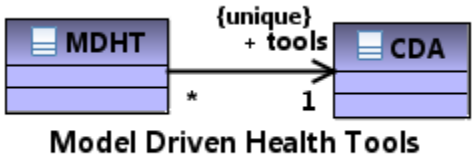
Implementation Guide for CDA Release 2: Reporting Birth and Fetal Death Information from the EHR to Vital Records, Release 1

US Realm

CDAR2_BAFDRPT_R1_2012SEP



HL7 DSTU Ballot, September 2012

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
New	August 2012	Mead Walker	
Initial package prepared for HL7 Balloting	February 2012	Mead Walker	Revised submission based on ballot comments.

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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 specializing that 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.

Discuss C-CCD and its templates

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 of how birth and fetal death events are recorded in a birthing hospital. For the birth record, prenatal care and pregnancy history information, such as the mother's last menstrual period (LMP), are obtained from the mother's prenatal records which are sent to the hospital by the prenatal care provider prior to the mother's estimated delivery date. Information about the labor and delivery and the infant (e.g., a spontaneous vaginal delivery of a girl weighing 3,242 grams) is documented by the nurse in the hospital's labor and delivery (L&D) log. Information about the labor and delivery and the newborn to be collected for the birth record is also documented by the nurse in the Facility Worksheet for the Child's Birth Certificate. The Pediatrician documents the physical assessment in the newborn's medical record and the nurse then completes the newborn information sections of the Facility Worksheet.

The Birth Information Specialist (BIS), the hospital staff person responsible for gathering and entering information for the birth certificate, checks the hospital's information system for a list of all new births. 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, he contacts the hospital and requests that they correct and retransmit the birth record. The hospital corrects the birth record and retransmits. Once the birth record has passed all edits, the vital records registrar registers the baby's birth and the mother is provided with a certified copy of the birth certificate on request.

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

The hospital of birth will serve as the 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.

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 or mother (patient).

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.

Use of Templates

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

Originator Responsibilities

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

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

Recipient Responsibilities

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

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

Conventions Used in This Guide

Conformance Requirements

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

Template name

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

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

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

Figure 1: Template name and "conforms to" appearance

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

The following cardinality indicators may be interpreted as follows:

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

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

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

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

Figure 2: Template-based conformance statements example

CCD templates are included within this implementation guide for ease of reference. CCD templates contained within this implementation guide are formatted WITHOUT typical **KEYWORD** and **XML** element styles. A WIKI site is available if you would like to make a comment to be considered for the next release of CCD: *http://wiki.hl7.org/*

index.php?title=CCD_Suggested_Enhancements The user name and password are: wiki/wikiwiki. You will need to create an account to edit the page and add your suggestion.

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

Figure 3: CCD conformance statements example

Keywords

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

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

XML Examples

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

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

Figure 4: ClinicalDocument example

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

Chapter 2

DOCUMENT TEMPLATES

Topics:

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

Reporting Birth Information from a clinical setting to vital records

[ClinicalDocument: templateId 2.16.840.1.113883.10.20.26.1]

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

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. We expect the more detailed demographics information will not be included within the facilities work sheet which provides the data requirements for 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)
   - *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/@code**="US" (CodeSystem: 1.0.3166.1 Country (ISO 3166-1))
   - *The realm that the document is relevant for. This specification is a US realm product.*
5. **SHALL** contain exactly one [1..1] **typeId**
   - *Type ID root = 2.16.840.1.113003.1.3.*
     Type ID extension = "POCD_HD000040.
6. **SHALL** contain exactly one [1..1] **id**
   - *Provide the identifier assigned to the document by the healthcare provider acting as a custodian of the information.*
7. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *The value provided indicates that the document is a live birth report.*
8. **SHALL** contain exactly one [1..1] **title**
   - *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**
   - *The point in time the document was created at.*
10. **SHALL** contain exactly one [1..1] **confidentialityCode**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.5.25 Confidentiality)
    - *An indication of the level of confidentiality with which the document needs to be managed.*
11. **SHALL** contain exactly one [1..1] **languageCode**
    - *The language used for recording information within the document.*
12. **SHALL** contain exactly one [1..1] **recordTarget**

    Information to identify the mother of the child.

a. This recordTarget **SHALL** contain exactly one [1..1] **`typeCode`** with data type ParticipationType
b. This recordTarget **SHALL** contain exactly one [1..1] **`patientRole`**

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

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

The medical record number assigned to the mother by the health care facility.
d. This patientRole **SHALL** contain exactly one [1..1] **`patient`**

a. This patient **SHALL** contain zero or one [0..1] **`classCode`** with data type EntityClass
b. This patient **SHALL** contain zero or one [0..1] **`determinerCode`** with data type EntityDeterminer
c. This patient **SHALL** contain exactly one [1..1] **`name`**

The name of the mother.

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

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`** with data type ParticipationType
b. This author **SHALL** contain exactly one [1..1] **`assignedAuthor`**

a. This assignedAuthor **SHALL** contain exactly one [1..1] **`id`**

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

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

The custodian represents the organization that is in charge of maintaining the document. The custodian is the steward that is entrusted with the care of the document. Every CDA document has exactly one custodian.

a. This custodian **SHALL** contain exactly one [1..1] **`@typeCode`**="CST"
b. This custodian **SHALL** contain exactly one [1..1] **`assignedCustodian`**

a. This assignedCustodian **SHALL** contain exactly one [1..1] **`@classCode`**="ASSIGNED"
b. This assignedCustodian Contains exactly one [1..1] **`representedCustodianOrganization`**

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

An identifier for the custodian organization.

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

a. Contains exactly one [1..1] *Antenatal Testing and Surveillance Section* (templateId: 2.16.840.1.113883.10.20.26.3)

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

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 Section* (templateId: 2.16.840.1.113883.10.20.26.5)

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

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

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

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="1373797775"/>
  <code code="1167748478"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="1112921367"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget/>
  <author>
    <time/>
    <assignedAuthor>
      <id root="MDHT" extension="1494725388"/>
    </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="1929384551"/>
          <code code="218107471"/>
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          </entry>
          <entry>
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                <high value="2013"/>
              </effectiveTime>
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```

```
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          <code code="248389415"/>
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          <confidentialityCode code="605536919"/>
          <languageCode code="Code forlanguageCode"/>
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            <relatedSubject classCode="PRS"/>
          </subject>
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              </effectiveTime>
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                <low value="2013"/>
                <high value="2013"/>
              </effectiveTime>
              <languageCode code="Code forlanguageCode"/>
            </observation>
          </entry>
          <component>
            <section/>
          </component>
        </section>
      </component>
      <component>
```

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

Reporting Fetal Death Information from a clinical setting to vital records

[ClinicalDocument: templateId `2.16.840.1.113883.10.20.26.2`]

The document definition captures the information represented on the US Facility Worksheet for the 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. We expect the more detailed demographics information will not be included within the facilities work sheet which provides the data requirements for 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`)
   - *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`)
   - *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/@code`**=**`"US"`** (CodeSystem: `1.0.3166.1 Country (ISO 3166-1)`)
   - *The realm that the document is relevant for. This specification is a US realm product.*
5. **SHALL** contain exactly one [1..1] **`typeId`**
   - *Type ID root = 2.16.840.1.113003.1.3.*

Type ID extension = "POCD_HD000040.

6. **SHALL** contain exactly one [1..1] **`id`**
   - *Provide the identifier assigned to the document by the healthcare provider acting as a custodian of the information.*
7. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *The value provided indicates that the document is a live birth report.*
8. **SHALL** contain exactly one [1..1] **`title`**
   - *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`**
   - *The point in time the document was created at.*
10. **SHALL** contain exactly one [1..1] **`confidentialityCode`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.5.25 Confidentiality`)
    - *An indication of the level of confidentiality with which the document needs to be managed.*
11. **SHALL** contain exactly one [1..1] **`languageCode`**
    - *The language used for recording information within the document.*
12. **SHALL** contain exactly one [1..1] **`recordTarget`**
    a. This recordTarget **SHALL** contain exactly one [1..1] **`typeCode`** with data type ParticipationType
    b. This recordTarget **SHALL** contain exactly one [1..1] **`patientRole`**
       a. This patientRole **SHALL** contain exactly one [1..1] **`@classCode`**=`"PAT"`
       b. This patientRole **SHOULD** contain zero or one [0..1] **`addr`**

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

          The medical record number assigned to the mother by the health care facility.
       d. This patientRole **SHALL** contain exactly one [1..1] **`patient`** with data type *Patient*
13. **SHALL** contain exactly one [1..1] **`author`**
    a. This author **SHALL** contain exactly one [1..1] **`typeCode`** with data type ParticipationType
    b. This author **SHALL** contain exactly one [1..1] **`assignedAuthor`**
       a. This assignedAuthor **SHALL** contain exactly one [1..1] **`@classCode`**=`"ASSIGNED"`
       b. This assignedAuthor **SHALL** contain exactly one [1..1] **`id`**

          An identifier for the author of the live birth report. Normally this is the certifying clinician.
14. **SHALL** contain exactly one [1..1] **`custodian`**
    a. This custodian **SHALL** contain exactly one [1..1] **`@typeCode`**=`"CST"`
    b. This custodian **SHALL** contain exactly one [1..1] **`assignedCustodian`**
       a. This assignedCustodian **SHALL** contain exactly one [1..1] **`@classCode`**=`"ASSIGNED"`
       b. This assignedCustodian **SHALL** contain exactly one [1..1] **`representedCustodianOrganization`**
          a. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **`@classCode`**=`"ORG"`
          b. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **`@determinerCode`**=`"INSTANCE"`
          c. This representedCustodianOrganization **SHALL** contain exactly one [1..1] **`id`**

             An identifier for the custodian organization.
15. **SHALL** contain exactly one [1..1] **`component`**

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

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

   a. Contains exactly one [1..1] *Fetal Delivery Section* (templateId: `2.16.840.1.113883.10.20.26.4`)

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

   a. Contains exactly one [1..1] *Antenatal Testing and Surveillance Section* (templateId: `2.16.840.1.113883.10.20.26.3`)

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

   a. Contains exactly one [1..1] *Prior Pregnancy History Section* (templateId: `2.16.840.1.113883.10.20.26.12`)

19. **SHOULD** contain zero or more [0..*] **`component`**

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

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="1636993122"/>
  <code code="871091497"/>
  <title>TEXT FOR TITLE</title>
  <effectiveTime/>
  <confidentialityCode code="793219329"/>
  <languageCode code="Code forlanguageCode"/>
  <recordTarget/>
  <author>
    <time/>
    <assignedAuthor classCode="ASSIGNED">
      <id root="MDHT" extension="782050783"/>
    </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="330942839"/>
          <code code="779345611"/>
          <title>TEXT FOR TITLE</title>
          <confidentialityCode code="1564856533"/>
          <languageCode code="Code forlanguageCode"/>
          <subject/>
          <entry>
            <observation>
              <realmCode code="Code forrealmCode"/>
```

```
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="1319050019"/>
            <code code="1053392270"/>
            <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="1417835214"/>
            <code code="367208563"/>
            <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="1959346778"/>
            <code code="1521499834"/>
            <effectiveTime>
              <low value="2013"/>
              <high value="2013"/>
            </effectiveTime>
            <languageCode code="Code forlanguageCode"/>
            <entryRelationship/>
            <entryRelationship/>
          </observation>
        </entry>
        <entry>
          <observation>
            <realmCode code="Code forrealmCode"/>
            <typeId root="2.16.840.1.113883.1.3"/>
            <id root="MDHT" extension="1687801270"/>
            <code code="1108575819"/>
            <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="2123331114"/>
            <code code="208605318"/>
            <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="1203674708"/>
            <code code="1664925937"/>
            <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="113809463"/>
            <code code="1854563803"/>
            <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="662654549"/>
        <code code="564300840"/>
        <title>TEXT FOR TITLE</title>
        <confidentialityCode code="723650947"/>
        <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="751044638"/>
            <code code="2142799164"/>
            <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="845450572"/>
              <code code="1962225296"/>
              <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:

Antenatal 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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the section - it captures prenatal care information in the case of a live birth and fetal death.*
5. **SHALL** contain exactly one [1..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.*
6. **SHALL** contain exactly one [1..1] **entry**
   - *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)

Antenatal Testing and Surveillance Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="94372624"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act>
      <id root="MDHT" extension="1890506704"/>
      <code code="1749945956"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN"/>
      </entryRelationship>
    </act>
  </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, patient's medical records.

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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the section - it contains information regarding the delivered fetus.*
5. **SHALL** contain exactly one [1..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.*
6. **SHALL** contain exactly one [1..1] **`subject`**
   a. Contains exactly one [1..1] CDA Subject
7. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Plurality* (templateId: `2.16.840.1.113883.10.20.26.41`)
8. **SHALL** contain exactly one [1..1] **`entry`**
   - *Record birth order if not a single delivery.*

   a. Contains exactly one [1..1] *Birth Order* (templateId: `2.16.840.1.113883.10.20.26.16`)
9. **SHALL** contain exactly one [1..1] **`entry`**
   a. Contains exactly one [1..1] *Number of Infants Born Alive* (templateId: `2.16.840.1.113883.10.20.26.37`)
10. **SHALL** contain exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Weight* (templateId: `2.16.840.1.113883.10.20.26.46`)
11. **SHOULD** contain zero or one [0..1] **`entry`**
    a. Contains exactly one [1..1] *Autopsy Performance* (templateId: `2.16.840.1.113883.10.20.26.15`)
12. **SHALL** contain exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Fetal Death Occurrance* (templateId: `2.16.840.1.113883.10.20.26.22`)
13. **SHALL** contain at least one [1..*] **`entry`**
    a. Contains exactly one [1..1] *Congenital Anomaly* (templateId: `2.16.840.1.113883.10.20.26.19`)
14. **SHALL** contain exactly one [1..1] **`entry`**
    a. Contains exactly one [1..1] *Fetal Delivery Time* (templateId: `2.16.840.1.113883.10.20.26.23`)

Fetal Delivery Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="814176287"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <subject/>
```

```
<entry>
  <observation>
    <id root="MDHT" extension="861517054"/>
    <code code="291680165"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2013"/>
      <high value="2013"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation/>
</entry>
<entry>
  <observation>
    <id root="MDHT" extension="1530165597"/>
    <code code="556235276"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2013"/>
      <high value="2013"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation>
    <id root="MDHT" extension="1372006889"/>
    <code code="2093869872"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2013"/>
      <high value="2013"/>
    </effectiveTime>
    <entryRelationship>
      <observation/>
    </entryRelationship>
    <entryRelationship/>
  </observation>
</entry>
<entry>
  <observation>
    <id root="MDHT" extension="378350851"/>
    <code code="1921595855"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2013"/>
      <high value="2013"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation>
    <id root="MDHT" extension="1635829728"/>
    <code code="1886338269"/>
    <text>Text Value</text>
    <effectiveTime>
      <low value="2013"/>
      <high value="2013"/>
    </effectiveTime>
  </observation>
</entry>
<entry>
  <observation>
```

```
      <id root="MDHT" extension="1577521216"/>
      <code code="593217414"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1415331390"/>
      <code code="620490248"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
</section>
```

History of Infection 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. Contains exactly one [1..1] **code**
5. **SHALL** contain at least one [1..*] **entry**
   - *One or more entries recording the presence of an infection may be recorded. Each entry contains information for a single infection.*
   a. Contains exactly one [1..1] *Infection Present* (templateId: 2.16.840.1.113883.10.20.26.30)
6. **SHALL** contain exactly one [1..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 Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="292176408"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <id root="MDHT" extension="246623616"/>
```

```
      <code code="1419281852"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**
5. **SHALL** contain exactly one [1..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.*
6. **MAY** contain zero or more [0..*] **`entry`**
   - *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 infection.*
   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`**
   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

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="836691479"/>
  <code code="228468028"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <procedure>
      <id root="MDHT" extension="1525110601"/>
      <code code="1352853016"/>
      <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the section - it is the labor and delivery section.*
5. **SHALL** contain exactly one [1..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.*
6. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Labor and Delivery Information* (templateId: 2.16.840.1.113883.10.20.26.31)
7. **MAY** contain zero or more [0..*] **entry**
   - *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**
   a. Contains exactly one [1..1] *Mother's Vital Signs Section* (templateId: 2.16.840.1.113883.10.20.26.9)
9. **SHALL** contain exactly one [1..1] **component**
   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

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1012926703"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <act/>
  </entry>
  <entry>
    <observation/>
  </entry>
  <component>
```

```
    <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
5. **SHALL** contain exactly one [1..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.*
6. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Body Weight at Delivery* (templateId: 2.16.840.1.113883.10.20.26.17)
7. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Height* (templateId: 2.16.840.1.113883.10.20.26.25)
8. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Prepregnancy Body Weight* (templateId: 2.16.840.1.113883.10.20.26.43)

Mother's Vital Signs Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="2055833893"/>
  <code code="1583568751"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="340771998"/>
      <code code="1331731898"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
```

```
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1407917111"/>
      <code code="1679647268"/>
      <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 zero or one [0..1] **@classCode**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
3. **SHALL** contain zero or one [0..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain zero or one [0..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the section - it contains information on the newborn.*
5. **SHALL** contain exactly one [1..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.*
6. **SHALL** contain exactly one [1..1] **subject**
   a. This subject **SHALL** contain exactly one [1..1] **@typeCode**="SBJ"
   b. This subject **SHALL** contain exactly one [1..1] **relatedSubject**
      a. This relatedSubject **SHALL** contain exactly one [1..1] **@classCode**="PRS"
      b. This relatedSubject **SHALL** contain exactly one [1..1] **subject**
         a. This subject **SHALL** contain exactly one [1..1] **@classCode**="PSN"
         b. This subject **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE"
         c. This subject **SHALL** contain exactly one [1..1] **sDTCId**

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

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

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

   The birth date and time of the newborn. By the same token, the date and time of delivery.

7. **SHALL** contain exactly one [1..1] **`entry`**
   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`**
   - *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`**
   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`**
    - *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`**
    - *Note, multiple congenital anomaly entries may be included. Each entry records a single anomaly.*

    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`**
    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`**
    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`**
    a. Contains exactly one [1..1] *Infant Breastfed* (templateId: `2.16.840.1.113883.10.20.26.27`)
15. **SHALL** contain at least one [1..*] **`component`**
    a. Contains exactly one [1..1] *Newborn's Vital Signs Section* (templateId: `2.16.840.1.113883.10.20.26.11`)

Newborn Delivery Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="2075212722"/>
  <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="1406940655"/>
      <code code="1986291629"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
```

```
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="280482611"/>
      <code code="1721298376"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="503038212"/>
      <code code="894922828"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1754125500"/>
      <code code="225661840"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="2039908839"/>
      <code code="1153190204"/>
      <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="1363241960"/>
      <code code="1554702676"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
```

```
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entry>
  <component>
    <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, including the temperature. 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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
5. **SHALL** contain exactly one [1..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.*
6. **SHALL** contain [1..2] **entry**
   - *The Apgar score is collected at 5 minutes after delivery. It will also be collected at 10 minutes after delivery if, and only if, the 5 minute score falls below the specified threshold.*
   a. Contains exactly one [1..1] *Apgar Score* (templateId: 2.16.840.1.113883.10.20.26.14)
7. **SHALL** contain zero or one [0..1] **entry**
   - *Record the birth weight of the newborn.*
   a. Contains exactly one [1..1] *Weight* (templateId: 2.16.840.1.113883.10.20.26.46)

Newborn's Vital Signs Section example

```
<?xml version="1.0" encoding="UTF-8"?>
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="889986966"/>
  <code code="1255841106"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation>
      <id root="MDHT" extension="33743285"/>
      <code code="1203780518"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
```

```
    </observation>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="1092742580"/>
      <code code="1480852090"/>
      <text>Text Value</text>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </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 zero or one [0..1] **@classCode**="DOCSECT" (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
3. **SHALL** contain zero or one [0..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain zero or one [0..1] **code**
5. **SHALL** contain 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.*
6. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Date of Last Live Birth* (templateId: 2.16.840.1.113883.10.20.26.20)
7. **SHALL** contain exactly one [1..1] **entry**
   a. Contains exactly one [1..1] *Last Menstrual Period Date* (templateId: 2.16.840.1.113883.10.20.26.33)
8. **SHALL** contain exactly one [1..1] **entry**
   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**
   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**
    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**
    a. Contains exactly one [1..1] *Estimate of Gestation* (templateId: 2.16.840.1.113883.10.20.26.21)

Prior Pregnancy History Section example

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

```
<section xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1582713049"/>
  <code code="1445189873"/>
  <title>TEXT FOR TITLE</title>
  <text/>
  <entry>
    <observation/>
  </entry>
  <entry>
    <observation>
      <id root="MDHT" extension="838027354"/>
      <code code="254066480"/>
      <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="322744777"/>
      <code code="1736624342"/>
      <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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from ValueSet *`Abnormal Conditions of the Newborn`* **STATIC**
   - *A code value that indicates the nature of the observation - it records the nature of the abnormal about which information is provided.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Abnormal Condition of the Newborn example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="712027385"/>
  <code code="492886506"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Apgar Score

[Observation: templateId `2.16.840.1.113883.10.20.26.14`]

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

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.14"
2. **SHALL** contain 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`)
4. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - that it is an Apgar score.*
5. **SHALL** contain exactly one [1..1] **`effectiveTime`**
   - *The effective time for the Apgar score is collected as a duration. The only expected durations are 5 minutes or 10 minutes.*
6. **SHALL** contain exactly one [1..1] **`value`** with data type INT

- *The measured Apgar score for the infant. The score is determined by evaluating the newborn baby on five simple criteria on a scale from zero to two, then summing up the five values thus obtained.*

Apgar Score example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="735019135"/>
  <code code="516423650"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Autopsy Performance

[Observation: templateId 2.16.840.1.113883.10.20.26.15]

Information on whether an autopsy has been performed, is planned, or has not been performed.

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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - that it indicates whether an autopsy was performed*
5. **SHALL** contain exactly one [1..1] **value** with data type BL
   - *Information to identify whether an autopsy was performed.*
6. **SHOULD** contain zero or one [0..1] **entryRelationship**

   If an autopsy has not been performed, indicate whether or not one is planned.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**
   b. This entryRelationship **SHALL** contain exactly one [1..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **code**
      b. This observation **SHALL** contain exactly one [1..1] **value** with data type BL

         An indicator to tell whether or not an autopsy is planned.
7. **MAY** contain zero or one [0..1] **entryRelationship**

   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**
   b. This entryRelationship **SHALL** contain exactly one [1..1] **observation** with data type *Autopsy Use*

Autopsy Performance example

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

```
  <id root="MDHT" extension="347985581"/>
  <code code="527812537"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <entryRelationship>
    <observation>
      <code code="958063485"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the observation - it is a birth order observation.*
5. **SHALL** contain exactly one [1..1] **value** with data type INT
   - *Indicate the order delivered in the pregnancy of the baby or fetus, aka "Set Number". Leave the field empty for singleton births or deliveries.*

Birth Order example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1361250508"/>
  <code code="579351606"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</observation>
```

Body Weight at Delivery

[Observation: templateId 2.16.840.1.113883.10.20.26.17]

The measured body weight of a mother at the time of delivery.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.17"
2. **SHALL** contain exactly one [1..1] **`@classCode`**="`OBS`" *Observation* (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`**
   - *A code value that indicates the nature of the observation - it captures the weight of the subject at the comencement of the delivery process.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The mother's weight at delivery. Both value and unit are collected.*

Body Weight at Delivery example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="2512502"/>
  <code code="360562072"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from ValueSet *`Labor and Delivery Characteristics`* **STATIC**
   - *A code value that indicates the nature of the observation - it indicates the nature of the labor and delivery characteristic about which information is provided.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type BL

Characteristic of Labor and Delivery example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1204966030"/>
  <code code="567447723"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
```

```
  </effectiveTime>
  <value xsi:type="BL"/>
</observation>
```

Congenital Anomaly

[Observation: templateId 2.16.840.1.113883.10.20.26.19]

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

1. **SHALL** contain exactly one [1..1] 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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *Congenital Anomalies of the Newborn* **STATIC**
   - *A code value that indicates the nature of the observation - it records the nature of the congenital anomaly about which information is provided.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL

Congenital Anomaly example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1090636302"/>
  <code code="1157958379"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</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)
4. **SHALL** contain exactly one [1..1] **code**

- *A code value that indicates the nature of the observation - it records the date of the last live birth for the mother.*

5. **SHALL** contain exactly one [1..1] **`value`** with data type TS
   - *The date of birth of the last live born infant. Month and year should be provided.*

Date of Last Live Birth example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="485886190"/>
  <code code="1186122032"/>
  <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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - that it records the birth attendant's estimate of gestation.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The final estimate of gestation. The value expected to be provided as a number of completed weeks.*

Estimate of Gestation example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="616333023"/>
  <code code="2032302236"/>
  <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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - that it indicates the death of a fetus.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type CD, where the @code **SHALL** be selected from ValueSet *`Fetal Death Time Points`* **STATIC**
   - *Information regarding the point within the delivery process at which fetal death occurred.*

Fetal Death Occurrance example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1645124517"/>
  <code code="112268615"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="CD" code="1893442672"/>
</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 birth time.

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`)
4. **SHALL** contain exactly one [1..1] **`code`**
   - *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
   - *The date and time of delivery.*

Fetal Delivery Time example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1626493011"/>
  <code code="875207697"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="TS"/>
</observation>
```

Height

[Observation: templateId 2.16.840.1.113883.10.20.26.25]

An observation to measure the mother's height.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.25"
2. **SHALL** contain 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)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - it is the record of the person's height.*
5. **SHALL** contain exactly one [1..1] **value** with data type PQ
   - *The height of the person. Collect unit of measure as well as the height value.*

Height example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="707336048"/>
  <code code="1162188758"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

home Birth Plan

[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)

3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - it records whether or not a home birth was planned.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL
   - *A Boolean value to indicate whether or not the mother planned to delivery at home.*

home Birth Plan example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="983138428"/>
  <code code="1315968934"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - that it indicates whether the infant is being breastfed.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL
   - *Information to identify whether the infant was being breastfed at discharge.*

Infant Breastfed example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="263748560"/>
  <code code="810692788"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - that it includes information on whether the infant was living at time of report.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL
   - *Information to identify whether the infant was living at the time of report.*

Infant Living example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="2076665492"/>
  <code code="342782769"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *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
   - *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**

   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"
   b. This participant **SHALL** contain exactly one [1..1] **participantRole**
      a. This participantRole **SHALL** contain zero or one [0..1] **@classCode**="SDLOC"
      b. This participantRole **SHALL** contain exactly one [1..1] **scopingEntity**
         a. This scopingEntity **SHALL** contain exactly one [1..1] **@classCode**="ORG"
         b. This scopingEntity **SHALL** contain exactly one [1..1] **@determinerCode**="INSTANCE"
         c. This scopingEntity **SHALL** contain exactly one [1..1] **name**

            The name of the facility the infant was transferred to.

infant Transfer example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1077624055"/>
  <code code="127683965"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <participant typeCode="DST">
    <participantRole classCode="SDLOC"/>
  </participant>
</observation>
```

Infection Present

[Observation: templateId 2.16.840.1.113883.10.20.26.30]

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

1. **SHALL** contain exactly one [1..1] 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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet **STATIC**
   - *A code value that indicates the nature of the observation - it records nature of the infection about which information is provided. Note, for live birth reporting refer to the value set: Birth Reporting - Infections Present. For fetal death reporting refer to the value set: Fetal Death Reporting - Infections Present.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL

Infection Present example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1324530901"/>
  <code code="21097451"/>
  <effectiveTime>
    <low value="2013"/>
```

```
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - it contains information regarding the labor and delivery process.*
5. **SHALL** contain exactly one [1..1] **performer**

   Information on the person attending the birth.

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

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

         An indication of the professional qualification of the birth attendant. Their title. If the code - OTHER - is chosen, the original text property is used to record a text value.
6. **SHALL** contain exactly one [1..1] **certifierParticipation**

   Information on the person certifying the birth.

   a. This certifierParticipation **SHALL** contain exactly one [1..1] **@typeCode**="RESP"
   b. This certifierParticipation **SHALL** contain exactly one [1..1] **time**

      The date and time the birth was certified.
   c. This certifierParticipation **SHALL** contain exactly one [1..1] **certifierRole**
      a. This certifierRole **SHALL** conform to *attendant Role*
      b. This certifierRole **SHALL** contain zero or one [0..1] **@classCode**="ASSIGNED"
      c. This certifierRole **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *Certifier Titles* **STATIC**

         An indication of the professional qualification of the certifier. Their title. If the code - OTHER - is chosen, the original text property is used to record a text value.

d. This certifierRole **SHALL** contain exactly one [1..1] **`assignedPerson`**

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

The name of the certifying person.

7. **SHALL** contain exactly one [1..1] **`participant`**

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

a. This participantRole **SHALL** contain exactly one [1..1] **`@classCode`**`="BIRTHPL"`
b. This participantRole **SHOULD** contain zero or one [0..1] **`id`**

An identifer for the facility within which the delivery took place. This attribute is not relevant if the birth took place outside of a health care facility. The attribute repeats to allow entry of both state and nationally assigned identifiers.

c. This participantRole **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from ValueSet *`Place where Birth/Delivery Occurred`* **STATIC**

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

d. This participantRole **MAY** contain zero or one [0..1] **`addr`**

The address for the place where the delivery took place. It is collected in those cases where the delivery did not occur within a healthcare facility.

e. This participantRole **SHOULD** contain zero or one [0..1] **`playingEntity`**

a. This playingEntity **SHALL** contain zero or one [0..1] **`@classCode`**`="PLC"`
b. This playingEntity **SHALL** contain zero or one [0..1] **`@determinerCode`**`="INSTANCE"`
c. This playingEntity **MAY** contain zero or one [0..1] **`desc`**

A description of the place where the birth took place. The attribute is used for those cases in which the delivery occurred neither at a healthcare facility, nor at a place with a defined postal address. 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."

d. This playingEntity **SHOULD** contain zero or more [0..*] **`name`**

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

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

- *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] *home Birth Plan* (templateId: `2.16.840.1.113883.10.20.26.26`)

9. **SHALL** contain exactly one [1..1] **`entryRelationship`**

a. Contains **`@typeCode="COMP"`** *COMP*
b. Contains exactly one [1..1] *Maternal Transfer* (templateId: `2.16.840.1.113883.10.20.26.35`)

10. **MAY** contain zero or more [0..*] **`entryRelationship`**

- *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`)

11. **SHALL** contain at least one [1..*] **`entryRelationship`**

   a. Contains **`@typeCode="COMP"`** *COMP*
   b. Contains exactly one [1..1] *Maternal Morbidity* (templateId: `2.16.840.1.113883.10.20.26.34`)
12. **SHALL** contain at least one [1..*] **`entryRelationship`**
   a. Contains **`@typeCode="COMP"`** *COMP*
   b. Contains exactly one [1..1] *Pregnancy Risk Factor* (templateId: `2.16.840.1.113883.10.20.26.44`)
13. **SHALL** contain exactly one [1..1] **`entryRelationship`**

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

   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**`="COMP"`
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`observation`**
      a. This observation **SHALL** contain exactly one [1..1] **`@classCode`**`="OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
      b. This observation **SHALL** contain exactly one [1..1] **`@moodCode`**`="EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
      c. This observation **SHALL** contain exactly one [1..1] **`code`**

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

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

Labor and Delivery Information example

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="803791641"/>
  <code code="502889205"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <performer typeCode="PRF">
    <assignedEntity classCode="ASSIGNED">
      <id root="MDHT" extension="727040832"/>
      <code code="1141185611"/>
      <assignedPerson/>
    </assignedEntity>
  </performer>
  <participant typeCode="LOC">
    <participantRole classCode="BIRTHPL">
      <id root="MDHT" extension="876704989"/>
      <code code="800549121"/>
      <addr/>
      <playingEntity classCode="PLC" determinerCode="INSTANCE"/>
    </participantRole>
  </participant>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="718877090"/>
      <value xsi:type="CD" code="65218641"/>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation/>
  </entryRelationship>
  <entryRelationship>
    <observation>
```

```
      <id root="MDHT" extension="848074203"/>
      <code code="670605629"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation>
      <id root="MDHT" extension="1475021514"/>
      <code code="1661967700"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <participant typeCode="ORG">
        <participantRole classCode="SDLOC"/>
      </participant>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation>
      <id root="MDHT" extension="1746287427"/>
      <code code="827872957"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
    </observation>
  </entryRelationship>
  <entryRelationship>
    <observation>
      <id root="MDHT" extension="1134589373"/>
      <code code="782577350"/>
      <effectiveTime>
        <low value="2013"/>
        <high value="2013"/>
      </effectiveTime>
      <entryRelationship typeCode="COMP">
        <observation classCode="OBS" moodCode="EVN"/>
      </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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**

- *A code value that indicates the nature of the observation - it contains the date of the last menstrual period.*

5. **SHALL** contain exactly one [1..1] **value** with data type TS
   - *The date the mother's last normal menstrual period began. (month, day and year.)*

Last Menstrual Period Date example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="177244688"/>
  <code code="527491599"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *Maternal Morbidity* **STATIC**
   - *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 BL

Maternal Morbidity example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="351151654"/>
  <code code="1694293249"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</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 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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - it refers to the transfer of the mother prior to delivery.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type BL
   - *A Boolean value to indicate whether or not the mother was transferred.*
6. **MAY** contain zero or one [0..1] **`participant`**

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

            The name of the facility the mother was transferred from.

Maternal Transfer example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="74294566"/>
  <code code="845712860"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from (CodeSystem: 2.16.840.1.113883.6.1 LOINC)
   - *A code value that indicates the nature of the procedure, that it records the method of delivery.*
5. **SHALL** contain exactly one [1..1] **entryRelationship**

   An observation to record whether forceps delivery was attempted but unsucessful.

   a. This entryRelationship **SHALL** contain exactly one [1..1] **@typeCode**="COMP"
   b. This entryRelationship **SHALL** contain exactly one [1..1] **observation**
      a. This observation **SHALL** contain exactly one [1..1] **@classCode**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
      b. This observation **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
      c. This observation **SHALL** contain exactly one [1..1] **code**

         A code value that indicates the nature of the observation - that it indicates whether forceps delivery was attempted as a method of delivering the infant, but failed.
      d. This observation **SHALL** contain exactly one [1..1] **value** with data type BL

         Information to identify whether forceps delivery was attempted as a method of delivering the infant, but failed.
6. **SHALL** contain exactly one [1..1] **entryRelationship**

   An observation to record whether vacuum extraction was attempted but unsucessful.

   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**, 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 - that it indicates whether delivery with vaccum extraction was attempted but unsucessful.
      d. This observation **SHALL** contain exactly one [1..1] **value** with data type BL

         Information to identify whether vacuum extraction was attempted as a method of delivering the infant, but failed.
7. **SHALL** contain exactly one [1..1] **entryRelationship**

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

      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, where the @code **SHALL** be selected from ValueSet *Fetal Presentations* **STATIC**

      Information on the presentation of the fetus at the point of delivery.
8. **SHALL** contain exactly one [1..1] **`entryRelationship`**

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

      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, where the @code **SHALL** be selected from ValueSet *Delivery Routes* **STATIC**

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

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

      a. Contains **`@typeCode=`**"COMP" *COMP*
9. **MAY** contain zero or one [0..1] **`entryRelationship`**

   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"
   b. This entryRelationship **SHALL** contain exactly one [1..1] **`observation`**
      a. This observation **SHALL** contain exactly one [1..1] **`@classCode`**="OBS" *Observation* (CodeSystem: 2.16.840.1.113883.5.6 HL7ActClass)
      b. This observation **SHALL** contain exactly one [1..1] **`@moodCode`**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
      c. This observation **SHALL** contain exactly one [1..1] **`code`**

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

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

Method of Delivery example

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

```
  <id root="MDHT" extension="2096689726"/>
  <code code="909128982"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="1592836140"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="456690088"/>
      <value xsi:type="BL"/>
    </observation>
  </entryRelationship>
</procedure>
```

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

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1695315846"/>
  <code code="430995642"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - it captures the number of infants born alive within a delivery.*
5. **SHALL** contain exactly one [1..1] **value** with data type INT
   - *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

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1341171697"/>
  <code code="2105469412"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code value that indicates the nature of the observation - it records the total number of previous live-born infants now dead.*
5. **SHALL** contain zero or more [0..*] **value** with data type INT

- *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

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="703849455"/>
  <code code="296619566"/>
  <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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001` `HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`@negationInd`**
   - *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`**, where the @code **SHALL** be selected from ValueSet *`Obstetric Procedures`* **STATIC**
   - *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

```
<?xml version="1.0" encoding="UTF-8"?>
<procedure xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="646437932"/>
  <code code="1396130840"/>
  <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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**, where the @code **SHALL** be selected from ValueSet *Labor Onsets* **STATIC**
   - *A code value that indicates the nature of the observation - it records a complication associated with labor and delivery.*
5. **SHALL** contain exactly one [1..1] **value** with data type BL

Onset of Labor example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="140058234"/>
  <code code="720209529"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
</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)
3. **SHALL** contain exactly one [1..1] **@moodCode**="EVN" *Event* (CodeSystem: 2.16.840.1.113883.5.1001 HL7ActMood)
4. **SHALL** contain exactly one [1..1] **code**
   - *A code to indicate the observation contains information on the total number of other pregnancy outcomes that did not result in a live birth.*
5. **SHALL** contain exactly one [1..1] **value** with data type INT

- *Total number of other pregnancy outcomes that did not result in a live birth. The entry is a non-negative integer within the range from zero to 30.*

6. **SHOULD** contain zero or one [0..1] **`effectiveTime`**
   - *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.*

Other Pregnancy Outcome example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1831699289"/>
  <code code="1904856922"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="INT" value="1"/>
</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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**="`EVN`" *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**
   - *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
   - *A measure of the plurality of the pregnancy.*

Plurality example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1395043944"/>
  <code code="1063073373"/>
  <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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from ValueSet *`Pregnancy Risk Factors`* **STATIC**
   - *A code value that indicates the nature of the observation - the nature of the risk factor about which information is provided.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type BL
6. **MAY** contain zero or more [0..*] **`entryRelationship`**

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

   a. Such entryRelationships **SHALL** contain exactly one [1..1] **`@typeCode`**=`"COMP"`
   b. Such entryRelationships **SHALL** contain zero or one [0..1] **`observation`**
      a. This observation **SHALL** contain exactly one [1..1] **`@classCode`**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
      b. This observation **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
      c. This observation **SHALL** contain exactly one [1..1] **`code`**

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

         The number of previous Cesarean deliveries.

Pregnancy Risk Factor example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="2110430506"/>
  <code code="1894062475"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="BL"/>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="1264023696"/>
      <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`)
3. **SHALL** contain exactly one [1..1] **`@moodCode`**=`"DEF"` (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
4. **MAY** contain zero or one [0..1] **`@negationInd`**
   - *Value the negation indicator as true if the mother did not receive prenatal care.*
5. **SHALL** contain exactly one [1..1] **`code`**, where the @code **SHALL** be selected from (CodeSystem: `2.16.840.1.113883.6.1 LOINC`)
   - *A code value that indicates the nature of the observation - it includes information about prenatal care received by the mother.*
6. **SHOULD** contain zero or one [0..1] **`effectiveTime`**
   - *The time interval is used to indicate the date of the first prenatal care visit, and the date of the last visit.*
7. **SHALL** contain exactly one [1..1] **`entryRelationship`**
   a. This entryRelationship **SHALL** contain exactly one [1..1] **`@typeCode`**=`"COMP"`
   b. This entryRelationship **SHALL** contain zero or one [0..1] **`observation`**
      a. This observation **SHALL** contain exactly one [1..1] **`@classCode`**=`"OBS"` *Observation* (CodeSystem: `2.16.840.1.113883.5.6 HL7ActClass`)
      b. This observation **SHALL** contain exactly one [1..1] **`@moodCode`**=`"EVN"` *Event* (CodeSystem: `2.16.840.1.113883.5.1001 HL7ActMood`)
      c. This observation **SHALL** contain exactly one [1..1] **`code`**
      d. This observation **SHALL** contain exactly one [1..1] **`value`** with data type INT

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

Pre-Natal Care example

```
<?xml version="1.0" encoding="UTF-8"?>
<act xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="urn:hl7-
org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="413503900"/>
  <code code="1966241992"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <entryRelationship typeCode="COMP">
    <observation classCode="OBS" moodCode="EVN">
      <code code="340418130"/>
      <value xsi:type="INT" value="1"/>
    </observation>
  </entryRelationship>
</act>
```

Pre-pregnancy Body Weight

[Observation: templateId `2.16.840.1.113883.10.20.26.43`]

The mother's weight before becoming pregnant.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.43"
2. **SHALL** contain 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`)
   - *The mother's weight before becoming pregnant.*
4. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - the mother's weight before becoming pregnant.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The mother's weight before becoming pregnant. The unit of measure must be provided.*

Pre-pregnancy Body Weight example

```
<?xml version="1.0" encoding="UTF-8"?>
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="1262338975"/>
  <code code="1276965111"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Weight

[Observation: templateId `2.16.840.1.113883.10.20.26.46`]

A measure of the birth weight of an infant or the weight of the fetus at the time of delivery.

1. **SHALL** contain exactly one [1..1] templateId ( ) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.26.46"
2. **SHALL** contain 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`)
4. **SHALL** contain exactly one [1..1] **`code`**
   - *A code value that indicates the nature of the observation - a record of the person's weight.*
5. **SHALL** contain exactly one [1..1] **`value`** with data type PQ
   - *The weight of the person. Collect unit of measure as well as the weight value.*

Weight example

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

```
<observation xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns="urn:hl7-org:v3" xsi:schemaLocation="urn:hl7-org:v3 CDA.xsd">
  <id root="MDHT" extension="2067587650"/>
  <code code="1379984978"/>
  <effectiveTime>
    <low value="2013"/>
    <high value="2013"/>
  </effectiveTime>
  <value xsi:type="PQ"/>
</observation>
```

Chapter 5

OTHER CLASSES

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

Chapter 6

VALUE SETS

Topics:

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

Abnormal Conditions of the Newborn

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

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

Act Codes

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

Birth Attendant Titles

Value Set	Birth Attendant Titles - (OID not specified)
Description	A list of different titles used by birth attendants to denote professional role. Note, the codes used are based on the current worksheet, and may be replaced with code values from a widely used code system.

Code	Code System	Print Name
MD		Medical Doctor
DO		Doctor of Osteopathy
CNM/CM		Certified Nurse Midwife/Certified Midwife
MW		Other Midwife
OTH		Other

Birth Reporting - Infections Present

Value Set	Birth Reporting - Infections Present - (OID not specified)

Description	A list of infections which may be present during pregnancy. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

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

Certifier Titles

Value Set	Certifier Titles - (OID not specified)
Description	A list of different titles used by birth attendants to denote professional role. Note, the codes used are based on the current worksheet, and may be replaced with code values from a widely used code system.

Code	Code System	Print Name
MD		Medical Doctor
DO		Doctor of Osteopathy
HAD		Hospital Administator or Designee
CNM/CM		Certified Nurse Midwife/Certified Midwife
MW		Other Midwife
OTH		Other

Congenital Anomalies of the Newborn

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

Code	Code System	Print Name
AN		Anencephaly
MSB		Meningomyelocele Spina Bifida
CGHD		Cyanotic Congenital Heart Disease
CDH		Congenital Diaphragmatic Hernia
OM		Omphalocele
GA		Gastroschisis

Code	Code System	Print Name
LRD		Limb Reduction Defect
CL		Cleft Lip with or without Cleft Palate
CP		Cleft Palate Alone
DS		Down Syndrome
DSC		Down Syndrome Karyotype Confirmed
DSP		Down Syndrome Karyotype Pending
SCD		Suspected Chromosomal Disorder
SCDC		Suspected Chromosomal Disorder Karyotype Confirmed
SCDP		Suspected Chromosomal Disorder Karyotype Pending
HY		Hypospadias
NONE		None of the Cited Anomalies

Delivery Payment Source

Value Set	Delivery Payment Source - (OID not specified)
Description	A list of different types of payment that may be used to support the expense of labor and delivery. Note, the codes used are based on the current worksheet, and may be replaced with code values from a widely used code system.

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

Delivery Routes

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

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

Fetal Death Reporting - Infections Present

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

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

Fetal Death Time Points

Value Set	Fetal Death Time Points - (OID not specified)
Description	A list of time points during the delivery process at which the fetal death is thought to have occured. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

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

Fetal Presentations

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

Code	Code System	Print Name
C		Cephalic
B		Breech

Code	Code System	Print Name
OTH		Other

Implementation Guide Sections

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

Code	Code System	Print Name
ATS		Antenatal Testing and Surveillance
Fetal Delivery		Fetus
HI		History of Infection
LDO		Labor and Delivery Outcome
LDP		Labor and Delivery Procedure
LD		Labor and Delivery
VSM		Mother's Vital Signs
ND		Newborn Delivery
VSN		Newborn's Vital Signs
PH		Prior Pregancy History

Implementation Guide Templates

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

Code	Code System	Print Name
ACN		Abnormal Condition of the Newborn
APS		Apgar Score
AP		Autopsy Performance
BO		Birth Order
BWD		Body weight at delivery
CLD		Characteristic of Labor and Delivery
COAN		Congenital Anomaly
DLLB		Date of Last Live Birth
EG		Estimate of Gestation
FDO		Fetal Death Occurance

Code	Code System	Print Name
FDT		Fetal Delivery Time
HGT		Height
HBP		Home Birth Plan
IB		Infant Breastfed
IL		Infant Living
INT		Infant Transfer
IP		Infection Present
LDI		Labor and Delivery Information
LMPD		Last Menstrual Period Date
MM		Maternal Morbidity
MT		Maternal Transfer
NBSL		Number of Births Still Living
NIBA		Number of Infants Born Alive
NLD		Number of Live Births now Dead
OP		Obstetric Procedure
OL		Onset of Labor
OPO		Other Pregnancy Outcome
PL		Plurality
RF		Pregnancy Risk Factor
PNC		PreNatal Care
PPBW		PrePregnancy Body Weight
WGT		Weight

Labor and Delivery Characteristics

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

Code	Code System	Print Name
IL		Induction of Labor
AL		Augmentation of Labor
NVP		Non-vertex Presentation
STU		Steroids for Fetal Lung Maturation Received by the Mother Prior to Delivery
ANU		Antibiotics Received by the Mother During Labor

Code	Code System	Print Name
CH		Clnical Chorioamnionitis Diagnosed During Labor or Maternal Temperature GE 38 C (100.4 F)
MC		Moderate/Heavy Meconium Staining of the Amniotic Fluid
FI		Fetal intolerance of Labor
ANES		Epidural or Spinal Anesthesia During Labor
NONE		None of the cited characteristics

Labor Onsets

Value Set	Labor Onsets - (OID not specified)
Description	A list of possible onsets of labor. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

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

Maternal Morbidity

Value Set	Maternal Morbidity - (OID not specified)
Description	A list of maternal morbidities that may be experienced by the mother during labor and delivery. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

Code	Code System	Print Name
MT		Maternal Transfusion
PL		Third of Fourth Degree Perineal Laceration
RU		Ruptured Uterus
UH		Unplanned Hysterectomy
ICU		Admission to Intensive Care
OR		Unplanned Operating Room Procedure Following Delivery
NONE		None of the Cited Maternal Morbidities

Obstetric Procedures

Value Set	Obstetric Procedures - (OID not specified)

Description	A list of obstetric procedures which may be performed during pregnancy. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

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

Place where Birth/Delivery Occurred

Value Set	Place where Birth/Delivery Occurred - (OID not specified)
Description	A list of different types of place or situations in which the birth or delivery occurred. Note, the codes used are imaginary and will be replaced with code values from a widely used code system.

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

Pregnancy Risk Factors

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

Code	Code System	Print Name
PPDIA		Diabetes (PrePregnancy)
GSDIA		Diabetes (Gestational)
PPHP		Hypertension (PrePreganancy)
GSHP		Hypertension (Gestational)
EC		Hypertension (Eclampsia)
PPB		Previous PreTerm Birth
OPPO		Other Previous Poor Pregnancy Outcome
IFT		Pregnancy Resulted from Infertility Treatment
IFT-FED		Fertility Enhancing Drugs

Code	Code System	Print Name
IFT-ART		Assisted Reproductive Technology
PC		Previous cesarean Delivery
NONE		None of the Cited Factors

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