEDCT	Delivery normal
302383004	SNOMEDCT	Forceps delivery
11466000	SNOMEDCT	Cesarean section
61586001	SNOMEDCT	Delivery by vacuum extraction
261665006	SNOMEDCT	Unknown

Fetal Death Time Points

Value Set	Fetal Death Time Points - 2.16.840.1.114222.4.11.7112
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of time points during the delivery process at which the fetal death is thought to have occured. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
634751000124116	SNOMEDCT	Death at time of first assessment, no labor ongoing
634741000124118	SNOMEDCT	Dead at time of first assessment, labor ongoing
634661000124111	SNOMEDCT	Died during labor, after first assessment
261665006	SNOMEDCT	Unknown

Fetal Presentations

Value Set	Fetal Presentations - 2.16.840.1.114222.4.11.7113
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of the different ways a fetus may present at the point of delivery. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
6096002	SNOMEDCT	Breech presentation
394841004	SNOMEDCT	Other category
70028003	SNOMEDCT	Vertex Presentation

Infections Present Treated - Fetal Death

Value Set	Infections Present Treated - Fetal Death - 2.16.840.1.114222.4.11.7135

Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of infections which may be present during pregnancy. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
1562800	SNOMEDCT	Gonorrhea
76272004	SNOMEDCT	Syphilis
105629000	SNOMEDCT	Chlamydia infection
4241002	SNOMEDCT	Listeriosis
426933007	SNOMEDCT	Streptococcus agalactiae infection
28944009	SNOMEDCT	Cytomegalovirus infection
186748004	SNOMEDCT	Parovirus infection
187192000	SNOMEDCT	Toxoplasmosis
394841004	SNOMEDCT	Other category
260413007	SNOMEDCT	None

Infections Present Treated - Live Birth

Value Set	Infections Present Treated - Live Birth - 2.16.840.1.114222.4.11.6070
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of infections which may be present during pregnancy. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
1562800	SNOMEDCT	Gonorrhea
76272004	SNOMEDCT	Syphilis
105629000	SNOMEDCT	Chlamydia infection
66071002	SNOMEDCT	Type B viral hepatitis
50711007	SNOMEDCT	Viral hepatitis C
260413007	SNOMEDCT	None

Karyotype Down Syndrome

Value Set	Karyotype Down Syndrome - 2.16.840.1.114222.4.11.7116
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
442124003	SNOMEDCT	Karyotype evaluation abnormal
312948004	SNOMEDCT	Karyotype determination

Karyotype Suspected Chromosomal Disorder

Value Set	Karyotype Suspected Chromosomal Disorder - 2.16.840.1.114222.4.11.7115
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
442124003	SNOMEDCT	Karyotype evaluation abnormal
312948004	SNOMEDCT	Karyotype determination

Labor and Delivery Characteristics

Value Set	Labor and Delivery Characteristics - 2.16.840.1.114222.4.11.7117
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of relevant characteristics that can affect the labor and delivery process. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
236958009	SNOMEDCT	Induction of labor
237001001	SNOMEDCT	Augmentation of labor
634621000124113	SNOMEDCT	Steroids (glucocorticoids) for fetal lung maturation (procedure)
634771000124114	SNOMEDCT	Antibiotics received during labor
11612004	SNOMEDCT	Chorioamnionitis
249135009	SNOMEDCT	Meconium stained liquor
130955003	SNOMEDCT	Fetal distress
231064003	SNOMEDCT	Intrathecal injection of local anesthetic agent
260413007	SNOMEDCT	None

Maternal Morbiditiy

Value Set	Maternal Morbiditiy - 2.16.840.1.114222.4.11.7119
Code System	SNOMEDCT - 2.16.840.1.113883.6.96

Version	December 1, 2013
Description	A list of maternal morbidities that may be experienced by the mother during labor and delivery. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
116859006	SNOMEDCT	Maternal transfusion
398019008	SNOMEDCT	Perineal laceration during delivery
34430009	SNOMEDCT	Rupture of uterus
625654015	SNOMEDCT	Emergency cesarean hysterectomy
309904001	SNOMEDCT	Intensive care unit
177217006	SNOMEDCT	Immediate repair of obstetric laceration
260413007	SNOMEDCT	None

Maternal Vital Signs

Value Set	Maternal Vital Signs - (OID not specified)
Code System	LOINC - 2.16.840.1.113883.6.1
Version	December 1, 2013
Definition	The collection of vital sign items that is collected for a mother within a Live Birth or Fetal Death report.
Description	A list of vital sign items captured for a mother. Note, LOINC is being used as the primary source for codes within the value set.

Code	Code System	Print Name
69461-2	LOINC	Body weight at delivery
56077-1	LOINC	Body weight pre current pregnancy
3137-7	LOINC	Body height

Newborn Abnormal Conditions

Value Set	Newborn Abnormal Conditions - 2.16.840.1.114222.4.11.7121
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of disorders or significant morbidities experienced by the newborn. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
AVI	SNOMEDCT	Assisted Ventilation Immediatly Following Delivery
AV6	SNOMEDCT	Assisted Ventilation for more than 6 Hours
405269005	SNOMEDCT	Neonatal intensive care unit

Code	Code System	Print Name
634801000124111	SNOMEDCT	Surfactant replacement therapy
634641000124112	SNOMEDCT	Antibiotics for suspected neonatal sepsis
91175000	SNOMEDCT	Seizure
56110009	SNOMEDCT	Birth trauma of fetus
260413007	SNOMEDCT	None

Newborn Assessments

Value Set	Newborn Assessments - (OID not specified)
Code System	LOINC - 2.16.840.1.113883.6.1
Description	Note, LOINC is being used as the primary source for codes within the value set.

Code	Code System	Print Name
9274-2	LOINC	Score 5M post birth
9271-8	LOINC	Score 10M post birth

Newborn Congenital Anomalies

Value Set	Newborn Congenital Anomalies - 2.16.840.1.114222.4.11.7122
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of malformations of the newborn or fetus diagnosed prenatally or after delivery. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
89369001	SNOMEDCT	Anencephalus
67531005	SNOMEDCT	Spina bifida
12770006	SNOMEDCT	Cyanotic congenital heart disease
17190001	SNOMEDCT	Congenital diaphragmatic hernia
18735004	SNOMEDCT	Congenital omphalocele
72951007	SNOMEDCT	Gastroschisis
67341007	SNOMEDCT	Longitudinal deficiency of limb
80281008	SNOMEDCT	Cleft lip
87979003	SNOMEDCT	Cleft palate
70156005	SNOMEDCT	Anomaly of chromosome pair 21
409709004	SNOMEDCT	Chromosomal disorder
416010008	SNOMEDCT	Hypospadias
260413007	SNOMEDCT	None

Newborn Vital Signs

Value Set	Newborn Vital Signs - (OID not specified)
Code System	LOINC - 2.16.840.1.113883.6.1
Version	December 1, 2013
Description	A list of vital sign information captured for a newborn or delivered fetus.

Code	Code System	Print Name
8339-4	LOINC	Body weight at birth

Obstetric Procedures

Value Set	Obstetric Procedures - 2.16.840.1.114222.4.11.7136
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of obstetric procedures which may be performed during pregnancy. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
265636007	SNOMEDCT	Cerclage of cervix
103747003	SNOMEDCT	Tocolysis
240278000	SNOMEDCT	External cephalic version
260413007	SNOMEDCT	None

Onset Labor

Value Set	Onset Labor - 2.16.840.1.114222.4.11.7123
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of possible onsets of labor. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
44223004	SNOMEDCT	Premature rupture of membranes
51920004	SNOMEDCT	Precipitate labor
53443007	SNOMEDCT	Prolonged labor
60413007	SNOMEDCT	None of the cited unusual onsets

Pregnancy Risk Factors

Value Set	Pregnancy Risk Factors - 2.16.840.1.114222.4.11.7126
Code System	SNOMEDCT - 2.16.840.1.113883.6.96
Version	December 1, 2013
Description	A list of risk factors for a pregnancy. Note, SNOMED is being used as the primary source for codes within the value set.

Code	Code System	Print Name
73211009	SNOMEDCT	Diabetes mellitus
11687002	SNOMEDCT	Gestational diabetes mellitus
38341003	SNOMEDCT	Hypertensive disorder, systemic arterial
48194001	SNOMEDCT	Pregnancy-induced hypertension
15938005	SNOMEDCT	Eclampsia
161765003	SNOMEDCT	History of - premature delivery
271903000	SNOMEDCT	History of - pregnancy
65046005	SNOMEDCT	Infertility Therapy
58533008	SNOMEDCT	Artificial insemination
63487001	SNOMEDCT	Assisted fertilization
200144004	SNOMEDCT	Deliveries by cesarean
260413007	SNOMEDCT	None

Source of Payment Typology

Value Set	Source of Payment Typology

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